



Transcript of the Hearing of

Date: January 29, 2015

Volume: 2

Case: SITING COUNCIL - DOCKET NO. 192B

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STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Docket No. 192B
CPV Towantic, LLC, Motion to Reopen and
Modify the June 23, 1999 Certificate of
Environmental Compatibility and Public Need
Based on Changed Conditions Pursuant to
Connecticut General Statutes §4-181a(b) for
the Construction, Maintenance and Operation
of a 785 MW Dual-Fuel Combined Cycle Electric
Generating Facility Located North of the
Prokop Road and Towantic Hill Road
Intersection in the Town of Oxford,
Connecticut

Continued Public Hearing held at the
Connecticut Siting Council, 10 Franklin
Square, New Britain, Connecticut, on
Thursday, January 29, 2015, beginning at
11:00 a.m.

H e l d B e f o r e:

ROBERT STEIN, Chairman

1 A p p e a r a n c e s :
2 Council Members:
3 SENATOR JAMES J. MURPHY, JR.,
4 Vice Chairman
5 DR. BARBARA C. BELL
6 LARRY LEVESQUE, PURA Designee
7 ROBERT HANNON, DEEP Designee
8 PHILIP T. ASHTON
9 DR. MICHAEL W. KLEMENS
10 DAVID LYNCH
11
12 Council Staff:
13 MELANIE BACHMAN, ESQ.,
14 Executive Director and
15 Staff Attorney
16 MICHAEL PERRONE
17 Siting Analyst
18
19 For CPV Towantic, LLC:
20 BROWN RUDNICK, LLP
21 185 Asylum Street
22 Hartford, Connecticut 06103
23 By: PHILIP M. SMALL, ESQ.
24 FRANCA L. DeROSA, ESQ
25

1 THE CHAIRMAN: Good morning,
2 everybody. I'd like to call to order the
3 meeting of the Connecticut Siting Council,
4 Docket Number 192B, today, Thursday, January
5 29, 2015, approximately 11:05. My name is
6 Robin Stein. I'm Chairman of the Connecticut
7 Siting Council.
8 This hearing is held pursuant
9 to the provisions of Title 16 of the
10 Connecticut General Statutes and of the
11 Uniform Administrative Procedure Act upon a
12 motion to reopen the final decision of
13 certificate of environmental compatibility
14 and public need held by CPV Towantic, LLC,
15 for the construction, maintenance and
16 operation of a 785-megawatt dual-fuel
17 combined cycle electric generating facility,
18 located north of Prokop Road and Towantic
19 Hill Road intersection in the town of Oxford,
20 Connecticut.
21 On November 13, 2014, the
22 Council, pursuant to a request filed by PV--
23 P -- CPV Towantic, LLC, and the provisions of
24 the Connecticut General Statutes Section
25 4-181a, Subsection (B), reopened the final

1 A p p e a r a n c e s (Cont'd):
2 For The Town of Middlebury:
3 LAW FIRM OF STEPHEN L. SAVARESE
4 103 South Main Street
5 Middlebury, Connecticut 06470
6 By: STEPHEN SAVARESE, ESQ.
7
8 Also present for the Town of Middlebury:
9 RAYMOND PIETRORAZIO
10
11 For the Connecticut Light & Power
12 Company:
13 NORTHEAST UTILITIES SERVICE COMPANY
14 107 Selden Street
15 Berlin, Connecticut 06037
16 By: JOHN R. MORISSETTE, ESQ.
17
18 For the Town of Oxford:
19 CONDON & SAVITT, PC
20 223 Wakelee Avenue
21 Ansonia, Connecticut 06401
22 By: KEVIN CONDON, ESQ.
23
24
25

1 decision rendered in this docket.
2 On June 23, 1999, the Council
3 had considered and approved granting a
4 certificate to the -- to the applicant's
5 predecessor for the construction --
6 A VOICE: I'm sorry. We can't
7 hear back here.
8 THE CHAIRMAN: We're working
9 on getting the mics -- mics fixed, but if
10 you -- there are -- there are a couple seats
11 closer. So you can -- I see some seats. So
12 if those in the back want to move a little
13 bit closer, feel free, but...
14 So, again, to repeat -- and
15 this was all stated at the -- at the public
16 hearing that was held, so a lot of this is
17 what you already heard.
18 Again, on June 23, 1999, the
19 Council considered and approved granting a
20 certificate to the applicant's predecessor
21 for the construction, maintenance and
22 operation of a 512-megawatt natural gas-fired
23 combined-cycle facility located at the -- the
24 same site in the Town of Oxford.
25 On March 1, 2001, the Council

<p style="text-align: right;">Page 115</p> <p>1 considered and approved a final site plan for 2 the facility. The certificate for the 3 facility is scheduled to expire on June 1, 4 2016.</p> <p>5 A verbatim transcript will be 6 made of this hearing and deposited at the 7 Town Clerk's Office in the Oxford and 8 Middlebury Town Halls for the convenience of 9 the public.</p> <p>10 We will proceed in accordance 11 with the prepared agenda, copies of which are 12 available here.</p> <p>13 The Council received a request 14 from Middlebury Land Trust for a 90-day 15 extension to provide expert testimony, dated 16 January 21, 2015, and a request from the 17 Westover School for a 90-day extension, dated 18 January 23, 2015.</p> <p>19 I will ask our staff attorney 20 and executive director, Attorney Bachman to 21 comment.</p> <p>22 MS. BACHMAN: Thank you, 23 Mr. Chairman.</p> <p>24 We do have a schedule for 25 additional prefiled testimony and exhibits to</p>	<p style="text-align: right;">Page 117</p> <p>1 Again, our executive director 2 may wish to comment.</p> <p>3 MS. BACHMAN: Thank you, 4 Mr. Chairman.</p> <p>5 As -- as we've had the 6 experience with the wind petitions, it is 7 clear we do not have any authority to issue a 8 moratorium, and therefore, I recommend the 9 request be denied.</p> <p>10 MR. ASHTON: So moved. 11 DR. KLEMENS: Second.</p> <p>12 THE CHAIRMAN: A motion, a 13 second.</p> <p>14 Discussion? 15 All those in favor signify by 16 saying aye.</p> <p>17 THE COUNCIL: Aye. 18 THE CHAIRMAN: Opposed? 19 Abstentions?</p> <p>20 The motion carries. 21 The Council has also added 15 22 items to the administrative notice list, 23 which is -- which are listed as Roman numeral 24 ID, items 17 through 31. 25 Does any party or intervenor</p>
<p style="text-align: right;">Page 116</p> <p>1 be submitted on or before February 3rd. 2 However, we don't anticipate completing the 3 hearing by the end of February and have 4 scheduled additional hearing dates for March.</p> <p>5 I would recommend that we deny 6 this request, in part, as it relates to a 7 90-day extension, but to grant it, in part, 8 as it relates to a 30-day extension to allow 9 for additional prefiled testimony and 10 exhibits to be submitted on or before 11 March 3rd.</p> <p>12 MR. ASHTON: So moved. 13 DR. BELL: Second.</p> <p>14 THE CHAIRMAN: I have a 15 motion. We have a second. 16 Any discussion? 17 Okay. All those in favor of a 18 30-day extension, signify it by saying aye.</p> <p>19 THE COUNCIL: Aye. 20 THE CHAIRMAN: Opposed? 21 Abstention? 22 The motion carries. 23 The Council has also received 24 a request from Jay Halpern for a moratorium 25 on further consideration of the project.</p>	<p style="text-align: right;">Page 118</p> <p>1 have any objection to the administrative 2 notice items? 3 (No response.) 4 THE CHAIRMAN: Hearing and 5 seeing none, they are admitted.</p> <p>6 We now begin with appearance 7 of the certificate holder, CPV Towantic, LLC, 8 to swear in -- I guess they have additional 9 witnesses.</p> <p>10 Attorney Small. 11 MR. SMALL: Good morning, 12 Mr. Chairman, members of the Council, staff. 13 We have two witnesses to be sworn in, Tanya 14 Bodell and Jon Donovan. If they would please 15 stand.</p> <p>16 J O N D O N O V A N, 17 T A N Y A B O D E L L, 18 called as witnesses, being first duly 19 sworn by Ms. Bachman, were examined and 20 testified on their oaths as follows: 21 THE REPORTER: Ms. Bodell, 22 could you spell your name, please. 23 THE WITNESS (Bodell): 24 T-a-n-y-a-B like in boy-o-d-e-l-l. 25 THE REPORTER: Thank you.</p>

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1 DANIELLE POWERS,
2 ANDREW J. BAZINET,
3 D. LYNN GRESOCK,
4 FREDERICK SELLARS,
5 CURTIS C. JONES,
6 having been previously duly sworn, were
7 examined and testified further on their
8 oaths as follows:
9 MR. SMALL: And starting with
10 you, Ms. Bodell, would you please state your
11 position and affiliation.
12 THE WITNESS (Bodell): Yes.
13 My name is Tayna Bodell. I am the Executive
14 Director of Energyzt, which is an energy
15 business advisory firm.
16 MR. SMALL: And please spell
17 that?
18 THE WITNESS (Bodell):
19 Energyzt is spelled E-n-e-r-g-y-z-t.
20 MR. SMALL: Thank you.
21 And, Mr. Donovan, would also
22 state your position and affiliation?
23 THE WITNESS (Donovan): My
24 name is John Donovan. I'm vice president of
25 engineering and construction at Competitive

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1 Power Ventures.
2 MR. SMALL: Thank you.
3 We have, Mr. Chair -- we have
4 a few additional exhibits, I believe. You
5 want us to introduce those now?
6 THE CHAIRMAN: Yes. Would you
7 please go through the verification.
8 MR. SMALL: Okay. We will do
9 that.
10 The Council program list is
11 Exhibit N, CPV's Late-Filed exhibits.
12 Mr. Bazinet, Ms. Gresock, Mr. Donovan and
13 Mr. Jones, you're all listed as witnesses on
14 certain of those interrogatories. Were the
15 ones for which you're listed prepared by you
16 or under your direction in each case?
17 THE WITNESS (Bazinet): Yes.
18 THE WITNESS (Gresock): Yes.
19 THE WITNESS (Donovan): Yes.
20 THE WITNESS (Jones): Yes.
21 MR. SMALL: Thank you.
22 Do any of you have any
23 corrections or changes to those exhibits?
24 THE WITNESS (Donovan): No.
25 THE WITNESS (Gresock): No.

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1 THE WITNESS (Jones): No.
2 THE WITNESS (Bazinet): No.
3 MR. SMALL: Okay.
4 And do you each adopt them as
5 your testimony here today?
6 THE WITNESS (Bazinet): Yes.
7 THE WITNESS (Gresock): I do.
8 THE WITNESS (Donovan): Yes.
9 THE WITNESS (Jones): Yes.
10 MR. SMALL: Mr. Donovan,
11 Exhibit 11 is your resume. Was that prepared
12 by you or under your direction?
13 THE WITNESS (Donovan): Yes,
14 it was.
15 MR. SMALL: And is it true and
16 correct to the best of your knowledge and
17 belief?
18 THE WITNESS (Donovan): It is.
19 MR. SMALL: And do you adopt
20 that as your testimony here today?
21 THE WITNESS (Donovan): Yes, I
22 do.
23 MR. SMALL: Thank you.
24 I believe, Mr. Chairman, I
25 believe that's it for the additional

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1 exhibits.
2 THE CHAIRMAN: Does any party
3 intervenor object to the admission of the new
4 exhibits?
5 (No response.)
6 THE CHAIRMAN: Hearing and
7 seeing none, the exhibits are now admitted.
8 (Exhibits II-B-1 through
9 Exhibits II-B-10: Received in evidence -
10 described in index.)
11 We'll now continue with
12 cross-examination by staff.
13 Mr. Perrone.
14 CROSS-EXAMINATION
15 MR. PERRONE: Thank you,
16 Mr. Chairman.
17 Referencing the Late-File
18 Exhibit 2B, I noticed that there are several
19 notice of presumed hazard documents, dated
20 November 17, 2014. How is it determined
21 which structures on the property required
22 those letters and which didn't?
23 THE WITNESS (Gresock): The
24 determination of which received that
25 designation is basically based upon elevation

1 and height. The -- all of the structures
2 that penetrate the VFR horizontal surface
3 were -- were determined to require additional
4 review in order to determine its effect on
5 the air navigation.

6 MR. PERRONE: Did any other
7 structures such as the water tanks, require
8 those letters?

9 THE WITNESS (Gresock): There
10 were a series of filings that were made. All
11 of the features of the project that -- that
12 were above the height of that surface were
13 filed for, and all of them were issued the
14 presumed hazard notifications to allow for
15 that additional review.

16 MR. PERRONE: It appears that
17 one of the letters for the administrative
18 building may be missing. I see one for the
19 southwest corner, the northwest corner, and
20 two of them for the southeast corner. Would
21 you be able to check on that?

22 THE WITNESS (Gresock): We'll
23 check on that. Thanks.

24 MR. SMALL: And if it's
25 missing, we will file it is a Late-Filed

1 It's hard to estimate height,
2 but I -- I would say something more like 70,
3 75 feet seems -- seems more accurate in -- in
4 the immediate vicinity. It varies of course.

5 MR. PERRONE: Sure.

6 Regarding the seasonal
7 visibility, could you explain how the bare
8 earth model works? For example, does that
9 only consider variations in ground elevation
10 and neglects vegetation?

11 THE WITNESS (Gresock): That's
12 correct. The bare earth model would account
13 for topography and terrain, but it wouldn't
14 account for vegetation. It also would not
15 account for any structures that would block
16 line of sight.

17 MR. PERRONE: And I understand
18 photographs of balloon visibility were
19 provided at various spots on the viewshed
20 map. How would those photos indicate that
21 the analysis was conservative, because it
22 appears that the locations chosen seem to be
23 in the seasonal visibility area, but then
24 some of the photos you see views above the
25 tree line where it appears year round.

1 exhibit.

2 MR. PERRONE: Thank you.
3 Regarding the public notice of
4 an additional FAA study, dated January 21,
5 2015, it says "Stack 1" on it. Does that
6 only include Stack 1 or does it include other
7 structures?

8 THE WITNESS (Gresock): All of
9 the structures were included in -- in that
10 circularization and the public notice
11 process.

12 MR. PERRONE: Now I'll turn to
13 visibility questions.

14 I understand, in your
15 visibility analysis, an average tree height
16 of 50 feet was used to be conservative. But,
17 in your opinion, what would be a rough
18 estimate of the average tree height?

19 THE WITNESS (Gresock): Tree
20 heights vary in -- in the region, of course.
21 But as we were out on the site flying the
22 balloons at stack top height, which is
23 150 feet above the finished ground elevation,
24 it seemed as though trees would be much
25 taller than 50 feet in general.

1 THE WITNESS (Gresock): What
2 we tried to do is during the balloon flight
3 is travel along all of the nearby roadways to
4 see if there were locations where the
5 balloons would be visible. We believe that
6 the lack of visibility in most locations is
7 reflecting a lot more obstructing vegetation
8 than the model would predict.

9 We find that a lot of the
10 roads in the vicinity have tree lines right
11 along the roads that would tend to block the
12 line of sight. So we believe it is showing
13 that it's conservative because there are many
14 fewer places where the balloons were visible
15 than the model would have expected, but those
16 were intended to be representative and
17 reflective and just a point of indicating
18 what the -- what the views would be.

19 MR. PERRONE: Now, turning to
20 Late-File Exhibit 2-I regarding retirements,
21 specifically, the SNL generation supply
22 curve.

23 Is it CPV Towantic's position
24 that this basically shows the dispatch of the
25 plant? It basically would be performed in

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1 that order, starting with the plant more to
2 the left?
3 THE WITNESS (Bazinet): Yes,
4 that's correct.
5 MR. PERRONE: Thank you.
6 That's all I have.
7 THE CHAIRMAN: We'll now
8 continue with the cross-examination by
9 members of the Council.
10 Dr. Bell?
11 DR. BELL: Thank you,
12 Mr. Chair.
13 Continuing along the line of
14 Mr. Perrone's question on visibility, are
15 all -- were all the cited roads that you
16 traveled, which you report in Exhibit 2-E,
17 late-filed, starting with Towantic Hill Road,
18 Prokop Hill Road, and so forth, are those all
19 marked on Figure 1?
20 THE WITNESS (Gresock): Yes.
21 Figure 1 illustrates, in yellow, the roads
22 that Tetra Tech drove on in order to view
23 towards the site to determine whether the
24 balloons could be seen.
25 DR. BELL: I see. So they're

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1 not named, but they're indicated in yellow?
2 A few of them are named, but not all of them?
3 THE WITNESS (Gresock): Yes.
4 DR. BELL: Would that be
5 correct?
6 THE WITNESS (Gresock):
7 That's -- that's correct.
8 DR. BELL: Okay. So it's
9 notable that the photos are all taken, let's
10 say, south and west of the proposed project
11 and not in the northern areas. So then, it's
12 your contention that you did look along those
13 roads in the northern areas, but were unable
14 to see the balloon. Is that what you're
15 saying?
16 THE WITNESS (Gresock): That's
17 correct.
18 DR. BELL: I see. Okay.
19 THE WITNESS (Gresock): And --
20 and, of course, along public roads is -- is
21 the only place that we were able to -- to
22 drive and to look.
23 DR. BELL: Okay. Thank you.
24 In the Tetra Volume, on
25 page 39, it's written that field

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1 investigations did not reveal any flora or
2 fauna listed as federal or state endangered,
3 threatened or special concerns.
4 My question is: Did Tetra do
5 field investigations recent -- well, before
6 the Tetra report, or does the report refer to
7 investigations done for the original
8 proposal, or years ago, 15 years ago? Or are
9 you referring to consultation with the DEEP?
10 Or what does that -- did those field
11 investigations refer to exactly?
12 MR. SMALL: Dr. Bell,
13 that's -- that -- Mr. Gustafson is probably
14 the best witness for that. As you know, he's
15 not going to -- he's not available. We're
16 hoping he's available for February 10th. So
17 could we defer that question for him?
18 Because he did -- the honest
19 answer, he did -- and Ms. Gresock explained
20 he did the field work.
21 THE WITNESS (Gresock):
22 That -- that's correct. And under my
23 direction, and included in the Tetra Tech
24 report are -- are documents from All Points
25 Technology Corp., and -- and they are the

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1 ones that went onto the site and -- and did
2 the more recent examination of whether those
3 species were -- were present.
4 DR. BELL: Okay. I -- I was
5 aware that Mr. Gustafson wouldn't be here,
6 and I didn't mean to ask specific questions
7 about them. I just wanted to know what the
8 reference was, and you've given me the
9 reference, so I understand. Thank you.
10 Now I'd like to ask a
11 completely different question. My
12 understanding is that you have qualified for
13 the FCM next month. How is it that you can
14 apply without any approvals from the Council?
15 How do you -- how do you, under that
16 circumstance, make any representations about
17 performance?
18 THE WITNESS (Bazinet): So the
19 qualification process is a process that
20 begins in June of each year, and it concludes
21 in September with what's called a
22 "Qualification Determination Notification"
23 from ISO New England, and that takes into
24 consideration all critical path items on the
25 project, including the permitting process,

1 construction, procurement, et cetera.
2 So you file all that
3 information with your associated
4 qualification package, and it's the ISO's
5 determination whether or not they think
6 you'll be there in time to meet the capacity
7 commitment period, beginning June 1, 2018, in
8 this case.

9 DR. BELL: I -- I see.

10 So that -- in that
11 qualification process, you did or did not
12 include the extended deadline that you're
13 asking for in terms of construction?

14 THE WITNESS (Bazinet): We
15 did. We noted that we would be filing
16 applications with the Siting Council, the
17 Connecticut DEEP, noting that changes would
18 be required from the existing certificate to
19 implement the new design. And that -- that
20 process was expected to unfold over the --
21 over a period of 6 months or the 180 days,
22 that short a timeline.

23 DR. BELL: But my question is
24 the 200 and -- the 2019 extension that you're
25 looking for?

1 THE WITNESS (Bazinet): So the
2 June 1, 2019, extension is contemplating that
3 the project doesn't move forward in FCA9.
4 And in the event that the project -- I'm
5 sorry -- and for that reason we would still
6 like to pursue the project, continue the
7 permitting process and move it forward in
8 FCA-10, which would be a June 1, 2019,
9 delivery date.

10 DR. BELL: So then you
11 would -- you'd have to qualify separately for
12 FCA10?

13 THE WITNESS (Bazinet): We --
14 we would have to reenter the qualification
15 process, that's correct.

16 DR. BELL: Thank you.

17 My next questions have to do
18 with the CEA report. And I'm going to pick
19 up on Mr. Ashton's questions from the last
20 hearing when he was questioning you about the
21 gas availability.

22 On page 16 of the report, you
23 are -- you refer to certain projects that
24 are, you say, are advancing to increase the
25 gas supply into Connecticut.

1 The first one that you
2 mentioned is AIM. We know about that one.
3 That's mainly sponsored by the LDCs. And
4 they made a -- they suggested that they could
5 do even more than what they're doing, but
6 that was turned down. So we understand that.

7 The Tennessee project, you
8 note, is already fully subscribed. So now we
9 get to the one that I'm going to ask about
10 because I'm a little bit confused. You -- it
11 seems to be that you're saying there are two
12 parts to the third one. One is expanding the
13 Algonquin Gas Transmission Pipeline and the
14 Maritimes and Northeast pipeline.

15 Now, is the first one that you
16 mentioned, the -- expanding the Algonquin Gas
17 Transmission Pipeline, wouldn't that be just
18 the same as the AIM project which Spectra is
19 doing?

20 THE WITNESS (Bazinet): So the
21 AIM project is a project that is moving
22 forward, received its, I believe, final
23 environmental impact statement just recently
24 from FERC. But they have a -- a separate
25 project in its planning stages, as well,

1 called "The Atlantic Bridge Project," which
2 would be exactly very similar to AIM in that
3 it wouldn't be a complete rebuild or
4 anything, but it's incremental improvements
5 to their system to support additional
6 capacity on -- on their system.

7 DR. BELL: Is it through
8 Connecticut?

9 THE WITNESS (Bazinet): It
10 would be all along the Algonquin Interstate
11 Pipeline System, which runs from Lambertville
12 all the way up to the Maritimes
13 Interconnection in Northeastern Mass.

14 DR. BELL: But so far they
15 haven't filed with FERC for that?

16 THE WITNESS (Bazinet): Not
17 that I'm aware of, no.

18 DR. BELL: And would that
19 connect with the Maritimes and -- and
20 Northeast Pipeline or -- why are they
21 mentioned in the same breath in this report
22 on page 16?

23 (Pause.)

24 THE WITNESS (Bazinet): I'm
25 sorry. I -- I understand the question now.

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1 The Maritimes and Northeast
2 Pipeline expansion, along with the AGT
3 expansion, is something that's even more
4 preliminary than the Atlantic Bridge.
5 That -- that was a joint venture that was
6 announced amongst Northeast Utilities and
7 Spectra Corporation, I believe, in the third
8 quarter of 2014, or the fourth quarter of
9 2014.

10 The -- the status of that
11 project, we're -- we're not sure where that
12 sits at this point.

13 DR. BELL: Thank you.
14 My next question on the report
15 is: Are you familiar with the most recent
16 draft of the state's Integrated Resource Plan
17 which came out last month?

18 THE WITNESS (Bazinet): Yes.
19 DR. BELL: And have you
20 submitted comments on it during the comment
21 period?

22 THE WITNESS (Bazinet): The --
23 we will be submitting comments. They're due
24 by February 11th, I believe.
25 DR. BELL: And can you explain

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1 why your version of the future picture for
2 energy in Connecticut differs from the IRP's
3 version?

4 THE WITNESS (Powers): In what
5 aspect specifically?

6 DR. BELL: Well, I'll give you
7 a quotation from the IRP --

8 THE WITNESS (Powers): Okay.
9 DR. BELL: -- which is in the
10 executive summary on page 3.

11 The -- quote, The 2014 IRP
12 projects that Connecticut will continue to
13 have plenty of capacity through 2 -- 2024 and
14 beyond due to ample in-state generation,
15 low-demand growth and a new transmission
16 built to reduce congestion.

17 And in a note on the same page
18 the IRP says: "Connecticut is also expected
19 to have enough local fast start generation
20 capability to meet it's localized -- it's
21 locational forward reserve market
22 requirements through 2024. This is
23 Connecticut specific."
24 THE WITNESS (Bazinet): So
25 that statement refers to capacity in

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1 Connecticut. And capacity is, by definition,
2 a regional product in ISO New England. And
3 due to the fact that Connecticut is an
4 import-constrained zone, if the rest of the
5 pool, for example, is short of capacity, then
6 Connecticut, NEMA -- Northeastern
7 Massachusetts -- excuse me -- and
8 southeastern Mass and Rhode Island for this
9 coming off, it would all be deemed short of
10 capacity as well; in other words, those
11 import-constrained zones can never settle
12 below the rest of the pool because of their
13 designation as a import-constrained zone.

14 So while it's true that excess
15 capacity may exist within the state of
16 Connecticut, the region being short also
17 causes pricing and Connecticut to be
18 effectively deemed short.

19 THE CHAIRMAN: But if I can
20 interject. I think that runs counter to your
21 arguments which say the problem is more in
22 Connecticut, and Connecticut is where we need
23 to develop more capacity.
24 THE WITNESS (Bazinet): So
25 there's really two -- two items at play here.

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1 We -- we believe the region needs new
2 capacity, as well as Connecticut, and that's
3 because the State of Connecticut is relying
4 on in excess of two gigawatts of generation
5 that is 50 to 60 years old, not reliable with
6 respect to actually delivering energy, and
7 is -- is precisely what the program that ISO
8 New England has developed. The Pay for
9 Performance Program is aimed at provide --
10 incentive -- incentivizing generators -- I'm
11 sorry -- to come in and replace that
12 capacity.

13 So while it's true that
14 Connecticut is in a surplus situation today,
15 that's not expected to be the case in the
16 near future. And because of the regional
17 shortage, Connecticut is also suffering from
18 the same price spikes that the rest of the
19 region is suffering from, which is consistent
20 with the statements made in the draft IRP.

21 DR. BELL: The draft IRP, of
22 course, has different parts that I haven't
23 referred to. I referred to the executive
24 summary. So we'll leave that question and
25 the matter of whether it's consistent or not

1 in abeyance for a minute.
2 But I will pursue your answer,
3 your argument, and simply ask you: Would
4 your argument still apply after the
5 completion of the first NEEWS project, which
6 ups Connecticut's import capability, and
7 after the incorporation of the Lake Road gas
8 plant into the Connecticut supply picture,
9 which it hasn't been, until the second NEEWS
10 project that we approved?

11 THE WITNESS (Bazinet): Yes.
12 So while Connecticut's local sourcing
13 requirement will be met and will be enhanced
14 by the presence of that project, it doesn't
15 change the fact that the region is still
16 short of capacity, and as a result,
17 Connecticut is going to feel the same price
18 impacts of that shortage.

19 DR. BELL: I'm not contesting
20 that the region is short of capacity. I
21 think -- that was never my question. My
22 question simply had to do with Connecticut,
23 and I thought you answered it with respect
24 only to Connecticut. But now, I'm asking the
25 question still with respect to Connecticut.

1 Is -- is it -- does ISO consider Connecticut
2 import restrained with the incorporation of
3 Lake Road into the -- into our electrical
4 picture, our state electrical picture, which
5 it hasn't been before, and also with the
6 improvements from the NEEWS project which
7 would increase import and export limits?

8 THE WITNESS (Bazinet): Yes.

9 DR. BELL: That's ISO's
10 position?

11 THE WITNESS (Bazinet):
12 That -- that's correct. The incorporation of
13 the NEEWS project was felt as of, I believe,
14 2017. That will be felt as of 2017, so
15 that -- that Interstate Reliability Project,
16 the segment of the NEEWS that you're
17 referring to that incorporates Lake Road into
18 Connecticut, is deemed to be in effect as of
19 that date. So, yes, the answer is yes.

20 DR. BELL: Now, I'd like to go
21 to transmission because you mention that --
22 well, because the quotation that I just read
23 from the IRP mentions that Connecticut has
24 made investments in transmission to improve
25 the flexibility of its own supply picture.

1 At one point in the CEA
2 Report, it's argued that transmission
3 solutions take as much as five years to
4 implement. You outline to Docket 272 and
5 Docket 217, which were the Plumtree to
6 Norwalk and the Middletown to Norwalk
7 projects some time ago. And you -- you -- so
8 you sketch with those and you say those took
9 five years, whereas new generations, a new
10 generation solution, such as the proposed CPV
11 project, can happen much faster.

12 But my question is: Isn't
13 2014 to 2019 also five years?

14 THE WITNESS (Powers): You
15 know, projects vary in the time they take to
16 get built. They can -- generation, in some
17 cases, can take as long as transmission. In
18 this case, you have a resource that's already
19 near infrastructure and ready to be built.

20 So it -- you know, it's --
21 it's an open-ended question as to whether or
22 not transmission would take longer in this
23 case. Connecticut has made great strides in
24 getting transmission projects built.

25 The most recent ISO New

1 England study on local needs in Connecticut
2 show that there's still additional
3 transmission that needs to get built that
4 hasn't even been designed yet or proposed.

5 THE CHAIRMAN: I can't -- I
6 can't resist, though, interjecting that the
7 original project was approved around 2000,
8 and 15 years later still hasn't been built.

9 So just -- I don't really know
10 if that requires a response, if you want to,
11 but that certainly flies in the -- sort of
12 counter to your argument about how fast these
13 projects move forward.

14 THE WITNESS (Bazinet): So --
15 so I think -- I think what the -- the
16 five-year cycles are referring to is the
17 completion of development and planning. And
18 in this particular case, this project has
19 been in the planning stages for quite some
20 time, but it's been ready for construction
21 for quite some time but for market factors
22 that have prohibited that.

23 The impetus to move the
24 project forward now is based on a market
25 signal, a pricing signal, that there is need

1 for new generation in ISO New England. And
2 assuming this process is resolved in the time
3 frame that we projected on our schedule, the
4 implementation of the project will take --
5 take place well within the five-year time
6 frame.

7 DR. BELL: Thank you.

8 We'll move to a different
9 question. On page 22, you're talking about
10 their removal of the -- or not -- you're
11 talking about often reviewed trigger prices,
12 and in that context, you're talking about
13 certain resources that would or would not be
14 considered in the -- to -- to be exempted
15 from certain parts of the ISO market and very
16 complicated, but my question is quite simple.

17 You mention "resources with
18 state-mandated contract built pursuant to a
19 state directive." That's a quote from what
20 you have on page -- the type of resource
21 you're referring to on page 22. Can you give
22 us a couple of examples of such resources
23 just so we understand? What are these
24 resources that are -- are receiving
25 out-of-market inputs that would -- are

1 in Connecticut, one or two, could you give me
2 those examples?

3 THE WITNESS (Powers): We
4 can -- we can follow up with some specific
5 names of facilities. But there were some
6 from Project 150, I believe, in the past,
7 from Connecticut efforts to get generation
8 built and signed contracts with utilities.

9 Kleen Energy, for example, had
10 a contract for the output of the facility,
11 and they -- they bid into the market without
12 an exemption.

13 DR. BELL: And so effectively,
14 in -- in -- well, have you -- do you have
15 another example?

16 MR. SMALL: Dr. Bell, excuse
17 me. On page 6 of our petition, there's
18 several plants listed, Kleen Energy being
19 one, Waterbury Generation, the two GenConn
20 projects, and the SCG New Haven Harbor
21 Peaker. Those were -- those were examples
22 that we listed. And then, Ms. Powers also
23 mentioned the Project 150 as well.

24 So there -- there are a number
25 of them that the Council should be -- you

1 considered not appropriate to exempt from --
2 from the ISO rule?

3 THE WITNESS (Powers): This --
4 this particular facet of the market where
5 there's no exempt -- exemption stems from an
6 issue down in PJM, where there were state
7 efforts to get generation built, and they
8 signed long-term contracts. Those generation
9 assets actually bid into the market at a zero
10 floor price.

11 So what -- what this is --
12 this is designed to do is say, regardless of
13 whether you have a contract for the output of
14 the power, you still need to bid in in
15 accordance with the rules of every other
16 generator, regardless of whether you have
17 someone buying the output.

18 DR. BELL: I understand that
19 this came out of a court case in PJM. My
20 question is: Is there an example in
21 Connecticut of a resource that was built with
22 state-mandated contracts pursuant to a state
23 directive that bid in at a zero or low market
24 price on the basis of that state-mandated
25 contract and could you -- if there were any

1 know, has had lots of experience with.

2 DR. BELL: Okay.

3 And so you're saying, under
4 this new market rule, that they would not be
5 required -- they would not be allowed to bid
6 in at a low price?

7 THE WITNESS (Powers): That's
8 correct.

9 DR. BELL: And what price
10 would they be required to build -- to bid in
11 at, sort of, you know, just generically?

12 THE WITNESS (Bazinet): So
13 that's subject to a unit specific analysis,
14 and that -- that -- there's a threshold set
15 by the Internal Market Monitor for ISO New
16 England at which a review process begins.

17 So assuming they would -- a
18 specific resource, whether it's combustion
19 turbine technology or combined cycle -- cycle
20 technology, would elect or would like to bid
21 below a certain price threshold, as set by
22 ISO New England, the internal market --
23 market monitor for ISO New -- New England
24 would need to review that bid and -- yeah --
25 and -- and they would need to approve that.

1 As an example, that -- for
2 combustion turbine technology, that limit is
3 now roughly -- I think it's, like, \$13 and
4 change per kilowatt month. So anything below
5 that would be subject to review by the
6 Internal Market Monitor. For combined cycle
7 technology, that set at \$8.87 cents per
8 kilowatt month -- I'm sorry -- for new
9 resources.

10 DR. BELL: All right. Thank
11 you. I understand that.

12 Back to the report on -- on
13 another part of it. On pages 18 to 25 are a
14 section of the report where -- that -- that
15 describes that the existing fleet of
16 generators in New England isn't performing up
17 to par. And you quote, on page -- on one of
18 those pages -- an ISO white paper saying
19 that, quote, On average, New England's
20 non-hydro plants delivered less than
21 60 percent of the additional power required
22 by ISO.

23 In sum, at times of greatest
24 need, many resources are delivering far below
25 the performance ability represented in their

1 capacity problem in New England be solved by
2 getting the existing generation to perform at
3 the level of a hundred percent of their
4 claims in the forward capacity market, or
5 perhaps just up to 84 percent, which is
6 what -- which is the level of delivery that
7 you say, on page 33, has been accomplished by
8 demand response resources?

9 THE WITNESS (Powers): I think
10 there are some things they can do to improve.
11 I think there's -- there's some improvement
12 in maintenance practices and things like
13 that. There are just some realities with
14 some of the generators that we have in
15 existence today. They're in the 40- to
16 60-year-old range. The technology just is
17 not -- it's -- it's old technology that's not
18 capable of being fast-start.

19 You've got a lot of nuclear
20 units. You've got a lot of coal units, older
21 oil units. And regardless of how robust they
22 make their maintenance practices, the design
23 of those units is not such that you can make
24 them quick-start.

25 They also have realities in

1 supply offers.

2 MR. SMALL: Just for
3 reference, that's on page 25 of the
4 Concentric Energy Report.

5 DR. BELL: Thank you.

6 The suggestion is that these
7 resources can improve by vary -- in various
8 ways, among others, and those are listed
9 on -- also on page 25. One is by upgrading
10 to dual-fuel capability, signing firm gas
11 contracts, adding fast-start capabilities, or
12 just improving their maintenance and staff
13 practices. So those are four examples of
14 what their existing resources could do.

15 So, basically, these pages, 18
16 to 25, which ends with this -- in this
17 culmination of what ISO charged them with,
18 basically says that the existing generators
19 in New England can do a lot better with what
20 they've got. And, arguably, the new market
21 rules have been put in place to reward them
22 for doing better. That's the price signal --
23 one of the price signals that they're getting
24 with the new market rules.

25 My question is: Why can't the

1 terms of their fuel. We had frozen coal
2 piles. We had people running out of oil
3 because they have -- they only have a certain
4 amount in their tanks.

5 So there -- there are things
6 you can do to improve, but there are just
7 realities with the existing generation fleet
8 that you can't overcome with -- with
9 improving processes.

10 DR. BELL: Well, we have some
11 experience in Connecticut, for instance, with
12 generators that can easily go back -- well,
13 maybe not too easily -- but with some expense
14 can go back to do dual-fuel capability, which
15 they all -- gas plants which all have that
16 capability, but then came to us and asked to
17 have relief from switching back to oil. That
18 could be accomplished with investment.

19 You talk about frozen coal
20 piles. With investment, coal -- even coal
21 piles -- and we don't have very much coal in
22 Connecticut, so we shouldn't even be talking
23 about this really. So maybe we should just
24 leave that aside.

25 But there -- there are plants

1 that have, in Connecticut, built peakers in
2 place of old coal fired originally, maybe, or
3 -- then oil-fired units, like, Middletown has
4 built peakers, and so forth. So I'm -- I'm
5 hearing what you say about the, sort of,
6 physical limitations of what they can do, but
7 with investment, they can actually invest and
8 create new -- they can put in new engines.
9 They can create new opportunities.

10 So I'm still not quite
11 understanding why the existing generators, if
12 given a correct signal, which they certainly
13 are being given now, couldn't -- if they're
14 only at 60 percent, couldn't really ramp up
15 their performance quite a bit.

16 THE WITNESS (Bazinet): So
17 there -- there's very little that a plant, an
18 old oil-fired steam boiler can do to
19 reconcile its performance with the Pay for
20 Performance Program being implemented by ISO
21 New England. There's a couple reasons for
22 that.

23 The projects that they would
24 need to implement are extremely capital
25 intensive, and there is no definitive cost

1 year. And that's just something they can't
2 resolve by upgrading the unit.

3 They could, as you noted,
4 replace units. But in that instance, it
5 would be effectively building a new plant as
6 we're recommending here today.

7 The -- the Towantic Power
8 Plant would be the most efficient unit in New
9 England, based on its design criteria, and
10 would be, on average, an overperformer in
11 this new regime.

12 DR. BELL: Thank you.

13 I just have one more question
14 along these lines. I understand that
15 dual-fuel capability is important in the
16 picture that we're in in New England. But in
17 a -- in an even larger picture with regard to
18 seasons or gas availability at the moment, or
19 other issues that have to do with dual-fuel
20 capability, we have New England that's
21 between -- somewhere between 40 percent and
22 50 percent dependent on natural gas for its
23 electricity. And we have Connecticut that's
24 somewhere between 30 percent and 40 percent
25 dependent, depending on what you count in and

1 recovery mechanism for those capital programs
2 that they would need to implement. There --
3 there's a Pay for Performance Program which
4 has penalties as well as incentives.

5 That -- the nature of that
6 program is that, in these scarcity events
7 they project, 20 to 40 hours a year there are
8 scarcity events. They implement a --
9 incentive to the tune of somewhere between
10 2,000 and 5,400 dollars per megawatt hour, in
11 rough numbers, and it scales up over time.

12 Whether you're off --
13 you're -- no matter what the excuse is for
14 your unavailability or nonperformance, it
15 doesn't matter if -- if it's because of
16 economic dispatch. So these -- these plants
17 are 12 to 14,000 heat rate plants. And just
18 by nature of that, they just don't run a
19 whole lot. And when they do -- or pushing
20 the button, I should say, is a tenuous
21 proposition.

22 So they're -- they're faced
23 with 20 to 40 hours a year of potential
24 penalties to the tune of 2,000 to 5,000
25 dollars a megawatt hour depending on the

1 so forth, but I think those ranges or --
2 those are -- you mentioned ranges like that
3 in -- in the reports, and I think those are
4 fair ranges.

5 And these -- this amount of
6 dependency, particularly the larger amount of
7 dependency in New England, which is where
8 Towantic is really operating, has become a
9 problem for a great many people who are
10 looking at the energy markets.

11 And my question is: In this
12 picture, how does the addition of a large
13 natural gas plant help achieve fuel
14 diversity?

15 THE WITNESS (Powers): I -- I
16 think it's one answer to a myriad of issues
17 we have in New England with the types of
18 generation we're building. I think this is a
19 dual-fuel -- dual-fuel unit that will make
20 steps towards becoming more diverse.

21 You know, one of the issues
22 with the market is it -- it doesn't send the
23 signal for a particular type of resource. It
24 sends a signal for -- as the ISO is -- is
25 striving to do here, dependable flexible

1 generation.
2 So, you know, the ability of
3 New England to achieve fuel diversity is --
4 is -- it's a difficult question because
5 markets aren't designed to send signals for
6 those. You know, we need X amount of coal.
7 We need X amount of oil.
8 The fact that this is dual
9 fueled does help the situation in New
10 England, in terms of fuel diversity, and
11 arguably, we have -- we have more work to do
12 in that area. But -- but backup oil gets us
13 on the path to where we need to go in terms
14 of having flexible, diverse resources.
15 DR. BELL: Thank you.
16 Those are my questions,
17 Mr. Chair.
18 THE CHAIRMAN: Thank you.
19 I understand Mr. Ashton has
20 some additional questions.
21 MR. ASHTON: If I could find
22 the microphone. Oh, there it is.
23 With regard to the issue of
24 too much reliability on one fuel or another,
25 what was the situation in New England a few

1 years back, ten years back? What was the
2 dominant fuel?
3 THE WITNESS (Powers): Ten
4 years back it was probably -- God, we've been
5 through coal. We've been through nuclear.
6 We've been through oil. We seem to fall in
7 love with a fuel every --
8 MR. ASHTON: Right.
9 THE WITNESS (Powers): -- ten
10 years. Right.
11 MR. ASHTON: What -- what --
12 so what was -- was it oil?
13 THE WITNESS (Powers): I think
14 it was probably -- was it oil?
15 Yeah.
16 MR. ASHTON: And how many
17 times has there been an embargo placed on
18 natural gas into New England?
19 THE WITNESS (Powers): I have
20 no idea.
21 MR. SMALL: Are you talking
22 about the New -- the two Arab -- new Arab oil
23 embargoes, Mr. Ashton?
24 MR. ASHTON: Yes.
25 MR. SMALL: Okay. Thank you.

1 Some of our witnesses are --
2 MR. ASHTON: We've never had
3 an embargo on natural gas because it's a --
4 it's a North American fuel, isn't that true,
5 or substantially all?
6 THE WITNESS (Powers): That's
7 right.
8 MR. ASHTON: And we've had how
9 many embargoes on oil?
10 THE WITNESS (Powers):
11 Numerous.
12 MR. ASHTON: And I think
13 Mr. Small hit the nail on the head. He's
14 very modest, though.
15 MR. SMALL: No, I think -- I
16 think some of our witnesses, Mr. Ashton, are
17 too young to remember them, unlike me.
18 MR. ASHTON: Okay.
19 And did we have a problem with
20 a freeze-up affecting fuel deliveries in New
21 England back 20-odd years ago because I --
22 you're -- yeah -- you're all pretty young for
23 that, I guess. Remember New Haven -- New
24 York harbor freezing up, Long Island Sound
25 freezing so no fuel deliveries -- liquid fuel

1 deliveries could be made? Is that correct?
2 THE WITNESS (Powers): Well,
3 I -- I used to work at Bridgepoint, and we
4 used to have -- the ships couldn't come in,
5 in the wintertime with coal.
6 MR. ASHTON: Right.
7 So the fact that they may be
8 leaning more on natural gas is not
9 necessarily a problem, is it?
10 THE WITNESS (Powers): Correct.
11 MR. ASHTON: We avoid sending
12 -- dependency on overseas oil from unstable
13 governments. Natural gas is environmentally
14 much better than oil and certainly better
15 than coal. So it's not a bleak picture if
16 you use natural gas, is it?
17 THE WITNESS (Powers): No.
18 That's correct.
19 MR. ASHTON: Let me change the
20 subject a little bit.
21 MR. SMALL: Mr. Ashton, just
22 before you do that, I would just note that
23 the question you asked about the current fuel
24 mix versus prior fuel mixes, there are two
25 figures in --

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1 MR. ASHTON: Yeah.
2 MR. SMALL: -- the Concentric
3 Report. They are on page -- they're Figures
4 1 and 2, on pages 5 and 6.
5 MR. ASHTON: Okay. So --
6 so --
7 MR. SMALL: It gives the --
8 and natural gas has gone from 18 to
9 43 percent, and oil has gone from 34 percent
10 down to 22 percent, as an example.
11 MR. ASHTON: So really, in --
12 in terms of resources for fuel, we have three
13 choices: Oil, natural gas, nuclear -- four
14 choices -- and coal.
15 I haven't seen many hands
16 raised for coal-fired plants in New England.
17 I know there's been a lot of testimony about
18 how terrible they are. No one is building
19 nuclear plants in New England. In fact, I
20 think there are only a couple in the country
21 that are being built. They've got some
22 difficulties.
23 So the option for fuel
24 diversity is nil in any quantitative -- in
25 any serious quantity. Is that fair to say?

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1 THE WITNESS (Bazinet):
2 Absolutely.
3 MR. ASHTON: Okay.
4 Let me go back to the plant.
5 I asked a number of questions last time about
6 various aspects of the plant. I want to
7 continue that a little bit.
8 Have there been any soil
9 borings taken on that site, and if so, what
10 sort of soils do they indicate?
11 THE WITNESS (Jones): Good
12 morning. It's Curt Jones from Civil One.
13 There were some soil borings
14 taken on the site, oh, probably -- I'd have
15 to look up the date, but it was a limited
16 geological investigation.
17 There was some -- there was a
18 few holes up in the north. The north end of
19 the site indicated that's the ledge in the
20 35-foot-plus range. So, generally, as far as
21 the excavation goes, we expect to be in
22 glacial till with very limited quantities of
23 rock encountered.
24 MR. ASHTON: And is that
25 glacial till -- well, glacial till well

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1 drained, gravelly-type material?
2 THE WITNESS (Jones): No, sir.
3 MR. ASHTON: What is it?
4 THE WITNESS (Jones): It's a
5 fine-grained sand and silty mixture.
6 MR. ASHTON: It has no
7 commercial value or has some?
8 THE WITNESS (Jones): Very
9 limited commercial value. It -- it is more
10 suitable to mass fills, you know, to export
11 it off the site. Moisture content becomes a
12 problem because it's so fine-grained, it
13 doesn't drain. And in order to compact it
14 properly, it does have to be near the optimum
15 moisture content.
16 MR. ASHTON: So do your major
17 structures have to go down to bedrock for
18 proper footing?
19 THE WITNESS (Jones): No, sir.
20 MR. ASHTON: So I'm a little
21 bit confused. You don't need to go to
22 bedrock, but the soil is not well-drained and
23 not very stable. Is that correct?
24 THE WITNESS (Jones): No. No,
25 I did not say unstable. The soils are stable

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1 but not well-drained. So there may be some
2 dewatering, perhaps, during the excavation.
3 Groundwater control will be necessary with
4 temporary dewatering salts.
5 MR. ASHTON: So these would be
6 spread footings or something like that?
7 THE WITNESS (Jones): That's
8 my understanding. I haven't seen any
9 detailed designs.
10 THE WITNESS (Donovan):
11 Mr. Ashton, the feedback --
12 based on the Geotech Report, the initial
13 Geotech report, and our review of our local
14 and -- local engineering, the owner's
15 engineer, we expect that the major
16 foundations will be spread footer design and
17 not pile supported.
18 MR. ASHTON: And the turbine
19 pedestal would be pile or spread footing?
20 THE WITNESS (Donovan): Spread
21 footing.
22 MR. ASHTON: Okay.
23 In reading the -- this is
24 exhibit -- bear with me just a second -- the
25 Late-File 2 which gets into the discussions

14 (Pages 159 to 162)

1 of the FAA and conflicts over penetration of
2 FAA space, we get into some very small
3 penetrations.
4 Is there any reasonable way
5 that those penetrations can be reduced so
6 that you're not penetrating FAA space?
7 For example, the air handling,
8 I think, is 6 feet, as I recall. Is that
9 something that is given information available
10 today, you go back and take another look at
11 to see if you can get rid of the conflict?
12 THE WITNESS (Donovan): We
13 would -- we would absolutely take a look at
14 those items to see if there are ways that we
15 can minimize our penetrations of that surface
16 area.
17 The specific question you
18 asked was related to the air intake
19 structure. And for the air intake structure,
20 we're at the minimum height. I mean, we have
21 minimized the height of the air intake
22 structure.
23 MR. ASHTON: Minimized it how?
24 THE WITNESS (Gresock): And --
25 and -- and we have looked very carefully at

1 orientations. No practical way was
2 identified. And as we examined the
3 surroundings of the site, we recognized that
4 there are existing structures that already
5 penetrate that VFR horizontal surface and
6 that the ground elevation does as well.
7 We also know that the
8 approvals that were granted by the FAA
9 incorporated penetrations both into this area
10 and additional areas previously. So --
11 MR. ASHTON: You're -- you're
12 anticipating some of my next questions.
13 THE WITNESS (Gresock): Sure.
14 Sorry.
15 MR. ASHTON: The tree cover
16 around, you -- trees can grow up to, in some
17 cases, in some places, a hundred foot or more
18 high. And they would -- and if they did, in
19 this instance, they would presumably all
20 penetrate FAA horizontal airspace. Right?
21 THE WITNESS (Gresock):
22 They -- they may well, right.
23 MR. ASHTON: And my friends at
24 Connecticut Light & Power have constructed a
25 double-circuit transmission -- quad

1 whether we have the potential to minimize.
2 That's one of the reasons we relocated the
3 stacks to be further from the airport. It's
4 one of the reasons that we reduced the
5 elevation of the -- of the finished site
6 grade by 1 foot. But the VFR horizontal --
7 yeah -- and, of course, looked at reducing
8 the heights of -- of various structures,
9 including the air-cooled condenser and -- and
10 some of the buildings.
11 But the VFR horizontal
12 surface, which is the surface that's
13 penetrated, is at a -- it extends 5,000 feet
14 from the runway at a height of 876 feet above
15 mean sea level. And given the -- given the
16 requirements of the design, there wasn't a
17 possibility of bringing -- bringing those
18 features lower.
19 MR. ASHTON: There was no
20 possibility of design change to bring them
21 in, within, or there's no tech -- no
22 practical change?
23 THE WITNESS (Gresock): We
24 certainly considered it and -- and considered
25 available -- available structures and

1 circuit -- three-circuit transmission line
2 right by the airport. And some of those
3 structures, I presume, are in the --
4 penetrating the airspaces?
5 THE WITNESS (Gresock): We
6 have surveyed five towers near the site that
7 penetrate that.
8 MR. ASHTON: Okay.
9 And I wouldn't be a bit
10 surprised -- I haven't done the
11 investigation -- but I wouldn't be a bit
12 surprised that there are other commercial
13 structures that similarly penetrate it, so it
14 is not an absolute.
15 Is a penetration an absolute
16 prohibition against construction, in any --
17 in any circumstance?
18 THE WITNESS (Gresock): No,
19 it's not.
20 The FAA identifies structures
21 that penetrate as obstacles, and then they're
22 further considered to determine whether or
23 not there's risk associated with it.
24 MR. ASHTON: They well may
25 just say just light the structure and that's

1 enough.
2 THE WITNESS (Gresock): We
3 certainly expect they will say light the
4 structure.
5 MR. ASHTON: Okay. We don't
6 know that, but we haven't got --
7 THE WITNESS (Gresock): Right.
8 MR. ASHTON: -- the FA here --
9 THE WITNESS (Gresock): Right.
10 MR. ASHTON: -- FAA here to
11 query them.
12 THE WITNESS (Gresock): Right.
13 MR. ASHTON: So that's -- that
14 remains to be seen.
15 One of the issues that was
16 raised last time was the possibility of
17 planes flying through the plume. And I --
18 I -- it may be that there are interrogatories
19 on the way to you about the plume, but let me
20 just poke a little bit at it.
21 Is the flight path of planes
22 ordained, to your knowledge, or can it be
23 adjusted depending upon specific
24 circumstances?
25 THE WITNESS (Gresock): There

1 THE WITNESS (Gresock): Yeah.
2 So, at Brainard, there are two existing
3 stacks located within 2,790 feet from the
4 approach end of Runway 20.
5 MR. ASHTON: And is even --
6 and is it even closer on the takeoff end?
7 (Pause.)
8 THE WITNESS (Gresock): Okay.
9 So the -- the departure for Runway 2 is the
10 same as Runway 20. So, yes, those -- those
11 same stacks would -- would be approximate to
12 both departure and takeoff.
13 MR. ASHTON: I must -- I got
14 the -- the answer got lost in the air. Say
15 it again?
16 THE WITNESS (Gresock): It's a
17 single runway with -- with two different
18 designations. In one direction, they would
19 be taking off; and in one direction, they
20 would be landing.
21 MR. ASHTON: Right.
22 And a plane approaching from
23 the south would have pretty good clearance
24 over those stacks, would it not, except for
25 the MD -- the MDC's plant would be the

1 are certain flight patterns and paths that
2 are identified. Within some of those areas,
3 there's a lot of latitude to avoid potential
4 obstructions.
5 MR. ASHTON: Okay.
6 Are you aware of any power
7 plants in Connecticut that are proximal to
8 airports?
9 THE WITNESS (Gresock): There
10 are several.
11 MR. ASHTON: And they are?
12 THE WITNESS (Bazinet):
13 Brainard, Sikorsky.
14 MR. ASHTON: Brainard is
15 Hartford.
16 THE WITNESS (Bazinet):
17 Correct. And Sikorsky in
18 Bridgeport.
19 MR. ASHTON: And let's --
20 let's talk about these for a second.
21 Brainard is Hartford, and
22 what's the conflict at Brainard?
23 I'll be happy -- I'm not
24 trying to rush you. I want competent
25 answers.

1 closest one?
2 THE WITNESS (Gresock): Right.
3 MR. ASHTON: And for a plane
4 taking off from the south to the north, that
5 goes right by the South Meadow plant, doesn't
6 it?
7 THE WITNESS (Gresock): There
8 definitely are stacks, not only within the
9 VFR pattern airspace for both horizontal and
10 conical surfaces, but they're also within the
11 circle to land on the runways.
12 MR. ASHTON: Yeah.
13 THE WITNESS (Gresock): And
14 certainly positioned very close to where the
15 planes would be coming out and going in.
16 MR. ASHTON: And do you know,
17 roughly, how old that airport is and how old
18 the conflict is? Do you have any idea?
19 I'll take the qualitative
20 answer if you think --
21 THE WITNESS (Gresock): For --
22 for quite a while. For quite a while.
23 MR. ASHTON: Would you suspect
24 that it might go well back before the
25 first -- the Second World War?

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1 THE WITNESS (Gresock): Yes.
2 MR. ASHTON: Okay. I'll let
3 it go.
4 What's another conflict, if
5 you know?
6 THE WITNESS (Gresock): At
7 Sikorsky, there is a very tall existing stack
8 that's located 24 nautical miles -- I'm
9 sorry -- 2.4 miles -- nautical miles from the
10 approach end of Runway 11. And that's within
11 the circle to land for Category D aircraft.
12 It's within the conical surface.
13 And because it stands at -- at
14 511 feet above mean sea level, it -- it
15 penetrates that conical surface for quite a
16 bit.
17 MR. ASHTON: The top of the
18 stack is 500 feet -- 511 feet up?
19 THE WITNESS (Gresock): Above
20 mean sea level.
21 MR. ASHTON: Okay.
22 And do you know what that
23 stack is? Where -- who it belongs to.
24 THE WITNESS (Bazinet): That's
25 the Bridgeport Harbor coal plant.

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1 MR. ASHTON: So -- okay. And
2 that's been there for a few years?
3 THE WITNESS (Bazinet): Since
4 the fifties.
5 MR. ASHTON: I'm sorry?
6 THE WITNESS (Bazinet): Since
7 the fifties.
8 MR. ASHTON: Fifty years?
9 Okay. And Sikorsky goes back to the Second
10 World War time too, something like that.
11 Any other conflicts you can
12 think of?
13 THE WITNESS (Gresock): Those
14 are ones we've looked at specifically. But I
15 do know that we had identified that other
16 airports exist in Connecticut, and of course,
17 many other locations that have -- have stacks
18 very close by.
19 MR. ASHTON: Would Tweed New
20 Haven have a conflict with New Haven Harbor
21 plant?
22 THE WITNESS (Gresock): That
23 was -- that was one. We -- we didn't pull
24 the information on that, but there is a
25 stack near that one as well.

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1 MR. ASHTON: That's a tall
2 stack, isn't it, about a 500-footer?
3 THE WITNESS (Gresock): Yes,
4 yes.
5 MR. ASHTON: So the fact that
6 there is a measure of conflict with an
7 airport is not necessarily an obstacle to
8 prevent it. Is that a fair conclusion?
9 THE WITNESS (Gresock): I
10 think the FAA would always consider that it's
11 an obstacle, but it isn't necessarily a
12 safety --
13 MR. ASHTON: Okay.
14 THE WITNESS (Gresock): --
15 hazard.
16 MR. ASHTON: Does emission
17 from the plume -- I may -- I'm going to ask
18 some of the questions that may possibly be in
19 an interrogatory already, but I'm -- I'm not
20 going to be here for long, and I'd like to
21 know what the answers are.
22 Has the -- have you done
23 studies to look at the velocity of exhaust
24 gases coming out of the stack as to what they
25 are at the top of those 150-foot stacks and

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1 how that velocity changes as the effluent
2 rises?
3 THE WITNESS (Gresock): We
4 know what the velocity is as it exits the
5 stack. We have not yet done studies to
6 indicate how that changes with distance. But
7 this project, of course, has been included in
8 historical studies, both by SAIC and by MITRT
9 in the past, that provided not necessarily
10 exact numerical values at distances, but it
11 evaluated the way in which the plume would
12 exhaust from the facility.
13 And in taking a look at the
14 inputs that were used in those prior models,
15 our project information is lower in -- our
16 current project information is lower in
17 temperature and a little lower in velocity as
18 well. And so we would expect that any impact
19 would be similar or -- or less than what
20 we're seeing in those historic reports.
21 MR. ASHTON: That's a nice
22 answer, but it lacks crispiness.
23 What kind of velocities are we
24 talking about at the stack exhaust, and
25 temperatures?

1 THE WITNESS (Gresock): The --
2 the exhaust exit velocity temperature is
3 183 degrees Fahrenheit.
4 MR. ASHTON: 183. Okay.
5 THE WITNESS (Gresock): And
6 the exhaust exit velocity is 56.2 feet per
7 second.
8 MR. ASHTON: Now, if I
9 remember my 56.2 feet per second, that's
10 something in the range of 30 miles -- that's
11 not me -- 30 miles an hour, something like
12 that? Thirty-five miles an hour?
13 THE WITNESS (Gresock): It's a
14 little more than 35 miles an hour.
15 MR. ASHTON: Okay.
16 Do you know what the wind
17 velocities were a couple days ago around this
18 area?
19 THE WITNESS (Gresock): They
20 were high.
21 MR. ASHTON: I'm struck with
22 35 in the context of a real life situation.
23 THE WITNESS (Gresock): I -- I
24 was stranded in Ohio so I don't know what
25 they were here.

1 THE WITNESS (Bazinet): Gusts
2 over 65 miles an hour.
3 MR. ASHTON: Okay.
4 So we're dealing with, at the
5 stack exit -- at the stack exit, a
6 temperature which is -- what was it again --
7 150?
8 THE WITNESS (Gresock): A
9 hundred and eighty-three.
10 MR. ASHTON: A hundred and
11 eighty-three.
12 And a velocity that is not
13 uncommon in the area of real meteorology.
14 Isn't that fair to say?
15 THE WITNESS (Gresock): That's
16 correct.
17 MR. ASHTON: Do you have an
18 opinion -- and I would like more specific
19 information, Mr. Small, as a Late-File, if
20 you don't have it -- do you have an opinion
21 as to how rapidly that temperature and
22 velocity changes as you go from the stack
23 upward vertically?
24 THE WITNESS (Gresock): Yeah.
25 I think it -- it varies, of course, on the --

1 based on meteorological condition.
2 MR. ASHTON: All right.
3 THE WITNESS (Gresock): And we
4 can take a look at some of --
5 MR. ASHTON: That's fair.
6 Let's talk -- let's talk still air, which is
7 probably the worst --
8 THE WITNESS (Gresock): Yeah.
9 MR. ASHTON: -- worst case.
10 Would you agree with that?
11 THE WITNESS (Gresock): The --
12 the MITRT -- yes, the MITRT model, back in
13 2012, certainly assumes that still air is --
14 is a maximum impact case, and took a look at
15 this project from -- from the perspective of
16 that very conservative view.
17 And in terms of the -- the
18 median height of the plume above the stack,
19 where they were identifying potentially
20 severe turbulence, that median height ranged
21 from 28 to 29 feet above stack top.
22 MR. ASHTON: Twenty-eight or
23 29 feet?
24 THE WITNESS (Gresock): Yeah.
25 MR. ASHTON: So you're up

1 about 180 feet. Is that -- that correct?
2 THE WITNESS (Gresock): Right.
3 MR. ASHTON: My arithmetic is
4 correct?
5 THE WITNESS (Gresock): And
6 there, of course, were percentile events that
7 had the plume extending even -- even farther
8 above the stack top. The 90th percentile
9 height ranged from 126 to 133.
10 MR. ASHTON: Has the project
11 run the diffusion models on the plume looking
12 at downstream diffusion?
13 THE WITNESS (Gresock): We
14 have not run the fusion model.
15 MR. ASHTON: Okay.
16 Is it possible to run air
17 models?
18 THE WITNESS (Gresock): Oh,
19 did you say diffusion?
20 MR. ASHTON: Diffusion, yeah.
21 THE WITNESS (Gresock): Oh,
22 diffusion.
23 MR. ASHTON: How the plume
24 dissipates.
25 THE WITNESS (Gresock): Oh, of

1 course we have done that as it pertains to
2 the air permit.
3 MR. ASHTON: And has that been
4 filed with the Council?
5 THE WITNESS (Gresock): It
6 has.
7 MR. ASHTON: Okay.
8 I think that's it for, at
9 least --
10 MR. SMALL: Mr. Ashton,
11 just -- just -- the -- the MITRT and the SAIC
12 documents that Ms. Gresock referred to are on
13 Mr. Pietrorazio's administrative notice list,
14 so they are -- they'll be part of your
15 record.
16 MR. ASHTON: Okay. Thank you.
17 THE CHAIRMAN: Okay. Thank
18 you.
19 Continue -- Dr. Klemens, do
20 you --
21 DR. KLEMENS: I just -- thank
22 you, Mr. Chairman.
23 I have a few questions. I'm
24 going to hold most of my questions for when
25 Mr. Gustafson is here on the 10th of

1 direction and speed.
2 DR. KLEMENS: But you also
3 testified that this would all dissipate at
4 the 28 to 29-foot level?
5 THE WITNESS (Gresock): That's
6 the medium height -- median height of the
7 plume above the stack that the MITRT report
8 identified as -- as being an area where
9 turbulence would exist.
10 DR. KLEMENS: Up to 28 to
11 29 feet above the top of the stack?
12 THE WITNESS (Gresock):
13 Correct.
14 DR. KLEMENS: And I don't know
15 much about air traffic control, but do you
16 generally find planes flying 28 to 29 feet
17 above an obstacle?
18 THE WITNESS (Gresock): Planes
19 should not be flying in that airspace.
20 The -- the VFR traffic pattern altitude in
21 the area is 1700 feet above mean sea level,
22 which would place planes at 720 feet above
23 the stack top.
24 There's also a recommendation
25 from -- yeah.

1 February, but I do have some questions.
2 Following on this discussion of the velocity
3 of the plume, we discussed the concept of
4 velocity -- of -- of meteorological velocity.
5 But in your -- do we have
6 winds coming straight up from the ground as
7 part of normal meteorological events at a
8 90-degree angle as from the stack?
9 Do you understand what I'm
10 saying?
11 THE WITNESS (Gresock): No.
12 DR. KLEMENS: Well, when the
13 winds blow across Connecticut, as they come
14 they blow lateral -- they blow parallel to
15 the ground or in some formation. As far
16 as -- I don't think, when you have weather
17 that it comes straight up from the ground, is
18 that correct, unless it's a tornado or
19 something?
20 THE WITNESS (Gresock): Yeah,
21 not straight up, although there's uplift
22 that -- that can occur. And, of course, I
23 know that the MITRT model incorporates three
24 years' worth of meteorological data to take
25 into account the variability of that wind

1 There's -- there are -- there
2 are different heights for -- for different
3 conditions. And -- and during -- I lost my
4 notes.
5 Go ahead.
6 THE WITNESS (Bazinet): For --
7 for VFR conditions, the recommendation from
8 the AOPA must be --
9 THE WITNESS (Gresock): And
10 that's the Aircraft Owners and Pilots
11 Association.
12 THE WITNESS (Bazinet): Excuse
13 me. Yeah.
14 THE WITNESS (Gresock): Yeah.
15 So -- so visual flight rule conditions means
16 meteorological visibility must be clear
17 enough to see. And there are two pattern
18 altitude recommendations there that AOPA --
19 that Andy is referring to -- is a
20 recommendation that aircraft fly at 1803 feet
21 above mean sea level, which would -- which
22 would be 823 feet above our stack top
23 elevation.
24 The airport manager
25 recommendation during VFR conditions is that

1 the 1700 feet above mean sea level, which
2 would be placing the minimum heights at
3 700 feet above stack top elevation. There is
4 an IF -- IFR condition which is what aircraft
5 would use when they're -- when they're using
6 their various equipment instead of
7 visibility. And the FAA defines a circling
8 minimum descent area which would put traffic
9 a minimum of 300 feet above the stack tops.

10 There is a hypothetical missed
11 approach area condition that establishes the
12 very lowest that we would expect any aircraft
13 would be over the stack, which is -- which is
14 at 277 feet above the stack. But that is a
15 calculation that's based on using a whole
16 series of worst-case assumptions in terms of
17 climbing rate and -- and location, and also
18 presumes that an aircraft would deliberately
19 want to fly directly over the stack.

20 DR. KLEMENS: So from what I'm
21 understanding, this -- the issue really is --
22 is the stack. The plume -- the plume is not
23 really an issue. If a plane is over -- that
24 close to the stack, there's other problems in
25 its -- in its way it's flying. It shouldn't

1 You've discussed two other
2 large facilities, one in Bridgeport and one
3 in New Haven. Do you have any data on what
4 those plumes are?

5 THE WITNESS (Gresock): We
6 don't have specifics on their plumes, but we
7 did take a look at the NTSB records to
8 determine whether there had been any
9 incidents reported at those two facilities,
10 and there were none.

11 DR. KLEMENS: Do you have any
12 records of a plume ever causing an air
13 traffic -- an airplane --

14 THE WITNESS (Gresock): No.

15 DR. KLEMENS: -- crash?

16 Thank you. All right.

17 I'd like to move on, and this
18 is probably for -- for Curt Jones. I'm going
19 to keep most of the wetland questions for
20 when Dean returns, but I would like to talk a
21 little bit about the subterranean nature
22 of -- of that. And I think you're probably
23 best able, I think, to answer this.

24 You -- you have described this
25 in one area, the bedrock is 35 feet below,

1 be that close to the stack, is what I'm
2 saying. Is that --

3 THE WITNESS (Gresock): It
4 shouldn't be that close to the stack, yes.

5 DR. KLEMENS: Yeah. And it's
6 got a bigger problem if it's close to the
7 stack probably than -- than 28 or 29 feet of
8 plume, the risk of colliding with the stack.
9 Correct?

10 THE WITNESS (Bazinet): Yes.

11 THE WITNESS (Gresock): It
12 would be prudent for aircraft to not fly that
13 close to the stack, yes.

14 DR. KLEMENS: Correct.

15 And so what I'm saying is this
16 whole plume discussion is sort of, maybe,
17 could be a bit of a red herring in the
18 overall discussion?

19 THE WITNESS (Gresock): I
20 think the FAA has been very consistent in
21 their -- in their view that the risk of
22 plumes causing a disruption of flights is --
23 is very unlikely.

24 DR. KLEMENS: And do you have
25 any information on -- on plumes?

1 but that's limited borings. Correct? You
2 haven't done comprehensive borings at the
3 site?

4 THE WITNESS (Jones): We -- we
5 do have a geotechnical report that was
6 prepared by Burns & Rowe back in January of
7 2001. And there were a series of tests.

8 In -- the report states that
9 there were 23 test borings, three piezometers
10 for measuring groundwater, and some
11 resistivity tests, and 12 test pits which
12 were excavated by a backhoe.

13 DR. KLEMENS: The depth to
14 bedrock is?

15 THE WITNESS (Jones): It's not
16 contained, but it's my recollection that it
17 was greater than 30 feet.

18 DR. KLEMENS: So is this sort
19 of like a large, sort of, dome or a rock
20 formation which is overlain by this very fine
21 silty water holding glacial till? Is that a
22 correct characterization?

23 THE WITNESS (Jones): I -- I
24 believe the proper term is a "drumlin."

25 MR. ASHTON: It is a drumlin?

1 THE WITNESS (Jones): Drumlin,
2 yes.
3 DR. KLEMENS: So do you have
4 any sense of what the subterranean water
5 flows are? Because the -- and I'm only
6 asking this because I was kind of amazed that
7 there was an attempt to fill a wetland on the
8 site -- which I guess we'll get into at some
9 point -- and that was unsuccessful to fill,
10 which would indicate to me there's an awful
11 lot, potentially, of subterranean water
12 moving through that site.
13 THE WITNESS (Jones): So, as
14 with most sites, the -- the soil conditions
15 do vary, and there are some wetlands on the
16 site. And I was talking in general terms
17 about the overall characteristics when I was
18 talking about the glacial till.
19 So within the glacial till,
20 the -- the soil permeability is very low, so
21 the water travels extremely slowly. So it
22 tends to, you know, store up during the
23 winter and -- and springtime, especially when
24 we have heavier rain. And the -- and the
25 groundwater levels will rise, you know,

1 within the pores of the soil and then over --
2 in -- during the summer, the ground levels --
3 groundwater levels will drop significantly.
4 So as far as the transmission
5 of water through the site, I would not
6 characterize -- characterize it as being high,
7 by any means. There are pockets where it
8 tends to accumulate due to the annual
9 rainfall.
10 DR. KLEMENS: So it
11 accumulates in these pockets and then breaks
12 out in these wetlands -- these breakout
13 wetlands?
14 THE WITNESS (Jones):
15 That's -- that's correct. I would also add
16 that there are no large off-site drainage
17 areas which contribute to the site. So the
18 site is pretty much isolated by itself on --
19 on the hilltop.
20 DR. KLEMENS: And when you put
21 a big foundation, how many -- how many acres
22 is this foundation, roughly, in size?
23 THE WITNESS (Jones): There
24 are a number of different structures.
25 DR. KLEMENS: Well, can you

1 give a composite of how -- how much of that
2 is going to be disrupted subterraneanly?
3 MR. SMALL: We can provide a
4 Late-File exhibit on that, Dr. Klemens.
5 THE WITNESS (Jones): We have
6 provided a Late-Filed exhibit showing the --
7 the mass grading that's showing on the site.
8 DR. KLEMENS: I'm interested
9 in how many acres you're going to be --
10 you're going to penetrate down into this --
11 this sort of till. And where I'm going with
12 this, I'd like to know, is what's happening
13 to all the water, the water storage capacity?
14 How will that be affected by the emplacement
15 of these foundations, and what will the
16 ultimate effects be -- and maybe that's a
17 question for Dean -- on the water quality
18 downstream in Jacks Brook where it drains?
19 THE WITNESS (Jones): So -- so
20 there are about 20 acres of disturbance. And
21 that, again, is shown on -- on our Late-Filed
22 exhibit. We have performed detailed
23 hydraulic calculations that have been
24 submitted to control the postdevelopment
25 runoff, as well as controlling of water

1 quality, the sotrmwater quality that leaves
2 the site. So we've -- we utilized the 2004
3 and 2002 state manuals and incorporated the
4 best practices into the plans.
5 DR. KLEMENS: And I understand
6 that. My question is that's with the
7 sotrmwater on the surface. How have you
8 factored in for what is going in or not going
9 in and what's going on subsurficially?
10 Because that's where I'm getting at, is
11 what's happening subsurficially, and what
12 will happen when we replace all that till
13 with foundations, footings, in that? Where
14 is this water going, or how much is there?
15 And do you have a date on that?
16 THE WITNESS (Jones): So I
17 think it -- it really gets into the -- the
18 runoff. So rather than -- and first of all,
19 it doesn't have a high coefficient of
20 absorption because of the glacial till on the
21 site. It's impermeable. There will be a
22 change in the ground cover, and the runoff is
23 controlled through detention ponds.
24 So, in effect, the groundwater
25 table will be lowered on the site to some

1 depth below the areas of the cuts and fills.
2 DR. KLEMENS: And what's the
3 environmental impact of lowering the
4 groundwater table?
5 THE WITNESS (Jones): Is
6 specifically -- in what regard?
7 DR. KLEMENS: In regards to
8 off-site. Off-site. We have a lot of --
9 there's a lot of material on the record, and
10 a lot of people have been concerned about
11 effects, the downstream receiving wetlands
12 and water courses. So what would your --
13 what would that effect be of lowering the
14 water table?
15 MR. SMALL: Dr. Klemens, we're
16 getting into an area that we may best handle
17 for a Late-Filed exhibit, because we don't
18 have subterranean -- the effect on -- as I
19 understand your question, is the effect on
20 the subterranean water table and what happens
21 with that water after construction, is that a
22 fair description of what you're looking for?
23 DR. KLEMENS: I'm interested
24 in whether -- if there's a lot of water being
25 held in that drumlin in those soils --

1 MR. SMALL: Yeah.
2 DR. KLEMENS: -- what will
3 happen, where it's being diverted, how it
4 will affect the downstream wetlands and water
5 courses, and more importantly, how are you
6 going to maintain the -- the quality of that
7 water.
8 You talk about -- I'm just
9 giving you what -- you're talking about
10 having detention ponds, but that water is
11 then going to be warmer than what's below.
12 So how are you going to deal with thermal
13 differences, water quality, quantity, and the
14 thermal aspects of that water?
15 THE WITNESS (Jones): I think
16 we could more accurately address all those
17 questions through Late-File exhibits.
18 DR. KLEMENS: But that's sort
19 of the universe of those questions is -- I'm
20 trying to understand that.
21 THE WITNESS (Jones): Okay.
22 DR. KLEMENS: And the only --
23 the very last set of questions I have just
24 really go back to some of the -- my
25 colleagues' cross-examination, is you said

1 that the impetus is the need for new
2 generation at this point. There's -- there's
3 an impetus to build this plant now.
4 THE WITNESS (Bazinet): Yeah.
5 Yes. I'm sorry.
6 MR. ASHTON: So I must ask the
7 question: Was there an impetus 15 years ago?
8 THE WITNESS (Bazinet):
9 Similarly, the -- there's been
10 multiple, I -- I guess, over the course of
11 the past 15 years in -- that you could
12 characterize one being the case 15 years ago
13 as well, yes.
14 DR. KLEMENS: And we've heard
15 a lot of talk about regional benefits. Can
16 you sort of articulate how this will benefit
17 the people of Connecticut and -- that's my
18 first question -- and more specifically, the
19 communities that are near this plant,
20 proposed plant?
21 THE WITNESS (Bodell): Tayna
22 Bodell, executive director of Energyzst.
23 We were tasked with performing
24 the benefits analysis of looking at the
25 impacts on prices and emissions in the region

1 of New England. We also were able to look at
2 Connecticut, which is not included in the
3 report, but we do have information on that.
4 And what we found was, in New England,
5 there's a benefit due to reduced prices of
6 around \$4.5 billion over the ten years we
7 examined, 2018 to 2028. Carbon --
8 DR. KLEMENS: This is -- this
9 is New England?
10 THE WITNESS (Bodell): This is
11 New England, and it's what is in the report.
12 We have similar numbers for
13 Connecticut as well. The benefits for
14 Connecticut on prices is about a third of the
15 benefits to New England. So around
16 \$1.5 billion in reduced electricity energy
17 costs to the load in Connecticut results from
18 putting this efficient, natural gas power
19 plant onto the system.
20 DR. KLEMENS: Are there any --
21 but there's no specific pricing benefits that
22 accrue to the communities near there?
23 THE WITNESS (Bodell): So
24 because New England is a locational marginal
25 pricing model, there would be benefits

1 accruing to the community, as well,
2 associated with the lower electricity costs.
3 We do not have specifically right now what
4 the local benefits would be. And we would
5 need to look at how the New England zones are
6 configured, but we -- we certainly could look
7 more -- in more detail at the zone of the
8 community.

9 DR. KLEMENS: I have no
10 further questions. Thank you. I have no
11 more further questions at this time, but I
12 reserve my right to ask on the wetlands next
13 time, please.

14 THE CHAIRMAN: Mr. Levesque?

15 MR. LEVESQUE: Ms. Gresock,
16 you testified that, given the current
17 turbines and production -- the size of the
18 equipment that is chosen so far, you couldn't
19 make the visibility and the bulk of the
20 buildings and the stacks lessened. But if
21 you had smaller production there and
22 different sized turbines, would the buildings
23 be smaller?

24 Are you giving her an answer?

25 THE WITNESS (Donovan): Well,

1 model that's more efficient, that's readily
2 available, from Germany, from U.S., wherever,
3 Mr. Donovan?

4 THE WITNESS (Donovan): I
5 don't know if I understand your question.
6 Could you repeat it, please?

7 MR. LEVESQUE: If you have
8 smaller gas turbines, smaller generators,
9 will your buildings be smaller or lower?

10 THE WITNESS (Donovan): No.
11 No. The boilers, the HRSGs, may be slightly
12 smaller, but on the order of just a few feet.
13 But the stack heights would be the same
14 height as what we're proposing. And the
15 air-cooled condenser would be per the
16 original -- the original application.

17 MR. LEVESQUE: Well, it's
18 difficult to do an off-the-cuff design.

19 THE WITNESS (Donovan):
20 Correct.

21 MR. LEVESQUE: And I didn't
22 ask for a specific size.

23 Did you do -- did you submit a
24 report -- and we talked about promoting dual
25 fuel or the cost of oil is much less, like --

1 I think one of the -- one of the benefits of
2 this -- of the changed application is that we
3 have reduced the height of the air-cooled
4 condenser, for example, and also the height
5 of the buildings.

6 MR. LEVESQUE: Can you make
7 the building smaller by choosing a lower
8 electric production?

9 THE WITNESS (Bazinet): Not
10 necessarily. The -- in the prior
11 certificated design, the visual impacts, in
12 our opinion, are greater with the smaller
13 megawatt footprint.

14 MR. LEVESQUE: Well, you said
15 smaller because, after 15 years, the
16 equipment is smaller and more efficient, not
17 because the production was less.

18 THE WITNESS (Bazinet): The
19 production out of the facility in the
20 certificated project is 512 megawatts per
21 hour compared to 785 megawatts per hour.
22 That facility would have greater visual
23 impacts due to the heights of the structures
24 than what we're proposing today.

25 MR. LEVESQUE: And choosing a

1 like now. Did you submit a report on how
2 many oil tank trucks per day you would need
3 to use oil production for a few weeks or a
4 few months?

5 THE WITNESS (Bazinet): So --
6 so the -- so -- so the -- the constraining
7 factor is not the oil that we have stored on
8 site. The constraining factor is the water
9 availability. And --

10 MR. LEVESQUE: Just answer my
11 question. Is it --

12 THE WITNESS (Bazinet): We
13 could not support multiple weeks of
14 production --

15 MR. LEVESQUE: Okay.

16 THE WITNESS (Bazinet): -- on
17 oil.

18 MR. LEVESQUE: What's --
19 did you submit -- did you submit a report --
20 report, yes or no, on how many oil tank
21 trucks you'd send there in a day?

22 THE WITNESS (Bazinet): We did
23 not.

24 MR. LEVESQUE: Okay.

25 And then, Mr. Donovan, I -- I

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1 assume -- are the largest manufactured
2 components that you'd deliver to the site via
3 the interstate trucks, would they be the gas
4 turbines?
5 THE WITNESS (Donovan):
6 It's -- that's correct. The
7 gas turbines would be among the largest
8 components, but it's the gas turbines and the
9 generators.
10 MR. LEVESQUE: And did you
11 pick a route already for how they would be
12 delivered, or do you know where they would be
13 manufactured?
14 THE WITNESS (Donovan):
15 They -- they would be
16 manufactured -- the gas turbines would be
17 manufactured in Greenville, North Carolina.
18 MR. LEVESQUE: Okay.
19 THE WITNESS (Donovan): The
20 generators would be -- or South Carolina --
21 sorry.
22 The steam turbine would be
23 manufactured in Schenectady, New York.
24 MR. LEVESQUE: Okay.
25 And did -- do you have a road

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1 engineering report on how those make their
2 way from I-84 to the site?
3 THE WITNESS (Bazinet): No, we
4 don't have a road engineering report. We
5 have an expectation for the route that the
6 equipment will probably be delivered, but
7 no -- no road engineering report.
8 MR. LEVESQUE: If you get a
9 chance to -- which towns would it pass
10 through?
11 THE WITNESS (Bazinet): So --
12 so the expectation is that the equipment
13 would be delivered via Interstate 84. And I
14 believe, as you get off that exit, you're
15 technically in Southbury, and then you're
16 quickly -- as you take a left off the exit,
17 within the Oxford town limits.
18 MR. LEVESQUE: Okay.
19 And did you talk to the
20 engineers, the town engineers, of those two
21 towns to get your survey of the weight limits
22 of the bridges and the roads for the route?
23 THE WITNESS (Donovan): In the
24 coming months we'll be doing -- when -- once
25 we select a contractor to build the facility,

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1 they'll be doing a more in-depth heavy haul
2 survey to determine the exact route.
3 MR. LEVESQUE: Okay. But
4 you -- you selected your turbines and your
5 generators before checking --
6 THE WITNESS (Donovan):
7 Correct.
8 MR. LEVESQUE: -- if they'll
9 let you go across those bridges?
10 THE WITNESS (Donovan): That's
11 correct.
12 MR. LEVESQUE: Okay.
13 And if they -- they don't
14 permit you to go across those bridges, what
15 do you do?
16 THE WITNESS (Donovan): We
17 find a different route. It's -- it's pretty
18 typical to -- to approach it this way, and
19 part of it is driven by the -- the need to
20 select the technology to support the
21 permitting earlier in the process.
22 MR. LEVESQUE: Sure.
23 And if -- if -- if it's
24 approved as now proposed, and all the permits
25 are in, if the roads need improvement, would

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1 the company ever consider volunteering to
2 improve those roads instead of asking the
3 towns to do it?
4 THE WITNESS (Bazinet):
5 Absolutely. We use -- we have
6 no intention of leaving irreparable or, you
7 know, damaged roads as a result of delivering
8 equipment to the site.
9 MR. LEVESQUE: Okay. Thank
10 you.
11 THE WITNESS (Bazinet): And
12 that's typical of how we've executed projects
13 in the past.
14 MR. LEVESQUE: Thank you,
15 Mr. Chairman.
16 THE CHAIRMAN: Thank you.
17 Mr. Hannon.
18 MR. HANNON: Thank you,
19 Mr. Chairman.
20 My questions really focus in
21 on the original application that was
22 submitted.
23 For example, on page 5, Bullet
24 2.1, the first comment, there is more
25 energy -- this is the first bullet -- more

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1 efficient energy output, saving fuel and
2 reducing greenhouse gas.
3 However, my question on that
4 is on page 24, in Tables 4-4. If I'm reading
5 it correctly, it looks like there's an
6 increase in greenhouse gases. So can you
7 explain the difference between what's in the
8 table and what's in the comment on page 5?
9 MR. SMALL: I'm sorry. Which
10 document are you on?
11 MR. HANNON: The application
12 form that originally came in.
13 THE CHAIRMAN: Exhibit 1.
14 MR. SMALL: Oh, exhibit 1.
15 Yeah. Thank you.
16 MR. HANNON: So on page 5,
17 under 2.1, the first bullet, it talks about
18 reducing greenhouse gas in the new proposal.
19 On page 24, Table 4-4, if I'm reading it
20 correctly, it looks like there's a
21 significant increase in greenhouse gases.
22 Can you please explain the difference?
23 THE WITNESS (Seller): Sure.
24 Yeah. Greenhouse gases, of course, are a
25 regional pollutant -- or, in fact, a global

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1 pollutant. The improvement in efficiency
2 results in fewer greenhouse gases per
3 megawatt hour of generation that the facility
4 would be responsible for.
5 So, obviously, if the facility
6 is larger, on an absolute basis, there's more
7 greenhouse gases coming from that facility,
8 but the differences in megawatts between the
9 larger facility and a smaller facility would
10 have to be met by another facility. And all
11 of the other facilities have a lesser
12 efficiency, and therefore, would be
13 generating more greenhouse gases per megawatt
14 hour.
15 So there's a set amount of
16 megawatt hours of -- of energy that has to be
17 generated in ISO New England to meet the
18 demand. And by going to a larger more
19 efficient turbine overall, there would be
20 less greenhouse gases emitted over the
21 region.
22 And since greenhouse gases are
23 basically a global pollutant, it doesn't
24 really make much too much difference where
25 they're generated from, from an environmental

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1 perspective.
2 MR. HANNON: So then on
3 Table 4-4, the greenhouse gases that you're
4 referring to, are you incorporating all those
5 above it, or is it a separate line item that
6 you're dealing with?
7 THE WITNESS (Seller): That
8 would be a separate line item. What --
9 what -- the Table 4-4 shows what -- what the
10 difference in greenhouse gas emissions on an
11 absolute annual tons per-year basis would be
12 between the two different turbines. It
13 doesn't take into account the fact that, with
14 the smaller turbine, you'd have to make up
15 that additional energy from someplace else.
16 MR. HANNON: Well, I can
17 appreciate that, but I'm looking at the total
18 difference. It does state that, under the
19 new unit, although it may be lower greenhouse
20 gas emissions per kilowatt, because there are
21 more kilowatts, you are generating more
22 greenhouse gases. I'm just saying that seems
23 to conflict with the statement that's on
24 page 5 that says "reducing greenhouse gases."
25 There's no, sort of, asterisk

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1 associated with per kilowatt hour. You say
2 on one page that it's reducing greenhouse
3 gases, on another it's more.
4 THE WITNESS (Seller): It's
5 reducing greenhouse gases on a regional
6 basis. Greenhouse gases are generally
7 regulated by the United States Environmental
8 Protection Agency, as well as the Connecticut
9 Department of Energy and Environmental
10 Protection on a pounds-per-megawatt-hour
11 basis because they recognize that it's --
12 it's a global pollutant.
13 MR. HANNON: Okay.
14 On page 9, 2.3, stack location
15 and position -- this is more of a question --
16 you just have a statement there, the second
17 paragraph: "This movement of the stacks will
18 avoid lateral navigation obstruction."
19 My question is going back, and
20 I'm looking at the original finding of fact
21 back in June of '99. Is this the same as the
22 circle to land minimum, or is this a
23 different situation out on the site where
24 there may be an issue with the FAA?
25 THE WITNESS (Gresock):

1 Previously, there were
2 additional areas that were penetrated by the
3 stack locations. So shifting the stacks
4 further to the east avoided the potential
5 penetration of the Runway 18 LNAV procedure
6 primary area which was -- was previously
7 penetrated.

8 Lowering the base elevation of
9 the site to 830 feet above mean sea level
10 from 831 feet above mean sea level avoided
11 the potential penetration of the expanded
12 Category A circling approach for the airport.

13 MR. HANNON: Okay.

14 But is that the circle to land
15 minimum? I'm just trying to make sure
16 that --

17 THE WITNESS (Gresock): Yeah.

18 MR. HANNON: -- you're using
19 one term in 2015. There was another term
20 used in 2 -- in 1999. I'm just trying to
21 make sure that they're one and the same.

22 THE WITNESS (Gresock): Yes,
23 with -- within that area, the circle to land
24 minimum would apply.

25 MR. HANNON: Okay. Thank you.

1 mitigation?

2 THE WITNESS (Bazinet): That's
3 -- so we're doing a combination. So we
4 are -- everything you said is true, and
5 further, the -- the current status of that
6 application is that we're contemplating the
7 use of wet ponds for mitigation in
8 combination with the In-Lieu Fee Program, and
9 that's been a recommendation that DEEP has
10 made to the project.

11 MR. SMALL: I would just note,
12 Mr. Hannon --

13 MR. HANNON: Yes.

14 MR. SMALL: -- that the DEEP
15 letter that was filed yesterday or the day
16 before, mentions what the agency requested --

17 MR. HANNON: Okay.

18 MR. SMALL: -- that we -- we
19 contemplate doing.

20 MR. HANNON: On page 26, water
21 usage, 4.1.2.1, this is just more of a
22 question. I think you're -- you're saying
23 that the maximum amount of water that would
24 be provided by Heritage is the
25 218,000 gallons per day. Is that correct?

1 On page 18, it is a question
2 dealing with the wetlands, but I think this
3 may be something that can possibly be
4 answered with Dean not being here. If not, I
5 can wait until he gets back.

6 But there's a reference on
7 here about March 2013, Army Corps
8 compensation mitigation will -- which in
9 accordance with the Connecticut In-Lieu Fee
10 established between the Army Corps and the
11 Audubon of Connecticut.

12 But then, on page 34 -- let's
13 make sure I get the right number there -- you
14 make a comment about, in addition, the Army
15 Corps and the DEEP have established a new
16 program that allows for an in-lieu payment.
17 The agency has not done that. So can you
18 please explain the discrepancy there?

19 And -- and, guys, before you
20 answer, let me also -- this may be moot
21 because the reason I'm even raising the issue
22 is because I believe somebody said at the
23 last -- or at the hearing in Oxford, that you
24 were no longer talking about fee in-lieu of
25 mitigation, or are you actually doing a

1 THE WITNESS (Bazinet): The --
2 the maximum amount that they'll commit to is
3 218,000 gallons per day, to the extent that
4 there are available supplies above and beyond
5 the 218,000 gallons per day on a -- analyzed
6 on daily basis, then they -- they could make
7 that available.

8 MR. HANNON: And has a
9 connection been made with Connecticut Water
10 to possibly increase that amount of water?

11 THE WITNESS (Bazinet): The
12 connection with Connecticut Water has been
13 made, but that contemplates that connection.

14 MR. HANNON: Okay.

15 And then you said the balance
16 of what you need will be stored on site.
17 Correct?

18 THE WITNESS (Bazinet): We
19 will be using on-site storage to supplement
20 our needs during oil firing. The -- the
21 balance of what we need is kind of a -- I
22 mean, you could argue we need a lot more
23 depending on how -- how many continuous
24 oil-firing hours you'd like to support.

25 MR. HANNON: Understood.

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1 Then a question I have on
2 page 29, now you're talking about an off-site
3 regenerated ion exchange system instead of
4 on-site. Where are you proposing to have the
5 ion exchange system, and what type of water
6 may be coming from that, as the water is
7 processed, so that you can actually run it so
8 it's clean enough?

9 THE WITNESS (Bazinet): So --
10 so the -- the creation of the demineralized
11 water will be a similar process. It will
12 just be that demineralized trailers will be
13 used to create that water and populate the
14 tank inventory, if you will. Those are noted
15 on our site plan filed in the application as
16 item 7.

17 MR. HANNON: No, I understand
18 that. But you're saying it's now going to be
19 off-site generated. Where?

20 THE WITNESS (Bazinet): We can
21 provide you some more detail for -- in a
22 Late-Filed exhibit on where -- where the
23 trailers would be regenerated. It would be
24 contracted through a third-party resource,
25 and we just don't have that detail available

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1 THE WITNESS (Gresock): That's
2 correct.

3 MR. HANNON: Thank you.

4 On page 39, at the top of the
5 page, the first full sentence: "No brooks or
6 streams are located on the project site."

7 This may be a matter of
8 semantics, but if I'm not mistaken, I think
9 that you discussed a -- an intermittent
10 channel. To me, it's basically one and the
11 same, and I believe that's associated with
12 Wetlands 1.

13 So if there is that
14 intermittent channel, or as I would consider
15 it to be an intermittent stream, I'm not sure
16 that this statement is really accurate.

17 MR. SMALL: Mr. Gustafson can
18 address that.

19 MR. HANNON: Okay. This is
20 part of Tab A.

21 There's a -- a letter sent to
22 Steve Edwards at the Department of Energy and
23 Environmental Protection which talks about --
24 this is on the third page -- a letter from
25 Naugatuck POTW confirming that it has the

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1 right now.

2 MR. HANNON: Okay. If you do
3 that, that would be great. Thank you.

4 On page 30, 4.1.2.3, you talk
5 about two detention ponds in the corporation
6 of low-impact development principles. Is
7 that primarily, like, the grass swales that
8 are being proposed on site, or are there some
9 other things I'm missing?

10 THE WITNESS (Jones): Well,
11 the grass swales are the primary component,
12 yes.

13 MR. HANNON: Okay.
14 Is there anything else that's
15 considered low impact that you're proposing?

16 THE WITNESS (Jones): I'd --
17 I'd like to review the plans and provide that
18 in detail as a Late-Filed exhibit, if you'd
19 like.

20 MR. HANNON: Okay.
21 And on page 37, groundwater,
22 talk about providing secondary containment
23 for all aboveground storage tanks. I'm
24 assuming that that's at a minimum,
25 110 percent capacity?

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1 ability to accept the proposed discharge,
2 will be forwarded to DEEP as soon as
3 practical.

4 Following up on that, there's
5 a letter from the Borough of Naugatuck, dated
6 September 19, 2014, where they voted
7 unanimously to authorize John Batorski to
8 approve and review their discharge permit
9 application. Has that been done?

10 THE WITNESS (Bazinet): Yes,
11 it has.

12 MR. HANNON: And are there
13 some results on it? I mean, I didn't see
14 anything in response to that.

15 THE WITNESS (Bazinet): Phone
16 conversations had taken place between myself
17 and John Batorski. Upon request of the --
18 the noted letter, the -- the information that
19 you see, dated September 19th, is what was
20 provided.

21 MR. HANNON: Okay. That's
22 fine. We can break.

23 THE CHAIRMAN: Yeah. We're
24 going to give Mr. Hannon a break now. We're
25 going to break for lunch at one o'clock.

27 (Pages 211 to 214)

<p style="text-align: right;">Page 215</p> <p>1 We'll resume promptly at 1:45, 45 minutes. 2 (Whereupon, the witnesses were 3 excused, and a recess for lunch was taken at 4 12:59 p.m.) 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25</p>	<p style="text-align: right;">Page 217</p> <p>1 matter. And I just want to make sure that 2 I'm understanding this again correctly. 3 4-4 is taking the combination 4 of the emissions, not so much based on per 5 ton, but the total that's being generated on 6 the site. So is it correct that on the 7 particulate matter there's about a 43 times 8 per year difference based on the new 9 technology? 10 THE WITNESS (Seller): That's 11 correct. The -- although the -- the new 12 machine is larger, it's particulate emission 13 rate is superior, and on balance, they would 14 be 43.3 tons per year less with the new 15 larger machine. 16 MR. HANNON: Okay. Thank you. 17 On Tab B, the wetlands report 18 on page 5, Wetland 2 description, in the 19 first line, I believe, that there's an error 20 there. I believe the -- it's the eastern 21 edge of the wetland that's located in the 22 northwest corner of the site. 23 MR. SMALL: I'm sorry, 24 Mr. Hannon. Where are you on page -- 25 MR. HANNON: Page 5, the first</p>
<p style="text-align: right;">Page 216</p> <p>1 AFTERNOON SESSION 2 1:45 P.M. 3 4 JON DONOVAN, 5 TANYA BODELL, 6 DANIELLE POWERS, 7 ANDREW J. BAZINET, 8 D. LYNN GRESOCK, 9 FREDERICK SELLARS, 10 CURTIS C. JONES, 11 having been previously duly sworn, were 12 examined and testified further on their 13 oaths as follows: 14 THE CHAIRMAN: Okay. Good 15 afternoon. 16 Now continue the 17 cross-examination, Mr. Hannon. 18 MR. HANNON: Thank you 19 Mr. Chair. 20 One of the things I wanted to 21 touch on briefly, go back to page 24, on 22 Table 4-4. 23 In listening to a lot of the 24 comments of the public hearing, one of the 25 concerns was the emissions of particulate</p>	<p style="text-align: right;">Page 218</p> <p>1 sentence under Wetland 2 description. It 2 says: "The majority of Wetland 2 is off-site 3 with only its western edge located in the 4 northwest corner of the site." 5 I believe that should be with 6 only its eastern edge. 7 THE WITNESS (Bazinet): Yes, 8 that's correct. 9 MR. HANNON: Tab C, getting 10 more towards the -- the back end of things, 11 page A19. Again, this goes back to part of 12 the question I had earlier about the 13 low-impact development activities. 14 So you've got the grass-lined 15 swales, but then, looking at -- bear with me 16 on this one -- I believe it is way towards 17 the back, but it's Map C310. 18 Is it Civil 1 that prepared 19 it? 20 THE WITNESS (Jones): Yes, 21 sir. 22 MR. HANNON: Okay. 23 I guess part of the question I 24 have there is that it states that -- and 25 there's -- at an elevation of 823, there is a</p>

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1 modified riprap emergency overflow from
2 Retention Area A. If I'm reading that
3 correctly, that's supposed to drain directly
4 into the grass swale.
5 I -- I haven't seen any type
6 of design that would be able to take that
7 water flow effectively without severely
8 eroding the banks over there. So I'm just
9 trying to figure out exactly what the process
10 would be there. Because, typically, I -- I
11 will admit I haven't seen the emergency
12 swales or these emergency spillways unloading
13 into a grass-lined swale, which is being used
14 to improve water quality.
15 THE WITNESS (Jones): Yes,
16 sir. Are you referring to the detention pond
17 in the northern side of the site there?
18 MR. HANNON: No. It's
19 Retention Area A, the one on the southern end
20 of the site.
21 THE WITNESS (Jones): The
22 southern site. So the overflow from that is
23 the two pipes on the westerly side of the
24 pond. So those flows will -- the outlet flow
25 will be split into those two pipes.

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1 MR. HANNON: Well, those
2 really aren't overflow pipes. Those are at
3 the base elevation of the detention basin.
4 You've got the emergency spillway on the
5 eastern side which is at an elevation of
6 823 --
7 THE WITNESS (Jones): Yes.
8 MR. HANNON: -- which is going
9 directly into the grass-lined swale. And my
10 concern is, if you're getting the water up at
11 a higher enough elevation, and you're pouring
12 water into a grass-lined swale that's not
13 designed to take water coming in at a
14 90-degree angle, I can see some significant
15 erosion over there. So I'm just curious as
16 to what's being planned in that area.
17 THE WITNESS (Jones): Okay.
18 So the emergency swale -- excuse me -- the
19 emergency spillway is intended to accommodate
20 flows in excess of a hundred-year storm. And
21 I'd be glad to take a further look at that,
22 and to be able to handle flows in excess of a
23 hundred-year storm, should that occur.
24 Typically, the hundred years --
25 MR. HANNON: Well, I'm more

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1 concerned about blowing out the spillway.
2 THE WITNESS (Jones):
3 Yeah. So, typically, that
4 hundred -- hundred-year storm is the designed
5 storm, and we certainly could add some
6 armored protection across that in -- in the
7 event that there would be a storm greater
8 than -- than the hundred year.
9 MR. HANNON: Okay. Then,
10 while we're actually on that page, keeping
11 that one sort of out and also -- it's
12 Figure 6. It's a map, right across on
13 page 30. Looking at figure 6, it -- to me,
14 based on the elevations, it looks like the
15 berm elevation is at 830.
16 On C1 -- I'm sorry -- 3 --
17 C310, that's at 824, so which is it?
18 THE WITNESS (Jones): I'm
19 sorry. Figure 6?
20 MR. HANNON: Figure 6. It's
21 in --
22 MR. SMALL: In the main body
23 of the report, Mr. Hannon?
24 MR. HANNON: Yes. It's right
25 across from page 30 -- page 30. So it's

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1 4.1.3. There, it looks like that the berm is
2 actually at an elevation of 830, but the Map
3 C310 shows the berm to be at an elevation of
4 824. So I'm just trying to make sure that I
5 understand which map is correct on this.
6 THE WITNESS (Jones): Can you
7 give me those numbers and locations again for
8 Figure 6, please?
9 MR. HANNON: Sure. Figure 6
10 is across from page 30.
11 THE WITNESS (Jones): Yeah, I
12 have figure 6 now. Thanks.
13 MR. HANNON: Okay. And then,
14 towards the -- the back, it's Map -- or page
15 C310?
16 THE WITNESS (Jones): Yes.
17 MR. HANNON: Okay.
18 There, you have a statement,
19 there's a 12-inch berm, elevation 824, and
20 the topography goes down from there. Okay?
21 THE WITNESS (Jones): Yes.
22 MR. HANNON: If you're looking
23 at page -- or Figure 6, the berm is at an
24 elevation of 830.
25 THE WITNESS (Jones): Yes.

1 MR. HANNON: So I'm just
2 trying to make sure that I understand which
3 one is the correct number.
4 THE WITNESS (Jones): The
5 Sheet C10 -- C310 is the correct drawing.
6 It's a newer drawing and which supersede the
7 information on Figure 6.
8 MR. HANNON: Okay. Thank you.
9 And you might want to keep
10 C310 out, because I've got some other
11 questions, but I want to go back on some
12 other issues first, and then we'll get back
13 there.
14 On page A22, it says: "CPV
15 will monitor stormwater management facilities
16 during construction."
17 It doesn't say anything about
18 postconstruction. It just says they'll
19 monitor during construction for invasive
20 species, and I don't think that's adequate.
21 I mean, so why monitoring
22 only -- and also, why only monitoring the
23 stormwater management facilities when the
24 invasives could be across the entire site?
25 You're talking about 20 acres of disturbed

1 land that takes up the site. I didn't see
2 anything related to long-term monitoring and
3 treatment of invasive species after
4 construction.
5 And then, the other question
6 is the sixth bullet at the bottom of
7 page A22. It talks about soils being
8 excavated. You know, it could conceivably
9 have some invasive plant seeds, things of
10 that nature, in there, and they'll be
11 stockpiled separately, but what's going to
12 happen with those stockpiles of soil?
13 MR. SMALL: Those are
14 probably -- those are very good questions.
15 They're probably best directed to Dean
16 Gustafson.
17 MR. HANNON: Okay. That's --
18 that's fine.
19 MR. SMALL: Or, you know, we
20 tried to capture them, have him prepare the
21 answer for those at the next hearing.
22 MR. HANNON: No, that's fine.
23 Fully -- and I fully understand that some of
24 these questions may be better dealt with by
25 Dean, and I'm fine with that.

1 Okay. How do I describe this
2 one.
3 Well, this -- this is part of
4 the All Points Technology submittal, dated
5 August 22, 2014. But this does go to some of
6 the comments that I believe you had made
7 earlier.
8 My question was: Were any
9 test pits dug on the site? And I believe you
10 made a comment there were 23 test pits dug.
11 Is that information available
12 anywhere in terms of what was actually found
13 in those test pits?
14 And the reason I'm asking is
15 I'm looking at it more from a soil
16 perspective, in terms of whether or not there
17 was any modeling testing done to see where
18 the high groundwater table was and how that
19 may or may not impact the storm drainage
20 system that's being proposed on site.
21 MR. SMALL: Mr. Hannon, we're
22 checking to see if that's somewhere in this
23 report. If it's not, we'll -- we'll provide
24 the document as a Late-Filed exhibit.
25 MR. HANNON: Okay. And I

1 didn't see it. So if it's there --
2 MR. SMALL: Right.
3 MR. HANNON: -- that's fine.
4 And I know there were comments made about a
5 number of borings, a number of the test pits,
6 but I don't remember seeing anything about
7 any of the data associated with the test
8 pits, and that's what I'm particularly
9 interested in.
10 MR. SMALL: We're -- we're not
11 finding it. So that's a document, Mr. Jones,
12 that you were referring to in your discussion
13 with Dr. Klemens?
14 THE WITNESS (Jones): Yes,
15 sir.
16 MR. SMALL: The geotechnical.
17 Well, we will submit that as a late-file.
18 THE WITNESS (Gresock): I
19 think there's a distinction between the
20 geotechnical report and what he's talking
21 about related to the soil shovel test pits.
22 MR. SMALL: Okay. Okay.
23 Which are -- are you looking
24 for --
25 MR. HANNON: I'm looking

1 specifically for the information in terms of
2 where the test pits were, what they were
3 reviewed for. I mean, I understand the
4 borings were probably done to determine where
5 ledge was, but I -- I also want an answer as
6 to where the test pits were and what they
7 were reviewed for?

8 THE WITNESS (Gresock): And
9 are you talking about geotechnical test pits,
10 or are you talking about the test pits that
11 Dean would have dug to support the wetland
12 delineation, or both?

13 MR. HANNON: I'm not even
14 looking at a wetland area.

15 THE WITNESS (Gresock): Okay.

16 MR. HANNON: I'm looking at
17 the soil conditions associated with the
18 upland soils, because both the Paxton and the
19 Woodbridge are susceptible to having
20 hardpans, which explains why there may be a
21 high groundwater table.

22 So I'm curious as to what the
23 testing of the soil might have been, in any
24 of those test pits. And if there weren't
25 test pits done where the detention basins are

1 And the balance of my
2 questions really go back to the Map C310.
3 There was a comment made, I believe, at the
4 public hearing that an oil-water separator
5 was to be installed on site. Did I hear that
6 correctly?

7 THE WITNESS (Donovan): That's
8 correct. Yeah.

9 MR. HANNON: Where?

10 THE WITNESS (Donovan): Just
11 give me a few moments.

12 MR. HANNON: Uh-huh.

13 THE WITNESS (Donovan): I have
14 to find my way.

15 We don't have that. We don't
16 have the location handy right now.

17 MR. SMALL: Again, we can --
18 we can provide that in a Late-Filed exhibit.

19 MR. HANNON: All right.

20 Well, this is -- this is part
21 of the reason why I'm asking is because I'm
22 looking at the drainage system from
23 Stormwater Renovation Area B. It looks as
24 though there are two outlets at that
25 structure. One identifies an outlet

1 proposed, that's something that should be
2 done, because I just want to make sure that
3 what you are proposing is not going to be
4 underwater to start with.

5 THE WITNESS (Jones): Okay.
6 Understood.

7 MR. SMALL: Again, we'll file
8 that document as a Late-Filed exhibit.

9 MR. HANNON: Okay.

10 This may have just been a
11 slight omission. In terms of the stormwater
12 management and erosion control report, on
13 page 5 -- this was dated September 2014.
14 It's just more of a question. There's a
15 laundry list of erosion sedimentation control
16 measures that are being considered here, but
17 it does not take into consideration the use
18 of straw waddles, which was included on
19 page A23, because, in all honesty, that may
20 be something that you're probably better off
21 using rather than hay bales and/or silt
22 fence. But that's not captured here, but it
23 is on the laundry list of erosion control
24 measures on page A23. So that probably just
25 needs to be there.

1 structure with an invert elevation of 821.
2 That's fine. That's, I believe, also sort of
3 the base elevation of that detention pond.

4 There's another pipe that is a
5 24-inch RCP, a little bit to the left of it,
6 but it doesn't show that there is any type of
7 head wall. It doesn't show there's any type
8 of basin. So how are you proposing to have
9 that system installed?

10 THE WITNESS (Jones): So that
11 additional 24-inch pipe that you're
12 referencing is the hundred-year storm
13 overflow. And we could provide greater
14 detail on the installation of that, if you'd
15 like.

16 MR. HANNON: So, I mean, is
17 there any type of a head wall associated with
18 it or, I mean, some type of gravel protection
19 for the incline? I mean, I'm -- I'm just
20 curious --

21 THE WITNESS (Jones): We could
22 provide that detail.

23 MR. HANNON: -- as to how
24 you're proposing to do that.

25 THE WITNESS (Jones):

1 Certainly.
2 MR. HANNON: Okay. And the
3 reason I'm -- I'm bringing up these issues,
4 and why, in particular, I'm interested in
5 where the oil-water separator is located, is
6 your taking the water from Renovation Area B
7 and it's, in essence, being piped down
8 towards the drainage easement. You're taking
9 a chunk of the water from Renovation Area A,
10 and you're also running that in from a
11 different direction into a small area.
12 You've got some slopes that
13 are ranging from 8.9 percent down to 2 and a
14 half coming in from one direction. The other
15 direction from the Retention Area A is 14.3
16 and 5 percent. And I have some doubts as to
17 whether or not those pipes ending in a riprap
18 area is going to survive. I mean, there's a
19 lot of slope there. There's a lot water
20 coming in through there. So I'm just curious
21 that that's not going to create a problem
22 with what is being proposed for the outlet,
23 actually, into that drainage easement.
24 THE WITNESS (Jones): And --
25 and that's on the easterly --

1 MR. HANNON: That's on C310.
2 THE WITNESS (Jones): -- on
3 the easterly into the drainage easement?
4 MR. HANNON: That is correct.
5 THE WITNESS (Jones): So
6 those -- all those calculations for
7 velocities are contained in the report. We
8 did find that the velocities are -- are below
9 the scouring velocities.
10 MR. HANNON: Okay. But, from
11 my perspective, this may also be a good area
12 to be locating the oil-water separator before
13 it goes off-site.
14 The other question is also
15 related to the drainage area. I mean, based
16 on what is on this map, it talks about
17 drainage easement in -- in favor of Lot 9A,
18 and it looks like there's a lot of water
19 going there that's not associated with
20 Lot 9A. Do you have the authority to drain
21 that water there?
22 THE WITNESS (Jones): Are
23 you -- are you saying from 9A across that
24 driveway to the south, or is it 9B?
25 MR. HANNON: There's a note --

1 there's a note on the map that says:
2 "Drainage easement in favor of Lot 9A."
3 THE WITNESS (Jones): Yes.
4 MR. HANNON: Now, is lot 9A
5 only that 6-acre parcel that is --
6 THE WITNESS (Jones): Yes.
7 MR. HANNON: Okay. So my
8 question is: If the easement for draining
9 water there is in favor of Lot 9A, does that
10 take into consideration draining the entire
11 site to that point?
12 THE WITNESS (Jones): So I
13 think it's a little bit of a legal question
14 and an interpretation of the easement
15 would -- you know, the easement language
16 would probably be consulted.
17 MR. HANNON: Absolutely
18 correct. But I'm saying, based on what's
19 here, it says the easement -- drainage
20 easement is in favor of lot 9A.
21 THE WITNESS (Jones): Yes.
22 MR. HANNON: So I'm just
23 trying to make sure.
24 THE WITNESS (Jones): So, in
25 addition, we -- we would note that there is

1 no increase in runoff going over into that
2 area.
3 MR. HANNON: Are you talking
4 about maximum flow or total?
5 THE WITNESS (Jones): I'm
6 talking about the flow rate.
7 MR. HANNON: Yeah, I'm talking
8 about total.
9 THE WITNESS (Jones): Uh-huh.
10 MR. HANNON: On a couple pages
11 later, on Map C320, I just want to make sure
12 that I understand what you mean by a
13 "photodegradable net" that's used in, like,
14 the erosion control blankets.
15 THE WITNESS (Jones): So these
16 are the type of netting that's -- that will
17 degrade in time and -- and not be permanent.
18 MR. HANNON: Okay. So is that
19 using more of a woven material or a plastic
20 material? I'm assuming it's a woven material
21 then.
22 THE WITNESS (Jones): Woven,
23 yeah.
24 MR. HANNON: Okay. Thank you.
25 I think I am done for the time

1 being. Thank you.
2 THE CHAIRMAN: Thank you.
3 Mr. Lynch.
4 MR. LYNCH: Mr. Chairman, I'd
5 like to, first of all, apologize to you and
6 the council members and the applicant
7 because, due to a personal situation, I'm not
8 really up-to-date on the proceedings. I have
9 some catching up to do. So I just wanted to
10 explain that.
11 But that having been said, I
12 do have some clarifications from some of the
13 early testimony this morning. And I walked
14 into the middle of Mr. Ashton's
15 cross-examination on the air traffic flight
16 patterns, and I heard 300 feet and 270 feet.
17 Could -- could you go over that again, if you
18 don't mind.
19 THE WITNESS (Gresock): The
20 air traffic restrictions that exist vary
21 under visual flight rule conditions and under
22 instrument flight rule conditions. VFR
23 traffic pattern altitude, as recommended by
24 the airport manager, is at 1700 feet above
25 mean sea level, which would have the aircraft

1 no lower than 720 feet above stack top.
2 There's also a VFR traffic
3 pattern altitude that is recommended by the
4 Aircraft Owners and Pilots Association, which
5 is at 1803 feet above mean sea level, which
6 would be aircraft at a minimum of 823 feet
7 above the stack.
8 There is an instrument flight
9 rule condition for the circling minimum
10 descent area which could result in aircraft
11 circling above at an elevation -- a minimum
12 elevation of 1,280 feet above mean sea level.
13 So that would be a minimum of 300 feet above
14 stack tops.
15 And then, as we've been
16 considering the way in which aircraft might
17 use the space that's within the vicinity of
18 the project, there is a hypothetical that a
19 missed approach -- a missed approach area is
20 quite large. And there's a hypothetical that
21 missed approach movements could result in
22 aircraft being at a height -- a minimum
23 height of 277 feet above the stack, which is
24 something that was calculated using a series
25 of conservative conditions about climbing

1 rate and location, and -- and assumes that an
2 aircraft circling would choose to do so over
3 the stack, as opposed to in other locations.
4 MR. LYNCH: Thank you. I came
5 in the middle. I didn't get all the numbers.
6 I have them now. Thank you very much.
7 The second clarification I'd
8 like to get is on the -- the benefits to
9 Connecticut and the benefits to the region
10 costwise. And my question is: Are -- did --
11 were these submitted also to ISO New England
12 for their verification?
13 THE WITNESS (Bazinet): No,
14 they were not.
15 MR. LYNCH: And, lastly,
16 again, just a clarification. If my teamster
17 buddies are right in the -- in transporting a
18 wide or heavy load, this all has to be done
19 in -- in the afternoon? It cannot be done in
20 the evenings, if you're transporting the
21 turbines?
22 THE WITNESS (Donovan): We
23 haven't determined that yet. We haven't
24 determined the day of -- the time of day
25 to -- for the deliveries and the transport.

1 MR. LYNCH: Well, from what my
2 teamster buddies tell me, it has to be done
3 during the day. It can't -- wide loads can't
4 go at night.
5 THE WITNESS (Donovan): Okay.
6 MR. LYNCH: That's why I'm
7 probably just -- thank you, Mr. Chairman.
8 THE CHAIRMAN: Okay. Thank
9 you.
10 Okay. I guess it's my turn.
11 Starting with Exhibit 1,
12 page 17, the last sentence above stormwater,
13 it says that -- well, it said, in 2010, to
14 permit the project -- required to obtain RGGI
15 allowances each year to match its annual CO2
16 emissions. Could you please elaborate on
17 that.
18 THE WITNESS (Seller): Yes,
19 sir, Mr. Chairman.
20 RGGI is the Regional
21 Greenhouse Gas Initiative, and that is a
22 carbon or, specifically, carbon dioxide cap
23 and trade program that several of the
24 northeastern states have voluntarily joined.
25 That cap and trade program

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1 results in auctions of allowances of -- of
2 carbon dioxide. And any power plant greater
3 than 25 megawatts would be required to
4 purchase a CO2 allowance for every ton of
5 carbon dioxide that it emits on a -- on a
6 real basis. So it's on -- based on actual
7 emissions.
8 THE CHAIRMAN: Okay.
9 And on page -- and I guess I
10 understand a little bit better your tables on
11 page 24. But on page 26 -- well, at some
12 point, you say that your -- with your new
13 technology, you would totally comply, I
14 believe, with all regulations.
15 But then, on page 26, you
16 state that to comply with the requirements of
17 nonattainment of source review for nitrogen
18 oxides, you have offsets -- and I think you
19 have other offsets. So how do -- what is the
20 extent of the offsets, and why do you need
21 offsets, and where would you get them, if, in
22 fact, you're in full compliance?
23 THE WITNESS (Seller): Sure.
24 Thank you.
25 The offsets that are referred

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1 to there are part of nonattainment new source
2 review provisions. Because Connecticut, like
3 most of the Northeast, is not attaining the
4 national ambient air quality standard for
5 ozone. And as a result, any facility that is
6 to be permitted within that region must
7 obtain nitrogen oxide allowances per the
8 Connecticut Department of Energy and
9 Environmental Protection's rules.
10 So this doesn't relieve the
11 project from meeting all other air quality
12 standards or air quality requirements. It's
13 an additional requirement that's placed on
14 all new facilities to obtain offsets. And
15 the rationale behind that is ozone is not
16 directly emitted from a power plant. In
17 fact, very, very few sources directly emit
18 ozone.
19 Ozone is created in the
20 atmosphere by a series of photochemical
21 reactions from a number of precursor
22 pollutants. And nitrogen oxide is the most
23 important of those precursor pollutants. So
24 the United States Environmental Protection
25 Agency and Connecticut Department of Energy

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1 and Environmental Protection require new
2 sources to obtain offsets that meet certain
3 criteria.
4 And they are -- basically,
5 they have to be offsets from existing -- from
6 actual emissions from a previously permitted
7 power plant or -- or other source. And they
8 have to be in -- in excess of any other
9 emission reduction requirement that have
10 been -- been applied to those sources, and
11 they must be federally enforceable by being
12 incorporated into the permit that the
13 facility will receive.
14 THE CHAIRMAN: Where --
15 where --
16 THE WITNESS (Seller): And
17 they -- they have to meet certain
18 geographical requirements. The offsets have
19 to come from the same or contiguous
20 nonattainment area of -- of equal or greater
21 nonattainment severity.
22 THE CHAIRMAN: Have you
23 determined where you would get the specific
24 offsets from?
25 THE WITNESS (Seller): The

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1 facility currently holds 177 offsets from --
2 from before, and those offsets are still
3 valid. There will be an additional 57
4 offsets that are required prior to operation,
5 and those would have to come from either
6 Connecticut or an upwind state, a contiguous
7 nonattainment area, most likely from Long
8 Island, for example, or New York.
9 THE CHAIRMAN: So it's not --
10 you don't get them from an existing power
11 plant?
12 THE WITNESS (Seller): What
13 happens is, when a facility makes a reduction
14 in emissions, either by shutting down and
15 surrendering its air permit or by applying
16 emission controls above and beyond what's
17 required by law, they can qualify to generate
18 something called "emission reduction credit."
19 And so when a facility shuts
20 down, it will -- it will receive an emission
21 reduction credit. They then can sell that
22 emission reduction credit to a new facility
23 who can convert the emission reduction credit
24 into an offset.
25 THE CHAIRMAN: Okay.

1 We talked about particulates.
2 That's obviously of concern, even though
3 compared to the previous proposal is reduced,
4 but it's still -- do you -- have you mapped
5 sort of the dispersal, so people would get a
6 sense of where these -- maybe it's in here
7 and I missed it -- where these particulates
8 actually would land?
9 THE WITNESS (Seller): Yes.
10 We've generated something called "isopleths."
11 We can certainly provide those to you. But I
12 can sort of characterize them generally now,
13 and we'll provide the isopleths as a
14 Late-Filed exhibit.
15 The maximum concentrations
16 of -- of particulates, specifically PM 2.5,
17 the highly respirable fine particulates,
18 occurs immediately at the fence line of the
19 facility and drops off --
20 THE CHAIRMAN: Is that by
21 coincidence or --
22 THE WITNESS (Seller): Well,
23 it's because -- from a number of -- of
24 factors --
25 THE CHAIRMAN: Okay.

1 THE WITNESS (Seller): --
2 because of the height of the stack, which is
3 relatively short compared to some other
4 facilities. It's not unusually short but on
5 the lower end of height. But more
6 importantly, because the conditions that
7 result in the highest concentration of
8 particulate would be when there are extremely
9 light wind speeds. And -- and under those
10 conditions, the maximum concentration winds
11 up being very, very close to the stack.
12 So the maximum concentrations
13 that are predicted by the model, basically
14 right at the fence line, those concentrations
15 are the ones that are then used to
16 demonstrate compliance with the ambient air
17 quality standards, which the facility does.
18 The concentrations drop off
19 extremely rapidly with distance from the
20 fence line in all directions. So by the time
21 you get to, say, the town of Middlebury line
22 or the Naugatuck State Forest or the Quassy
23 Amusement Park or the Westover School or
24 Oxford Greens, those levels are extremely
25 small, a minute fraction of not only the

1 ambient air quality standards, but of
2 existing particulate levels.
3 THE CHAIRMAN: Okay.
4 I -- I personally think it
5 would be very helpful to -- to see those --
6 the modeling of however you --
7 THE WITNESS (Seller): Sure.
8 THE CHAIRMAN: And as far as
9 SO2 and the nitrogen oxide, they get
10 dispersed in the air. Where -- where do they
11 end up?
12 THE WITNESS (Seller): Very,
13 very similar situation. Those -- the maximum
14 concentrations of those pollutants would
15 similarly be at the fence line and drop off
16 rapidly with distance in all directions.
17 THE CHAIRMAN: Then maybe --
18 it's always been my understanding that the
19 issues of acid -- acid rain, which affected,
20 for example, the Adirondacks and Catskills,
21 didn't come from any close by power plants.
22 They came from Ohio and other places.
23 So are you telling me that, in
24 this case, these things don't get dispersed
25 and end up -- my guess would be, based on

1 that analogy, which may be incorrect, in the
2 Atlantic Ocean, which already has some issues
3 with acid -- acidity?
4 THE WITNESS (Seller): That
5 that's correct. The -- all of the emissions,
6 yeah, get dispersed. In this particular
7 case, the maximum concentrations of sulfur
8 dioxide would be right at -- at the -- at the
9 property boundary.
10 A lot of the sources that you
11 referred to, in the Midwest, tend to be older
12 coal-fired power plants that have extremely
13 tall stacks, some as high as a thousand feet.
14 And in those situations, the -- the exhaust
15 plume can -- can actually get right into a
16 cloud and transport a considerable distance
17 before it's -- it's deposited.
18 So, in addition to having to
19 demonstrate compliance with the ambient air
20 quality standards, all new power plant
21 sources have to -- new and existing power
22 plant sources have to participate in an acid
23 rain cap and trade program, similar to what
24 we talked about before and -- as far as
25 getting allowances. And that market-based

1 cap and trade system has driven down the
2 total of loading of sulfur dioxide basically
3 in the United States by a considerable
4 fraction, which has resulted in improvements
5 to acid rain.

6 One of the -- the biggest
7 differences, of course, between a natural
8 gas-fired power plant and those coal plants
9 with the very, very large stacks as in a
10 natural gas power plant, and it's only a tiny
11 fraction of the sulfur dioxide that a large
12 coal plant would be.

13 Similarly, when -- when this
14 project was -- was originally approved, the
15 amount of sulfur dioxide was a lot higher
16 because it was prior to the introduction of
17 ultralow sulfur distillate fuel oil, and it
18 was originally approved with -- with just
19 regular low sulfur fuel, so sulfur dioxide
20 would have been considerably higher.

21 THE CHAIRMAN: Okay.

22 Since you said most of the
23 pollutants would end up no further than the
24 fence line, is there either a need, and if
25 there is, a way to clean it up? I mean, do

1 Wetlands 2 and 3 which, I understand, have
2 been designated to be very important wetlands
3 in the APT report.

4 Can you tell me what, if all
5 the particulate or all the significant amount
6 of particulate matter is falling either at
7 the fence line or in -- within the fence
8 line, that would be in those biofiltration --
9 those two stormwater ponds. What happens
10 when it hits the water, and where is that
11 water going, and how are we going to protect
12 both those two wetlands, as well as the water
13 that's being held within the fenced compound?

14 THE WITNESS (Seller): Again,
15 Dr. Klemens, there's, of course, always going
16 to be a point of maximum impact somewhere.
17 And the way that the air regulations are is
18 it has to demonstrate that, even at that
19 point of maximum impact. There is no
20 detrimental effect.

21 The -- the concentrations of
22 sulfur dioxide being as low as -- as they
23 are, .03 micrograms per cubic meter, and the
24 impact concentration of particulate on an
25 annual average basis being 0.2 micrograms per

1 we want these -- you know, if it rains SO₂ it
2 turns into sulfuric acid. I mean, do we want
3 these things to -- or is it -- I just don't
4 understand.

5 THE WITNESS (Seller): Yeah.
6 There's always going to be maximum point of
7 impact. In this case, the maximum point of
8 impact is near the fence line, but that
9 number is an extremely small number. It's --
10 it's an insignificant fraction of what the
11 current ambient air quality levels are.

12 As -- as an example, the
13 maximum impact, on an annual average basis,
14 of sulfur dioxide would be .03 micrograms per
15 cubic meter, compared to an ambient air
16 quality standard of 80 micrograms per cubic
17 meter. So you can see that there's an
18 incredibly insignificant fraction of that
19 standard.

20 THE CHAIRMAN: Okay.

21 Dr. Klemens, you had a --

22 DR. KLEMENS: I have a
23 follow-up question on this. It's a very
24 interesting discussion. I noticed, on the
25 western boundary, the fence line, there's

1 cubic meter compared to an ambient air
2 quality standard of 12 would indicate that
3 the ambient concentrations are very low. And
4 we would not expect a lot of deposition from
5 a gas-fired power plant.

6 DR. KLEMENS: In -- in
7 wetlands, because we're not talking just
8 about falling on the Earth. We're now
9 talking about falling on wetlands and in
10 stormwater ponds which have the ability to
11 concentrate and do other things with those
12 pollutants.

13 THE WITNESS (Seller):
14 Correct.

15 Again, the concentrations and
16 the deposition are really very, very small.
17 And then, beyond that, under the Prevention
18 of Significant Deterioration regulations, we
19 also did analyses of impacts to soils and
20 vegetation, and looking at the most sensitive
21 vegetation. So that would certainly include
22 vegetation that would be expected to be in a
23 wetland system.

24 DR. KLEMENS: So, in your
25 professional opinion, the waters that are

1 going to leave the site and eventually go
2 downhill into the -- Jacks Brook and
3 ultimately the Naugatuck River, those are not
4 going to be polluted by these concentrations
5 of particulate matter?
6 THE WITNESS (Seller):
7 That's -- that is my
8 testimony.
9 DR. KLEMENS: Thank you, sir.
10 Thank you, Mr. Chairman.
11 THE CHAIRMAN: On the air
12 navigation -- and I'm only going to ask a
13 couple of questions because I think we're
14 going to have more extensive discussion with
15 several of the intervenors, but -- and this
16 information -- we may already have it -- but
17 is this, the airport, is that primarily -- is
18 it private, is it commercial, is it both?
19 THE WITNESS (Gresock): The
20 airport is owned by the Connecticut Airport
21 Authority and has a number of different type
22 of aircraft that -- that fly out of it. I
23 have statistics for 2012, where there were
24 47,987 total operations, and there were 128
25 single engine, 8 multiengine, and 31 jet

1 aircraft based at the airport in that year,
2 plus one helicopter.
3 THE CHAIRMAN: Okay.
4 And can you, if you haven't
5 already, can you provide the flight pattern
6 for the -- for the runways? Because, to me,
7 that's more significant than people flying up
8 overhead at whatever the altitude you
9 mentioned.
10 THE WITNESS (Gresock): So an
11 illustration of the various flight pattern
12 areas would be helpful?
13 THE CHAIRMAN: Right,
14 particularly -- primarily for landing,
15 because --
16 THE WITNESS (Gresock): We
17 can -- we can certainly do that. It always
18 helps to be clearer with a picture.
19 THE CHAIRMAN: All right.
20 And I guess this is more of a
21 comment than a question, although you can
22 respond. But I am -- the fact that there are
23 already penetrations -- I think that's what
24 you call -- or obstacles, I'm not sure its
25 necessarily a good idea to add. And the fact

1 that other airports have penetrations dating
2 50 years ago, I don't think is necessarily a
3 good analogy. So I just -- I just mention
4 that. I think, at some point -- and
5 obviously, this is for the FAA to ultimately
6 determine. An airport, if it's now
7 technically unsafe, it may become less
8 desirable to fly in and out of if you're
9 having to -- to deal with an increasing
10 number of penetrations.
11 THE WITNESS (Gresock): And it
12 is something that we'll be waiting for the
13 FAA to study. But I will say that the same
14 situation existed in -- in their evaluation
15 and their review the -- the last time. And
16 those stacks, at this height and at a -- at a
17 location that impinged on additional areas,
18 has been valid for the project stacks as
19 recently as 2011, and went through the
20 same -- the same review process, the same
21 circularization and public review. So
22 we'll -- we'll see.
23 THE CHAIRMAN: Thank you.
24 Just on -- on the issue of
25 water supply and use, again, page 26. I

1 think you mentioned that the -- in general,
2 the water demand is less than of the
3 previous. There's a substantial increase if
4 and when you have to use the oil as a fuel.
5 And I think that may have been
6 also noted -- I'm not sure -- in the -- I'm
7 not sure -- in the letter from the Department
8 of Health, but that is a question of what
9 there seems to be. And it seems to be, the
10 answer is, well, hopefully, we only -- we
11 will only need the oil for a very limited
12 amount of time.
13 But if, all of a sudden, there
14 are issues with gas supply, that -- that
15 limited amount of time might be significant.
16 And then your reserves that you have are, I
17 think, could be an issue.
18 THE WITNESS (Bazinet): So
19 in -- in thinking about what would be the
20 appropriate water supply for exactly those
21 conditions, we conducted a pretty detailed
22 analysis of our expected dispatch for
23 operation over last winter using historical
24 values.
25 Last winter was, in the last

1 25 years, one of the two worst winters on
2 record and experienced from, at least a gas
3 supply interruption standpoint or
4 curtailment, effectively unprecedented. So
5 in -- in doing that, we came up with an
6 expected dispatch profile of 541 hours in 15
7 separate instances, of which we would have
8 been able to satisfy all 15. And in only two
9 instances would the dispatcher request have
10 been longer than the 52 hours that we would
11 be able to support.

12 THE CHAIRMAN: Okay.

13 Mr. Hannon has a follow-up.

14 MR. HANNON: It talks about,
15 again on page 26, 720 hours of -- of, I
16 guess, operating by oil. Is -- is that part
17 of the application from the resource review
18 program? Is that a limit that's in the
19 application itself?

20 THE WITNESS (Gresock): Yes,
21 that's -- that's the number of hours to which
22 we -- we would be restricted under that
23 permit.

24 MR. HANNON: And are there any
25 exceptions or exemptions from that limit?

1 2015, Department of Public Health, actually
2 it's to the Siting Council. And the fifth
3 bullet on the bottom of page 1 talks about
4 the original -- CP -- CPM notes that HWC --
5 and these are not my requests to initial
6 everything -- but has a limited supply of
7 water available to provide to the project.

8 Have you found it?

9 And therefore, says, you need
10 more. And they, apparently, in 2010, the
11 Department of Public Health allowed this to
12 happen. And I think it just begs the
13 question, particularly if we run into very
14 dry years, which we haven't for a few years,
15 but we certainly have in the past, if you're
16 having to, you know, get water from one place
17 which has to get water from another place,
18 what is the impacts going to be on aquifers
19 and the rivers?

20 THE WITNESS (Bazinet): So
21 the -- the issue that you're referencing is
22 not unique to Towantic as a member -- or as a
23 customer of Heritage Village Water Company.
24 And there has been a commitment letter that's
25 been issued from Heritage Village that is

1 THE WITNESS (Gresock): No.

2 MR. HANNON: Thank you.

3 THE CHAIRMAN: Also, on the
4 subject, a letter, dated January 8, 2015,
5 from the Department of Public Health, it
6 states on the bottom of the first page
7 that -- where is it -- the water company,
8 which is Heritage, whatever, H -- HWC, it
9 says they have enough -- a limited supply of
10 water available to provide for this project,
11 and therefore, they need additional source.
12 And that, in 2010, the Department of Public
13 Health issued a sale of excess water permit
14 through the Connecticut Water Company in
15 Naugatuck.

16 So is that -- is that -- do
17 you agree with that -- that statement, and
18 therefore, is it therefore correct that your
19 main water provider doesn't even have enough
20 water to satisfy your needs without getting
21 this additional water or am I misreading it?

22 THE WITNESS (Jones): I'm
23 sorry. As I was looking for the document,
24 could you just reference the --

25 THE CHAIRMAN: January 8,

1 conditioned on exactly that interconnection
2 that's referenced.

3 So that -- with that, they've
4 reviewed their water supply plan. And my
5 understanding is that they're in the process
6 of updating that currently. But factoring in
7 the what -- the -- the project's requirements
8 over the long term -- I believe it's 50 years
9 is what they look at -- there's -- assuming
10 that that interconnection exists, there's
11 sufficient supply for the project and all of
12 the other customers -- excuse me -- of
13 Heritage Village, for that matter.

14 THE CHAIRMAN: Do we know when
15 that updated report is going to be available?

16 THE WITNESS (Bazinet): No.
17 No, I don't. My understanding is right now
18 they're in the middle of a -- a rate case
19 that's consuming the -- the lion's share of
20 their time. But their report, I believe, is
21 in draft form.

22 THE CHAIRMAN: And just also
23 to reiterate what I stated previously, the
24 last page of that letter, the last sentence,
25 the sentence does raise the issue that the

1 water demand has increased for -- in some
2 operational modes. And I assume that's
3 mainly when the oil is used.

4 But, I guess, they're asking
5 you to demonstrate that you're optimizing
6 water conservation opportunities. And I
7 assume you intend to respond to the public
8 health, that you're -- everything else seems
9 to be, you know, state of the art, up to
10 date. But the one area -- one of the areas
11 where there's a significant increase in usage
12 happens to be in the -- in the need for water
13 when your oil is being used.

14 THE WITNESS (Bazinet): So --
15 so we've -- while that's absolutely true,
16 we've taken every effort to incorporate
17 conservation measures into the project,
18 substantially on the discharge side, as well
19 as the supply of water side. We -- we
20 unfortunately cannot change the water demands
21 of the facility while ultralow sulfur
22 distillate is the fuel that's being operated
23 on.

24 What we've done to try to
25 mitigate our impacts during those conditions

1 is limit the amount that we would take on a
2 daily basis from Heritage Village to no more
3 than what was previously approved. So that,
4 obviously, creates a balancing act between
5 managing a continuous production capacity.
6 But we felt that, in doing that, and
7 analyzing the worst, you know, one of the two
8 worst winters on record over the past 25
9 years, we've -- we've fairly accomplished
10 minimizing the amount of water we would take
11 relative to the expected oil-fired operation
12 for the facility.

13 THE CHAIRMAN: I'm now going
14 to Exhibit 2, I guess, your market analysis.
15 I know that these were mentioned, but I
16 think -- I'm not sure you gave them as much
17 weight as perhaps you should have. And that
18 has to do with improvements and the
19 combination of energy efficiency,
20 conservation -- which I would put in bold and
21 highlight -- distributed generation, the use
22 of microgrids and fuel cells, all of which,
23 if I have read the information correctly, are
24 actually reducing the demand, not increasing
25 it in the state and, hopefully, in the

1 region.

2 So do you want to comment,
3 because I'm concerned that you really did not
4 give enough attention to the demand side. It
5 was too heavily on the supply side.

6 THE WITNESS (Powers): And
7 you're correct. Those -- those measures are
8 all making --

9 THE CHAIRMAN: I'm correct
10 that they didn't or --

11 THE WITNESS (Powers): I'm
12 sorry. Correct that those are all making
13 important contributions to reduction in
14 demand. But the Connecticut IRP, the draft
15 IRP that was just released, as well as ISO
16 New England, is still projecting, I think,
17 about a half a percent a year increase in
18 demand. So it would be higher but for those
19 types of -- of measures being successful.

20 THE CHAIRMAN: And one could
21 also argue that, if we continue to invest in
22 those programs, it could also be lower over
23 the next 10 or 20 years?

24 THE WITNESS (Powers): You
25 know, it's -- it's hard to say. I mean,

1 it's --

2 THE CHAIRMAN: You don't have
3 to answer. That was probably more of an
4 opinion, but one which this person --
5 individual -- I also want to bring your
6 attention to something, and that, I think,
7 the Council is very proud of, and that's the
8 10-year forecast of Connecticut electric
9 loads, which staff, and Mr. Perrone is the
10 prime author -- and I'm not going to say how
11 good he is because somebody might steal him
12 some day -- but in a couple of -- in this
13 report, which, I think, in many ways is
14 similar to ISO, it -- I think it states that
15 in the -- in the future, the planning future,
16 that there really is no need for additional
17 generation, certainly in Connecticut.

18 And I know we've been back and
19 forth and you've -- you've commented, but
20 when you add in those demand changes, and
21 also the large investments with -- in
22 transmission facilities, which this Council
23 has been involved in the approval of them, it
24 really -- it really is hard to -- or I have
25 trouble making the case that this plant is

1 really needed, at least on the issue of
2 market.

3 Now, maybe the issue of the
4 environment, and if this really results in
5 closing down of other older plants, but in
6 the market, from these reports we have,
7 I'm -- I'm at somewhat of a loss of really
8 seeing the need. And, you know, part of our
9 job is to balance need with the impacts.

10 THE WITNESS (Powers): I think
11 from, and as Andy has mentioned before, from
12 a regional perspective, I think it's -- it's
13 clear that we do need generation. From --
14 from a local perspective, in terms of pure
15 megawatts, the -- the state of Connecticut
16 has enough pure megawatts to meet reliability
17 requirements.

18 I think the piece that -- that
19 we're missing that we haven't talked about,
20 there's -- there's two pieces of reliability.
21 There's megawatts, which is the adequacy of
22 generation in the ground, but there's another
23 piece of resource adequacy -- or adequacy,
24 which is security, which is the ability of
25 the system to sustain instantaneous changes.

1 to the Council. And the paragraph noted
2 energy supply context, where they reference
3 that estimates of generous -- generation
4 capacity in New England that will be lost to
5 retirement over the next five years vary from
6 a conservative 3200 megawatts for known,
7 formally announced retirements, up to
8 8,300 megawatts of capacity being at risk of
9 retirement in that same period. And that's
10 per ISO New England's estimate.

11 So the addition of our plant,
12 it's not just us on an island saying this is
13 needed. I feel like the Department of Energy
14 and Environmental Protection sees it that way
15 as well, as well as ISO New England.

16 THE CHAIRMAN: Okay. We just
17 got it. I haven't had a chance to read it
18 yet -- maybe you haven't, either -- a letter
19 from the Department of Energy and
20 Environmental Protection on some of these
21 issues. But I can't talk and read at the
22 same time. I have certain limitations.

23 MR. SMALL: But that's a
24 letter, Mr. Chairman, that we were referring
25 to. That's -- it discusses this issue

1 So -- and that's what the transmission
2 improvements were designed to get at, was the
3 security piece of reliability.

4 And I think the most recent
5 ISO Southwest Connecticut needs assessment
6 showed that, while there have been great
7 strides in addressing local reliability
8 requirements in terms of security with the
9 addition of transmission, there -- there are
10 still some local concerns that ideally are
11 addressed with transmission, in addition to
12 local generation, that gives the ISO more
13 flexibility to dispatch resources and to
14 address instantaneous disturbances on the
15 system.

16 THE WITNESS (Bazinet): I'd
17 like to add one small piece to that -- and I
18 apologize for any redundancy -- but the
19 economic impacts of the regional shortage is
20 felt across the region and in Connecticut,
21 specifically due to the nature of Connecticut
22 being an import-constrained zone.

23 And furthermore, that's
24 emphasized by the Connecticut Department of
25 Energy and Environmental Protection's letter

1 directly.

2 THE CHAIRMAN: All right.
3 Mr. Lynch.

4 MR. LYNCH: Just as a
5 follow-up. You keep mentioning the region.
6 Could you define "the region"? Does it
7 include the tristate area of New York, or is
8 it only New England?

9 THE WITNESS (Bazinet): Just
10 New England.

11 MR. LYNCH: Thank you.

12 THE CHAIRMAN: And Dr. Bell.

13 DR. BELL: Just a follow up on
14 when we're talking about the New England
15 region needs, and so forth. Isn't it true, I
16 believe -- and I'm not sure which page it's
17 on in your CEA report, but it -- I -- I
18 believe it's in there, and it certainly would
19 be something that you would know from other
20 sources, ISO, that the two most constrained
21 regions in New England are in Rhode Island
22 and southeastern Massachusetts, which is
23 basically the Boston area. If anybody has
24 been to the Boston area lately and looked
25 around, you can see the huge amount of energy

1 going into all those construction projects
2 all over Boston, and then we get into the
3 past of how much energy they needed for the
4 Big Dig, and so forth and so on.
5 So this is not -- this is
6 common knowledge. And that seems to be
7 what -- where ISO says the two most
8 constrained regions are for now and the
9 foreseeable future. So, really, all that --
10 the regional impetus is towards providing
11 energy for Rhode Island and -- well, northern
12 Rhode Island, which is, again, feeding into
13 the Boston area and -- and southeastern
14 Massachusetts.
15 So my question is: Even at a
16 regional level, quite apart, we discussed
17 Connecticut and the lack of need in
18 Connecticut, but even at a regional level, a
19 gas plant in, arguably, west central
20 Connecticut, where the transmission
21 difficulties we know are east-west
22 difficulties, not north-south difficulties --
23 and that's what the Council has been trying
24 to remedy, both in -- in the Middletown to
25 Norwalk peak and Plumtree peak and in the

1 Southeastern Massachusetts and Rhode Island
2 was 4FCA9 -- to be conducted on Monday
3 actually -- is newly -- is a newly deemed
4 import constrained zone.
5 So there's two distinctions
6 I'd like to draw: The -- the distinction
7 between, one, an import constrained zone; and
8 two, the actual supply demand balance within
9 that zone.
10 And you're absolutely on the
11 money that Connecticut, when you look at it
12 in isolation as an import constrained zone,
13 has a surplus of capacity. And northeastern
14 Mass, as recently as, I believe, '13, was
15 short of capacity. And SEMRI, Southeastern
16 Mass and Rhode Island, is expected to be
17 short of capacity for this auction. The rest
18 of pool -- so the rest of the region is also
19 short of capacity.
20 In fact, in FCA9, at a
21 minimum, the rest of pool needs to procure
22 2,000 megawatts of new capacity to satisfy
23 the net installed capacity requirement which
24 is the target -- effectively, the target
25 reserve margin for the entire region. That

1 NEEWS projects, which are all oriented
2 towards east-west transmission.
3 Given the need in east of --
4 to the east, and given the lack of -- or
5 constraints -- let's put it this way --
6 constraints, east-west constraints in the
7 transmission system, when you look at it that
8 way, it doesn't seem to be that a plant in
9 west central Connecticut is the best place to
10 serve the most constrained regions in New
11 England.
12 THE WITNESS (Bazinet):
13 There's quite a few topics there, so I'm
14 going to try to start in reverse order with
15 the last.
16 So electrically, this plan's
17 location is deemed to be in southwest
18 Connecticut. And while it's true that many
19 of the projects -- transmission projects that
20 have been completed to relieve the east-west
21 transfer, notably, including Lake Road as a
22 new -- effectively, a new generating resource
23 in Connecticut, Connecticut remains an import
24 constrained zone just like northeastern
25 Massachusetts and southeastern Massachusetts.

1 can come from anywhere in the region.
2 The last point I'd like to
3 make is that, although -- and again, I
4 apologize if I'm -- if this is a bit
5 redundant -- but that -- there's been a lot
6 of discussion and -- in the ISO New England
7 world and others, around the expectation for
8 future retirements. And while Connecticut
9 can reliably say that it's -- or can
10 accurately say that it's meeting its local
11 sourcing requirement today, that's not the
12 expectation for the very near future.
13 It is expected to -- if -- in
14 other words, if the 2500 or so megawatts of
15 55-plus-year-old generation were to retire,
16 it would quickly find itself drastically
17 short. And the planning horizon for projects
18 like this for transmission is such that that
19 shortage would be -- would persist for quite
20 some time, and prices would respond to that.
21 So the proposal that we put in
22 front of you is, one, satisfying both the
23 regional need, and as a result, a need that
24 translates to Connecticut, but a forecasted
25 need is -- I'm sorry -- a regional current

<p style="text-align: right;">Page 271</p> <p>1 need, but a forecasted local need as well. 2 DR. BELL: I thank you for 3 your answer. It's a complicated matter. 4 There are many factors. I just have one 5 follow-up. 6 When I have made statements or 7 asked questions that's in relation to the -- 8 it's with the IRP in the background, as I 9 stated to begin with. And I do note that the 10 IRP has in it strategies for how to meet the 11 need going forward on these various fronts 12 that you've been mentioning. 13 And I put it to you, have you 14 seen, in the IRP -- and they have, I think 15 it's eight resource strategies that they -- 16 that they give for how to meet any needs that 17 they see. And my question is: Have you seen 18 anything in those strategies that mentioned 19 the word "gas plant, large gas plant"? 20 THE WITNESS (Bazinet): You'll 21 have to pardon me while -- while I find the 22 reference in the document. 23 THE WITNESS (Powers): So I 24 think it addresses several strategies in the 25 executive summary for ensuring the -- the</p>	<p style="text-align: right;">Page 273</p> <p>1 DR. BELL: Yes. If you look 2 at the actual -- I think you're following the 3 executive summary, and it does say that. If 4 you actually look at the text behind which, 5 you know, is multipages, at the end there, 6 the question is: To what extent would they 7 want to procure fossil fuel generation? 8 The point that you're making 9 about the demand resources being cast into 10 doubt is a big problem, but it does not have 11 to do with procuring new generation in -- in 12 a conventional sense. It has to do with 13 figuring out how to get demand response back 14 into the market. So that is -- that's a very 15 big question. And I don't -- I certainly 16 don't have any knowledge about an answer. 17 The other problem has to do 18 with the matter that you also mentioned in 19 your report, which I asked a question about 20 earlier. That is resources that won't be 21 able to enter the market in the way they have 22 in the past because they might be handled 23 through state mandated contracts. And -- but 24 that's a question we're not dealing with here 25 because we're dealing with a proposal for a</p>
<p style="text-align: right;">Page 272</p> <p>1 future of Connecticut in terms of 2 reliability. And -- and a lot of these are 3 things that -- that Connecticut and the ISO 4 are promoting and are already doing. I think 5 the one that's important to look at is be 6 prepared to procure new generation. 7 You know, the market is a 8 very, especially now, very fluid. So Andy 9 mentioned retirements. If you look at the 10 picture today, there's a lot of risk 11 associated with that picture. You've got 12 retirements that are a major risk. While 13 demand response has made, you know, great, 14 great strides in the market, there's a lot of 15 uncertainty around 3,000 megawatts of demand 16 response in New England, with the FERC ruling 17 on whether or not those can play in the 18 markets, as well as how much will come in 19 going forward. 20 So the -- the IRP specifically 21 states that if the -- if the capacity market 22 can't attract new resources just by setting 23 price signals, that Connecticut will have to 24 be prepared to procure new generation as 25 well.</p>	<p style="text-align: right;">Page 274</p> <p>1 new plant. 2 So I'm just commenting, but I 3 don't have -- I'm not suggesting that it's 4 material at this instant. 5 Thank you. 6 THE CHAIRMAN: Senator Murphy. 7 MR. SMALL: May we respond on 8 that? Can we have just one moment? 9 Just a brief response. 10 THE WITNESS (Bazinet): 11 Just -- I'm sorry. One 12 other -- and I apologize. I know I'm reading 13 from materials that you -- the Council hasn't 14 yet had an opportunity to review. But, 15 again, from the January 28th letter from 16 DEEP -- Connecticut DEEP -- excuse me -- the 17 addition of a 785 megawatt net output of 18 natural gas-fired power from a dual-fuel 19 capability plant will -- will both shore up 20 the supply needs of Connecticut and the 21 region and improve the reliability of the 22 electric system. Further, the ability of the 23 proposed facility to quickly ramp up or ramp 24 down, et cetera et cetera. 25 So I mean, I -- it's -- it's</p>

1 our belief that -- at least the Department of
2 Energy and Environmental Protection sees the
3 same need and believes that a natural
4 gas-fired generation project would be
5 beneficial to the region as well as the State
6 of Connecticut.

7 And I'll just note that this
8 is as of January 2015, whereas, you know, as
9 is the case with all studies, you begin, and
10 by the time you're, you know, done, you could
11 restart because the assumptions made may or
12 may not be stale due to short-term market
13 influences.

14 The other point that you made
15 there was the risk -- well -- I'm sorry --
16 the nature of state sponsored contracts. And
17 the risk associated with moving forward under
18 that type of program is -- well, it's
19 unknown, or it's not defined at this point,
20 so it's up to the market to respond to market
21 need currently. And the proposal that we've
22 kind of put -- put forth is premised on a
23 market-based solution that effectively
24 mitigates that potential risk.

25 THE CHAIRMAN: Senator Murphy.

1 MR. SMALL: -- I see -- I may
2 be missing it, but I see the Norwalk Harbor
3 units in the potential retirements.

4 SENATOR MURPHY: Yeah.

5 MR. SMALL: I don't see
6 them -- oh, wait.

7 SENATOR MURPHY: They're --
8 they're next to the -- the third and fourth
9 from the bottom.

10 MR. SMALL: Oh, I see that.
11 Yes, I see.

12 THE WITNESS (Bazinet):
13 That -- and that is an error. The -- they
14 should only be the retire -- existing
15 retirement section.

16 SENATOR MURPHY: And the
17 Montville units, potentially retire, I
18 thought they were down. I thought they had
19 been --

20 THE WITNESS (Bazinet):
21 There -- there are still capacity resources
22 that ISO New England relies on.

23 MR. ASHTON: Montville 5 was
24 gone ten years ago.

25 THE WITNESS (Bazinet): Yeah.

1 SENATOR MURPHY: This is in
2 kind of follow-up to some of the responses
3 made about retirements and potential
4 retirements. And your Late File 2I -- and
5 you provided the list of retired facilities
6 and potential retired facilities.

7 And my question really is
8 whether you put the two Norwalk Harbor
9 projects in both -- on your list.

10 THE WITNESS (Bazinet): I'm
11 sorry. Could you repeat the question?

12 SENATOR MURPHY: It's in
13 reference to your -- your Late File 2I. You
14 attached a list of those facilities that have
15 retired and those that are potentially
16 retiring. And you've made reference to the
17 numbers that were retiring.

18 SENATOR MURPHY: And so forth.

19 And in the retiring
20 facilities, you had two Norwalk Harbor
21 facilities. And in the potential
22 retirements, you have the two Norwalk
23 Harborside facilities.

24 MR. SMALL: Mr. Murphy --

25 SENATOR MURPHY: Yeah.

1 There's --

2 THE WITNESS (Gresock): Well,
3 we'll double-check those. I know the
4 Montville -- I know the Montville units
5 submitted retirement requests, but they're
6 not yet officially retired. They still have,
7 I think, two more years on their capacity
8 obligation.

9 MR. ASHTON: They've only got
10 half a boiler.

11 SENATOR MURPHY: I mean,
12 they're really not doing anything, so you
13 really should -- okay. Well, you'll --
14 you'll check on it and give us another thing?

15 THE WITNESS (Powers): Yeah.

16 MR. SMALL: I just want to
17 read -- the date is ISO date, which may be
18 different than physical retirement date. I
19 think that might be the disconnect you're --
20 you have.

21 SENATOR MURPHY: But when you
22 answer the questions and indicate the number
23 of megawatts, and so forth, it does make a
24 difference whether they're really there or
25 they're not.

1 Thank you.
2 THE CHAIRMAN: And I've got
3 one -- one more question at this point.
4 Several places you mentioned as an obvious
5 benefit is that, if this plant were to be
6 constructed and go into production,
7 presumably, where there are more -- less
8 efficient plants would go out, that it would
9 lower the wholesale market price.
10 I think the people, other than
11 the companies that sell the wholesale to the
12 retail market, but I think the people really
13 want to know is it going to have a real
14 impact on what they're paying for
15 electricity.
16 Do you have any examples
17 anywhere that can make this point?
18 THE WITNESS (Bodell): Tayna
19 Bodell again.
20 The numbers are not in the
21 report but, obviously, we could provide
22 those. The estimated reduction in
23 electricity prices for the region is two to
24 four dollars per megawatt hour and escalating
25 over time. And for Connecticut, it's three

1 to five dollars per-megawatt-hour reduction
2 because of the addition of this facility.
3 And that is as high as it
4 because of the tight supply-demand
5 constraints that are anticipated under the
6 announced retirements and the projections of
7 the New England ISO.
8 MR. SMALL: And we'll -- we'll
9 do a Late-Filed exhibit with the Connecticut
10 benefits -- specific Connecticut benefits of
11 the facility.
12 THE CHAIRMAN: Okay.
13 But I just want to know, are
14 there -- are there more questions from the
15 Council?
16 MR. ASHTON: I have some.
17 DR. KLEMENS: We go now?
18 THE CHAIRMAN: Well, I was
19 hoping to make it -- but it's not going to
20 work -- make it clean because we have to have
21 people come up and set up. But we'll take
22 a -- we'll take five minute break now, and
23 we'll ask a few more questions, hopefully,
24 from the Council, and then we'll go to, I
25 guess, it's the Town of Middlebury.

1 (Whereupon, a recess was taken
2 from 3:05 p.m. until 3:12 p.m.)
3 THE CHAIRMAN: Ladies and
4 gentlemen, the five minutes are up. Let's
5 get back to -- before we get to the Town of
6 Middlebury, which I hope we will very
7 shortly, we have some questions first from
8 Mr. Ashton.
9 MR. ASHTON: We lost our
10 applicant.
11 THE CHAIRMAN: Well, ask them
12 anyway. If they can't answer, it will be
13 duly noted.
14 MR. ASHTON: I probably can.
15 Some of these are more mechanical.
16 In the Interrogatory 2-D, for
17 dog, they talk about efficiency winter,
18 summer average, unfired, duct-fired, and so
19 forth. And it talks about LHV and HHV.
20 Do you know what those
21 abbreviations are, and can you explain them
22 for the untutored?
23 THE WITNESS (Donovan): Sure.
24 I can -- I can take this. The LHV is --
25 it's -- LHV stands for lower heating value,

1 and HHV is higher heating value. It's all in
2 how the -- the fuel is purchased.
3 MR. ASHTON: And what does the
4 difference mean?
5 THE WITNESS (Donovan): The
6 difference between the two is in the
7 condensables of the -- the fuels. It's a Btu
8 content of the fuel on a BTU-per-pound basis.
9 MR. ASHTON: And LHV means you
10 do or do not consider condensation?
11 THE WITNESS (Donovan): You do
12 not.
13 MR. ASHTON: HHV means you do?
14 THE WITNESS (Donovan): That
15 is correct.
16 MR. ASHTON: Okay. Thank you.
17 When we're talking about
18 Connecticut being self-sufficient as far as
19 generation goes, what assumption is made
20 regarding the connection to Long Island, the
21 deep fee tie at New Haven and the Norwalk
22 cable. So are there exports or imports or
23 zero flow?
24 THE WITNESS (Bodell): To
25 answer that, I would have to look

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1 specifically at the load flows in the way
2 that they flow in the model. They may change
3 over time, depending on the capacity, but I
4 would have to get back to you.
5 MR. ASHTON: So your answer is
6 you don't know?
7 THE WITNESS (Bodell): Right
8 now, no, I do not know.
9 MR. ASHTON: And can you
10 answer that in a late-file?
11 MR. SMALL: Yes, we can.
12 MR. ASHTON: Okay.
13 I may have asked this question
14 before. If I have, please forgive me.
15 Can the unit be fired
16 partially on oil, partially on gas; in other
17 words, could one unit be fired with oil, one
18 unit fired gas in a shouldered situation?
19 THE WITNESS (Donovan): The
20 answer is yes.
21 MR. ASHTON: Okay. That's it.
22 I'm not looking for -- it's fairly simple.
23 Has there any comparison --
24 has there been any noise study made of the
25 noise generated by the plant versus noise

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1 THE WITNESS (Bazinet): No.
2 MR. ASHTON: Has there any
3 consideration been given to establishing a
4 nearby impoundment where a large volume of
5 water could be stored for later use?
6 THE WITNESS (Bazinet): We --
7 we haven't considered it. We could look at
8 it.
9 MR. ASHTON: You -- you could
10 look at it?
11 THE WITNESS (Bazinet): Yes.
12 MR. ASHTON: It would probably
13 mean an additional property acquisition. I
14 don't think you're going to do it on
15 26 acres.
16 THE WITNESS (Bazinet):
17 Understood. But, I mean, we could analyze
18 the -- the feasibility of it, is, I guess,
19 what I was referring to.
20 MR. ASHTON: I think a quick
21 and dirty look at it might be worthwhile.
22 In looking at the discharge of
23 water from the plant, there are at least four
24 power plants, to my knowledge, that establish
25 an NPDS discharge plant on their own

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1 generated by the airport, and especially,
2 flights overhead?
3 And if it's a simple yes you
4 have, late-file it. If you haven't, is there
5 any way it can be done reasonably?
6 THE WITNESS (Gresock): No.
7 We have no comparative study like that.
8 MR. ASHTON: Any update on the
9 gas supply? Anything new in the last month?
10 THE WITNESS (Bazinet): Well,
11 I can provide you with a more detailed
12 explanation of how we approach the process,
13 if that's --
14 MR. ASHTON: No. Is there
15 anything new that FERC has now approved,
16 another BCF per second pipeline coming into
17 New England or something like that?
18 THE WITNESS (Bazinet): Not
19 that we're aware of.
20 MR. ASHTON: Okay. The answer
21 is no.
22 Has -- has there been any
23 consideration to drawing water out of the
24 Naugatuck River, as well as, or in lieu of
25 Pomperaug?

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1 property. You know, it gets rid of the oils
2 and stuff like that. But they also found
3 that where the -- the products of corrosion
4 coming out of a plant that were -- would be
5 removable by these little sewage treatment
6 plans, has that been considered for the -- in
7 your case here?
8 THE WITNESS (Bazinet): So
9 we're -- we're recycling all of the heat
10 recovery steam generator blowdown so that
11 those --
12 MR. ASHTON: And you take out
13 the metals that you pick up then?
14 THE WITNESS (Bazinet): They
15 would be --
16 MR. ASHTON: And go through a
17 decontamination process, an exchange or
18 whatever, maybe?
19 THE WITNESS (Bazinet): That's
20 correct.
21 MR. ASHTON: Okay. That
22 answers that.
23 And, in your opinion, is the
24 cost of having inadequate -- the societal
25 cost of having inadequate capacity, how does

45 (Pages 283 to 286)

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1 it compare with the cost of having a little
2 surplus in the capacity?

3 THE WITNESS (Bazinet): So
4 just to clarify, the -- you're generating
5 capacity as a region or --

6 MR. ASHTON: If you have to
7 curtail load because of a shortage in
8 capacity, what's the societal impact of that
9 versus having -- society having to carry a
10 long picture where you have excess
11 generation?

12 THE WITNESS (Powers): Well,
13 I -- speaking from a market perspective, I
14 think, as we've seen in past capacity
15 auctions, when you're a little bit long, it
16 provides incremental reliability benefits and
17 your prices are, you know, reasonably low.

18 When you go short, even just a
19 little bit, and in the last auction we went
20 short a lot, but with the structure of the
21 market, even when you go short a little bit,
22 prices rise to the cost of new entry. So
23 you're paying significantly more money when
24 you're a little bit short than when you're a
25 little bit long.

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1 denominator, the individual homeowner, what
2 this means, and I think it would be helpful.
3 That's the comment, as you do these
4 late-files.

5 I have two comments on C310.
6 Again, when you're colleagues go through and
7 start asking questions, you have more
8 questions. And on C310, two things came up,
9 and I'm bringing this up because possibly
10 this is something that Dean should address.
11 You'll have to address this through a
12 late-file also.

13 But as I understand it,
14 correct me if I'm wrong, this facility sits
15 at the crest of a hill. Is that correct?

16 THE WITNESS (Bazinet): The --
17 it's -- it sits -- the --

18 THE WITNESS (Jones): So I
19 more accurately describe it as in a saddle
20 where to the north and south it rises up
21 slightly, and to the east and west it drops
22 off slightly.

23 DR. KLEMENS: Well, to the
24 east and west. Can we say that water is
25 flowing off the site in many different

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1 MR. ASHTON: Thank you. Those
2 are my questions.

3 THE CHAIRMAN: Thank you.
4 Dr. Klemens.

5 DR. KLEMENS: I have a general
6 observation. As you're going to be producing
7 these late-files, there's been a lot of
8 discussion at the large scale. Last time,
9 there was the discussion about what the cost
10 and the savings would be.

11 Would it be possible to take
12 some of these concepts and distill it into
13 the most basic level, the single ratepayer,
14 and what it means to them? It would
15 certainly, I think, be helpful to me to
16 understand, and I think to many of the
17 citizens that have asked questions, what does
18 it mean to them?

19 Likewise, with the issue of
20 the particulate pollution, the Chairman
21 wanted to see maps of where it was going.
22 And I think it really is to respond to the
23 huge volume of citizen concern that we've
24 received. Is there any way you can think
25 about the lowest -- the lowest common

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1 directions now and feeding many different
2 wetlands?

3 THE WITNESS (Jones): The
4 water is flowing off the site in many
5 different directions. That's shown on our --
6 on the drainage area map.

7 DR. KLEMENS: Okay. So what
8 I'm seeing here now on -- on your stormwater
9 management plan, is that you are capturing
10 all the water on the site and discharging it
11 to a single discharge point. Is that
12 correct?

13 THE WITNESS (Jones): That's
14 not correct.

15 DR. KLEMENS: Could you tell
16 me where the --

17 THE WITNESS (Jones): So there
18 are several discharge points.

19 DR. KLEMENS: Oh, I don't see
20 them. I see the two detention ponds all
21 being taken to one point into that swale that
22 Mr. Hannon was so concerned about.

23 THE WITNESS (Jones): So we'd
24 like to submit as a Late-Filed exhibit our
25 drainage area map showing pre and

46 (Pages 287 to 290)

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1 postdevelopment drainage areas and the
2 discharges from each of those areas pre and
3 postdevelopment. I think it would directly
4 address your question.
5 DR. KLEMENS: Well, my
6 question is maintaining the preexisting
7 hydrology and not capturing all the hydrology
8 from the site and putting it in one wetland.
9 THE WITNESS (Jones): That's
10 correct.
11 DR. KLEMENS: I'm
12 particularly, again, concerned about the
13 contribution of Wetland 1, which I believe
14 you're proposing to fill?
15 THE WITNESS (Jones): That is
16 being proposed to fill.
17 DR. KLEMENS: Well, there's
18 water coming out of that which feeds directly
19 into Wetlands Number 2 and 3. So how are you
20 going to maintain the hydrological balance in
21 those wetlands post development?
22 THE WITNESS (Jones): We would
23 like Mr. Gustafson to -- to answer that for
24 you.
25 DR. KLEMENS: That will be

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1 answered by Mr. Gustafson or answered by the
2 late file, or both?
3 MR. SMALL: Probably --
4 probably a combination of the two,
5 Dr. Klemens.
6 DR. KLEMENS: Okay. Well, I
7 wanted to get that question out there for you
8 to address. Thank you.
9 And the only other question I
10 have, I notice you're talking about the
11 photodegradable -- photodegradable netting --
12 the netting. Is that approved by the DEEP?
13 Because I know there's a lot of concern about
14 this kind of netting and entanglement of
15 wildlife.
16 THE WITNESS (Jones): That --
17 that's why it's photodegradable.
18 DR. KLEMENS: Okay. Fine.
19 Thank you for that clarification.
20 THE CHAIRMAN: Thank you.
21 Mr. Levesque.
22 MR. LEVESQUE: Just a few
23 questions about water supply.
24 Does the Heritage Village have
25 a water treatment plant?

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1 THE WITNESS (Bazinet): Yes,
2 they do.
3 MR. LEVESQUE: And all the
4 studies you have, or reports about how
5 your -- your contract would work and -- and
6 the study of the supply of the water that
7 you -- that you want to buy from them, have
8 you submitted that in this app?
9 THE WITNESS (Bazinet): So
10 there was a response to interrogatory that
11 described how we would meet our water demands
12 during oil-fired operation. The balance of
13 the year, during gas-fired operation, there
14 is no -- there is no, you know, need to
15 balance continuous hours of oil-fired
16 operation with water supply.
17 MR. LEVESQUE: Okay. And then
18 your water needs for nonpotable are supplied
19 from that treatment plant?
20 THE WITNESS (Bazinet): All of
21 the facility's water requirements are
22 supplied by Heritage Village.
23 MR. LEVESQUE: After the
24 filtration plant?
25 THE WITNESS (Bazinet):

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1 It's -- there -- it's all potable water, so
2 yes.
3 MR. LEVESQUE: Is there a
4 way -- have you studied a way -- can you --
5 can you use nontreated drinking water for the
6 needs of the electric production?
7 THE WITNESS (Bazinet): Yeah.
8 Yes, we could. The end result of the water
9 would need to be demineralized, which we'd
10 take care of on-site, but, yeah. So -- so
11 yes, the answer is yes. We've looked at it,
12 and, yes, we could use it.
13 MR. LEVESQUE: Have you looked
14 into -- like, in California, on this they
15 have -- they're even supplying drinking water
16 from treated sewage effluent plants. Have
17 you looked into finding it from other
18 supplies?
19 THE WITNESS (Bazinet): We
20 did. We conducted a detailed analysis about
21 a year or two ago and looked at both supply
22 from Waterbury, their -- their existing
23 wastewater treatment facility, as well as the
24 Naugatuck wastewater treatment plant.
25 It was done in a slightly

1 different context, but the -- the end -- the
2 end result was the same, in that the
3 feasible -- while technically feasible, the
4 routing plan to get from Point A to Point B
5 was just not -- just not something that we --
6 we deemed was a viable option.
7 MR. LEVESQUE: Is the
8 Naugatuck one closer?
9 THE WITNESS (Bazinet):
10 Actually, Waterbury had --
11 there -- there are more direct routes to
12 Waterbury using the existing right of way --
13 rights of way. But, yeah, it's not something
14 that I think would be looked upon favorably.
15 MR. LEVESQUE: How about
16 prefiltration plant water from Heritage?
17 THE WITNESS (Donovan): I
18 mean, one thing that -- that Mr. -- in -- in
19 response to Mr. Ashton, I think, is -- we
20 should have highlighted further was we are
21 incorporating a number of recycling methods
22 inside the plant, innovative things to -- to
23 reduce the water consumption and the water
24 discharge to an absolute minimum, far lower
25 than comparable projects.

1 MR. LEVESQUE: Okay.
2 But did you check about
3 getting water from the Heritage effluent
4 plant, or is it a matter of cost?
5 THE WITNESS (Bazinet): Yeah,
6 I'm not certain what that -- no, we didn't
7 examine that plant specifically.
8 MR. LEVESQUE: Because they --
9 they have a sewage district, too.
10 THE WITNESS (Bazinet): Yeah,
11 my understand is that's --
12 MR. LEVESQUE: They're one of
13 the only two regulated public utility sewage
14 districts. That's what I'm aware of.
15 THE WITNESS (Bazinet): Yeah.
16 My understanding is that the capacity of that
17 plant is extremely small.
18 THE WITNESS (Jones): About
19 800,000.
20 THE WITNESS (Bazinet): Yeah.
21 About 800,000 gallons a day relative to
22 Naugatuck to Waterbury. I think Naugatuck
23 has a designed capacity of about
24 10 million gallons per day. And Waterbury
25 is, I believe, 37 million gallons per day.

1 So, in other words, our impacts on the plant
2 of that size are probably not --
3 MR. LEVESQUE: It would take,
4 like, a quarter of their -- your maximum use
5 might be a quarter of what they put out?
6 THE WITNESS (Bazinet):
7 Correct.
8 MR. LEVESQUE: Okay. Thank
9 you very much.
10 THE CHAIRMAN: Okay.
11 The Town of Middlebury, thank
12 you for your patience. And I don't know
13 which of you two gentlemen would like to
14 start, but --
15 MR. SAVARESE: Mr. Chairman,
16 my name is Attorney Stephen Savarese. I'm a
17 licensed attorney and representing the Town
18 of Middlebury.
19 MR. LYNCH: Mr. Savarese, keep
20 your voice up.
21 MR. SAVARESE: Yes. I'm going
22 to defer to my senior colleague who has been
23 part of the process through the entire
24 proceedings that were held in 2006 and 2007.
25 And then, we are hopeful that

1 we're going to get a further opportunity to
2 address the Council and all the after-filed
3 materials because we are the first of the
4 party intervenors to come forward, but the
5 evidence is still coming in that we're having
6 to evaluate and critique.
7 So just on a fairness basis,
8 we would hope that, at some point, we would
9 be entitled to go again to address what is
10 still being filed by the applicant.
11 THE CHAIRMAN: Somebody has to
12 go first, and the Council was probably at an
13 equal disadvantage, and there will be another
14 opportunity. We just want to ask you, and
15 we'll ask everybody, including ourselves,
16 that when we respond to late filings, we keep
17 our questions concise and don't repeat, but
18 that's not an issue at the moment.
19 MR. SAVARESE: Understood.
20 And again, we developed our questions without
21 the knowledge of what preceded this morning.
22 So again, we apologize if we're going to be
23 repeating, in even a nuanced manner, some of
24 the questions that were diligently put
25 forward by the Council and answered by the

1 applicants.
2 We also note that the
3 transcript from the prior proceedings had not
4 yet been filed, so we did not have further
5 opportunity to -- to cross-reference that
6 we're not repeating the question that was
7 answered -- asked and answered back on
8 January 15th. But without further ado,
9 Mr. Ray Pietrorazio.

10 CROSS-EXAMINATION

11 MR. PIETRORAZIO: Thank you
12 Stephen. Good afternoon. Thank you for this
13 opportunity to speak to the Council and to
14 cross the applicant.

15 My name is Raymond
16 Pietrorazio. I reside in Middlebury,
17 Connecticut. I'm approaching 76 years of
18 age, and I've never been in this type of
19 forum before. I'm sure both panels here have
20 been, but this is my first time, so I beg
21 your indulgence.

22 I will start by saying that
23 I've tried to maintain a pretty narrow focus
24 on this whole issue since my involvement in
25 the year 2000, and mainly, that is with

1 standards of the state and local level. We
2 also, in addition, for comparative
3 information, provide information about the
4 ambient background and do a comparison so
5 that those who live in the area can
6 understand the degree to which the sound
7 levels will or will not change.

8 MR. PIETRORAZIO: Okay. I
9 guess that partly answers my question. But
10 the -- the validation to my question comes
11 from the EPA standards that mandates that all
12 noise issues -- that all noises that are --
13 are in the area of the receptors to be
14 combined to arrive at the final decibel
15 rating. Is that correct?

16 THE WITNESS (Gresock): Can
17 you give me a citation on that standard?

18 MR. PIETRORAZIO: Well, I'm --
19 I'm mainly concerned with the -- the
20 combination of noise from both the airport
21 and the plant.

22 MR. SMALL: If you can tell
23 that -- if you can provide us with a
24 reference to the regulation you're asking us
25 about, we can -- we can respond.

1 relation to the plant stack discharges and
2 the effects it would have on the aviation at
3 the Waterbury-Oxford Airport. And you know
4 the history there, so I want take any longer.

5 There were a few comments made
6 when the hearings were just started --
7 restarted again that I'd like to ask a couple
8 questions on, if I may? And I think it was
9 Chairman Stein that brought up the noise
10 issue and asked -- or maybe it wasn't.

11 THE CHAIRMAN: It wasn't me,
12 but it was somebody.

13 MR. ASHTON: Guilty.

14 MR. PIETRORAZIO: Okay.
15 Councilman Ashton. Which I thought was a
16 very good question.

17 The -- I guess the question
18 is: Isn't it true that when we seek to find
19 the final decibel rating at the various
20 receptors on such an issue, that we have to
21 consider noise from all sources in the area?
22 Isn't that correct?

23 THE WITNESS (Gresock): The
24 noise levels from the facility itself are
25 the -- are what need to comply with the

1 MR. PIETRORAZIO: I'd be happy
2 to -- I'd be happy to. As I say, this came
3 up just as Chairman -- Councilman Ashton
4 brought up the subject.

5 With regard to --

6 MR. ASHTON: In fairness,
7 Mr. Pietrorazio --

8 MR. PIETRORAZIO: Yes.

9 MR. ASHTON: -- to my
10 knowledge, noise measurements don't
11 discriminate against individual generators of
12 noise, but rather, they take the totality of
13 noise at a given point.

14 MR. PIETRORAZIO: That's --
15 that's exactly correct.

16 MR. ASHTON: Does that get rid
17 of one late-file?

18 MR. PIETRORAZIO: No. No.
19 They want the EPA standards, so I'd be happy
20 to supply it to them.

21 THE WITNESS (Gresock): No.

22 MR. ASHTON: I should ask the
23 applicant.

24 THE WITNESS (Gresock): And I
25 think there's a distinction. The ambient

1 sound levels and the change in ambient sound
2 levels obviously has all sources included.
3 So the project contribution would be
4 reflected in the comparative information that
5 would show what the change in sound level
6 would be.

7 The project, however, sound by
8 itself is what is regulated by the state and
9 the local standards. So I think there --
10 there are just two -- two different types of
11 analysis and consideration should be given.

12 MR. PIETRORAZIO: Sure. The
13 reason why I bring it up is I'm sure the
14 Council would be very interested in knowing
15 what the final decibel rating is. Thank you.

16 With regard to excess
17 generation, isn't it true that the loads and
18 forecast that the Siting Council has produced
19 for many years now, at least decades that I
20 know of, has repeatedly stated that the
21 excess generation in Connecticut -- maybe
22 this question is better directed to the
23 Council -- but the excess generation in
24 Connecticut has been on the order of 18 to
25 20 percent, isn't that correct, by the loads

1 and forecast in the recent, say, two decades?

2 THE CHAIRMAN: Well, this is
3 really your opportunity to cross-examine the
4 applicant. Obviously, if we have a ready
5 answer to clarify, we'd be glad to.

6 I don't have the percentage,
7 you know, 18 or 20 percent. I know that,
8 fairly consistently, even with the -- with
9 the plant retirements and planned
10 retirements, our particular study has, in the
11 past, shown that there is sufficient supply.

12 Beyond that, as I said,
13 we're -- this is really your unique
14 opportunity to ask questions of the
15 applicant.

16 MR. PIETRORAZIO: Thank you,
17 Chairman Stein.

18 The first question on my list
19 here that I prepared: Isn't one of the
20 principal purposes of the stack to convey the
21 products of combustion containing toxic gases
22 and/or particulate material to a point high
23 enough above the ground level so that, after
24 normal dispersion above the stack, the ground
25 level concentration of any contaminants will

1 be well below permissible levels?
2 THE WITNESS (Seller): Yes,
3 the primary purpose of the stack is -- is
4 precisely that, is that to safely emit the
5 products of combustion and -- which -- which
6 are, you know, common products of combustion
7 are found in any combustion process, to
8 levels that comply with ambient air quality
9 standards.

10 MR. PIETRORAZIO: Thank you.
11 Do you agree that the stack
12 designed for such a project as this is a very
13 complex undertaking that involves many
14 factors and considerations?

15 THE WITNESS (Seller): Yes.
16 The height of the stack takes into account
17 the height of the buildings, nearby terrain,
18 and the nature and properties of the exhaust
19 gas itself.

20 MR. PIETRORAZIO: Thank you.
21 Can ground concentrations of
22 pollutants be reduced by the use of higher
23 stacks?

24 THE WITNESS (Seller): In some
25 instances, yes.

1 MR. PIETRORAZIO: Would you
2 say in most instances?

3 THE WITNESS (Seller):
4 In many instances, but not --
5 not -- certainly not in all instances.

6 MR. PIETRORAZIO: Thank you.
7 Would two 150 -- I'm sorry --
8 160-foot tall stacks at the CPV Towantic be
9 more effective in the dispersion of
10 contaminants than the current 150-foot high
11 stacks?

12 THE WITNESS (Seller): There
13 may be a marginal difference in -- in the
14 ultimate concentrations, but the result in
15 concentrations from the emissions of 150 feet
16 are well below all of the applicable
17 air-quality standards. And so such an
18 additional stack height would be unnecessary.

19 MR. PIETRORAZIO: I'll be
20 providing a document to the Council that --
21 that states that the -- a 20-foot change in
22 height in the stacks will produce more than
23 double the deposition. And I just -- the
24 import is on the height of the stacks.

25 For the record, do you know

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1 the height of the stacks of the most recent
2 dual-fueled combined cycle electric
3 generating facility to become operational in
4 Connecticut?
5 MR. SMALL: Which facility
6 would that be, Mr. Pietrorazio?
7 MR. PIETRORAZIO: Well, I'm
8 asking you if you know what the most recent
9 one is.
10 Well, let's take -- if you
11 don't, let's take Middletown, the Kleen
12 Energy plant.
13 THE WITNESS (Seller): I don't
14 know what the height of that stack is, no.
15 MR. PIETRORAZIO: The
16 Killington plant?
17 MR. ASHTON: No, Killingly.
18 MR. PIETRORAZIO: I'm sorry,
19 Killingly.
20 MR. ASHTON: The Killingly
21 Plant, Lakeville, Lake Road.
22 MR. PIETRORAZIO: Lake Road.
23 THE WITNESS (Bazinet): Don't
24 know what the stack height is there, either.
25 MR. PIETRORAZIO: Thank you.

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1 From the findings of Fact
2 Number 33 for Docket 255, available from the
3 Council's administrative notice list, the
4 Kleen Energy 620 megawatt facility in
5 Middletown, Connecticut, approved
6 November 21, 2002, became operational, in
7 2011, with two stacks that measured 215 feet
8 tall, is the answer to that question.
9 The next question is: How
10 does exit velocity of the stack gases affect
11 ground level pollution?
12 THE WITNESS (Seller): The
13 ground level pollution would be indirectly
14 affected by the exit velocity combustion
15 plume, like that of the proposed project
16 would be warmer than ambient air and,
17 therefore, considered a buoyant plume. So it
18 is much more influenced by the mass flow rate
19 and the temperature than by the exit
20 velocity.
21 MR. PIETRORAZIO: I don't
22 quite understand. Thank you. I don't quite
23 understand the answer. I guess what I was
24 referring to is the -- maybe I should
25 rephrase the question to read: If the exit

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1 velocity were to increase, would it have a
2 direct effect's on the ground level
3 pollution?
4 THE WITNESS (Seller): If the
5 exit velocity alone were to increase, but the
6 mass flow rate and the temperature were the
7 same, it would have a marginal, at best,
8 improvement.
9 MR. PIETRORAZIO: But it would
10 improve?
11 THE WITNESS (Seller):
12 Slightly.
13 MR. PIETRORAZIO: Thank you.
14 What is the relationship of
15 stack gas exit velocity and the turbulent
16 wake of the stack itself?
17 THE WITNESS (Gresock): I'm
18 not sure I completely understand the
19 question.
20 MR. PIETRORAZIO: Well, maybe
21 if I used a different term for the turbulent
22 wake. I'm talking about what we refer to in
23 the industry as cap -- stack tip downwash; in
24 other words, the downwash of the pollutants
25 of the plume itself caused by the erratic

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1 airflow around the top of the chimney, the
2 best I can describe it.
3 THE WITNESS (Seller): Yeah.
4 Sure. Stack tip downwash is -- is more
5 influenced by the physical structure of the
6 stack itself and air flowing across the, say,
7 the building, and then the stack itself would
8 influence the escape of the exhaust plume.
9 MR. PIETRORAZIO: And -- and
10 what is the relationship with regard to the
11 exit velocity again? That's -- that's the
12 question. In other words, does the exit
13 velocity tend to exacerbate the situation, or
14 if the exit velocity increased, would it tend
15 lessen the effect of the stack tip downwash?
16 THE WITNESS (Seller): I would
17 have to take a look at that. I think the
18 stack tip downwash is -- is more of a
19 physical feature on the -- on the basis of
20 the juxtaposition of the buildings and the
21 stack itself. So I'm not sure I understand
22 the relationship by -- of increasing or
23 decreasing the velocity, whether it would
24 have much of an effect on stack tip downwash.
25 MR. PIETRORAZIO: Thank you.

1 There is a critical wind
2 velocity, quote/unquote, for every stack exit
3 velocity. Can you please explain what is
4 meant by the term "critical wind velocity"?
5 THE WITNESS (Seller): I -- I
6 have no idea.
7 MR. PIETRORAZIO: Thank you.
8 And what is meant by the term
9 "terrain downwash"?
10 THE WITNESS (Seller): If
11 there is terrain very close to the facility
12 itself that is taller than the stack and
13 within very close proximity to the stack, air
14 flowing across the terrain can influence the
15 downwash of the stack, the same as -- of
16 having a very tall building immediately
17 adjacent to the stack.
18 MR. PIETRORAZIO: Very good.
19 Thank you.
20 And what is meant by the term
21 "building downwash"?
22 THE WITNESS (Seller): The
23 same effect, the air flowing across the
24 building can cause the -- the escaping plume
25 to -- to move in a downward direction before

1 because the atmosphere is comprised of about
2 80 percent nitrogen, so in the combustion
3 process there would be some conversion from
4 atmospheric nitrogen to various oxides of
5 nitrogen.
6 If there are sulfur impurities
7 in any fuel, those would oxidize into sulfur
8 dioxide. Any particulates in the inlet air,
9 like pollen or dust, plus any partially
10 burned hydrocarbons, could form particulate
11 matter. And any unburned fuel that would go
12 through go the system would comprise of all
13 of the organic compounds or hydrocarbons.
14 There would be trace emissions
15 of various other -- other chemicals on the
16 basis of what would be in either the air that
17 went into the combustion or in the fuel
18 itself.
19 MR. PIETRORAZIO: Thank you.
20 I'm sorry. Did -- did you
21 mention, in the beginning of your response,
22 carbon monoxide?
23 THE WITNESS (Seller):
24 That's -- no, I'm sorry. I
25 omitted carbon monoxide. So any incomplete

1 it resumes upward.
2 MR. PIETRORAZIO: And -- and
3 adversely affect normal dispersion?
4 THE WITNESS (Seller):
5 Building induced downwash is
6 taken into account in all of the atmospheric
7 modeling, yes, because it can have an
8 influence on where and -- and the location
9 and magnitude of the point of maximum impact.
10 MR. PIETRORAZIO: Thank you.
11 Besides water vapor and carbon
12 dioxide being the main products of combustion
13 of natural gas, what other gases will be
14 emitted from the stacks of this plant?
15 THE WITNESS (Seller): Okay.
16 In any combustion process of -- of any fuel,
17 so whether it's in a power plant or in your
18 car or in your home, the primary products of
19 combustion --
20 MR. PIETRORAZIO: Carbon based
21 fuels?
22 THE WITNESS (Seller): Any
23 carbon based fuel, the products of combustion
24 would be carbon dioxide, water, and then,
25 nitrogen dioxide, which is formed primarily

1 combustion of the fuel would result not only
2 in hydrocarbons but also partially combusted
3 carbon or carbon monoxide.
4 MR. PIETRORAZIO: Thank you.
5 And what are the average
6 minimum and maximum percentages of full
7 rating that the plant would operate at; in
8 other words, the plant is capable of
9 operating at a minimum and maximum capacity,
10 and I'd like to know what you would
11 contribute as being the minimum and maximum
12 averages.
13 THE WITNESS (Bazinet): So the
14 five data points, I believe, you're asking
15 for, an average load, a minimum load, a
16 maximum load, and the minimum and maximum of
17 the average.
18 MR. PIETRORAZIO: That's
19 correct, yes.
20 THE WITNESS (Bazinet): So the
21 maximum load is 100 percent of the planned
22 output. The minimum load is -- can be found
23 on Table 2 -- 23 of the exhibit. It's 1 on
24 page 8, and that's 30 -- 30 percent.
25 MR. PIETRORAZIO: What was

1 that number?
2 THE WITNESS (Bazinet): Thirty
3 percent.
4 The average load is going to
5 depend entirely on the dispatch request from
6 ISO New England, demand at any given point in
7 time, ambient temperature, a number of
8 different factors. And it's kind of
9 impossible, at this point, to say what the --
10 well, the min -- the min and max of that --
11 that average would be because we don't
12 actually know what that average would be at
13 this point.
14 MR. PIETRORAZIO: Okay.
15 So you don't have -- it's the
16 same answer for the maximum average?
17 THE WITNESS (Bazinet): The --
18 the average dispatched load of the plant is
19 going to be dependent on so many different
20 variables in the future, that we can project,
21 and we can project an expected capacity
22 factor at full load, but the -- the requests
23 made by ISO New England, at any given point
24 in time, could vary for a number of different
25 reasons such that it would be impossible for

1 us to say today what the average expected
2 operating mode of the plant is in any given
3 year.
4 MR. PIETRORAZIO: So in -- in
5 trying to determine the -- the size of the
6 plant that you're going to build, you
7 would -- you would have some conception of
8 what the demands are going to be so that --
9 well, let me rephrase here. Let me back up
10 just a little bit.
11 The -- the plant overall
12 efficiency, in other words, from fuel to
13 megawatt, the -- is dependent somewhat, and
14 largely, I think, the efficiency of the plant
15 would be on the percentage of rating.
16 Correct?
17 There is a point at which the
18 plant is most efficient in its operation. Is
19 that correct?
20 THE WITNESS (Bazinet): Yes.
21 MR. PIETRORAZIO: And it's
22 usually at the higher end?
23 THE WITNESS (Bazinet): That's
24 correct.
25 MR. PIETRORAZIO: So if we're

1 going to -- if we're going to build an 800
2 megawatt plant, the conjecture must be that
3 your -- your average maximum load is going to
4 be on the higher end of that 800 megawatts.
5 Is that correct?
6 THE WITNESS (Bazinet): So
7 what I -- what I can direct you to is Figure
8 23 of Exhibit 2 of our filing. It's on
9 page 44. That provides, over the first ten
10 years of operation, the expected capacity
11 factor of the plant, that is, the total
12 possible megawatt hours generated as -- as
13 the denominator, assuming 8,760 hours of
14 operation, and the numerator being the
15 projected generation over that same time
16 period.
17 Figure 23, on page 44, I think
18 it is.
19 MR. PIETRORAZIO: Yes, we got
20 it. Thank you.
21 So correct me if I'm wrong.
22 You're mostly in the lower 70s range,
23 70 percent, 72, 71?
24 THE WITNESS (Bazinet): That's
25 correct. So on an average annual basis, the

1 expected capacity factor is in that range.
2 Correct.
3 MR. PIETRORAZIO: Thank you.
4 And what would be the exit
5 velocities of stack gases at that average
6 rate, say, 72 percent? Do you have that? I
7 believe I saw in the submittal the -- the one
8 figure for exit stack velocity, but I didn't
9 see it for the range.
10 THE WITNESS (Bazinet): I just
11 want to correct a statement. That -- that
12 does not assume that the plant will be
13 operated at an average rating of 70 percent.
14 It's simply the megawatt hours expected to be
15 generated divided by the total potential
16 megawatt hours that could be generated. That
17 could happen at a variety of different
18 operating points over the -- over the span of
19 a year.
20 MR. PIETRORAZIO: I
21 understand. I was seeking information. I
22 didn't get it, but I was seeking to find the
23 average that you expected the plant be
24 operated at, and you couldn't answer it, so
25 that's fine.

1 So do we have the exit
2 velocity at 72 percent of rating?
3 (Pause.)
4 THE WITNESS (Gresock): We --
5 we have some information on some load cases,
6 but we don't have information for 72 percent
7 load. We use a typical operating case, which
8 we call "the ISO condition," which is the
9 plant operating at a hundred percent load
10 in -- including -- yeah -- and the unfired
11 case, which is -- which is a higher -- or
12 which is the -- the higher velocity is
13 56.2 feet per second velocity for the -- for
14 that hundred percent load case.
15 MR. PIETRORAZIO: Thank you
16 very much.
17 And what material would the
18 internal liner of the stacks be constructed
19 of?
20 THE WITNESS (Donovan): The
21 stacks are going to be carbon steel, and
22 there may be a stainless liner for the
23 first -- for the first section. I don't know
24 how tall that would be.
25 MR. PIETRORAZIO: For the

1 first section, you mean the base section?
2 THE WITNESS (Donovan): Yes.
3 MR. PIETRORAZIO: And the
4 remainder would --
5 THE WITNESS (Donovan): Carbon
6 steel.
7 MR. PIETRORAZIO: The internal
8 liner?
9 THE WITNESS (Donovan): There
10 would be no internal liner above a certain
11 point.
12 MR. PIETRORAZIO: Okay. So
13 for friction loss, we would use carbon steel?
14 THE WITNESS (Donovan): That's
15 correct.
16 MR. PIETRORAZIO: Thank you.
17 You've just answered the next question.
18 How will the difference in
19 exit velocities -- I'm sorry. I had a
20 question before that.
21 The exit velocities will vary
22 in accordance with firing rate. Is that
23 correct?
24 THE WITNESS (Seller): Yes.
25 MR. PIETRORAZIO: And how will

1 the difference in exit velocities affect the
2 stack gas dispersion?
3 THE WITNESS (Seller): The
4 stack gas dispersion, again, is primarily
5 influenced by the mass flow rate which is
6 indirectly related to the exit velocity, as
7 well as the temperature. So when the exit
8 velocity is lower, it typically means there's
9 less mass flow rates, so less -- less total
10 air coming out of the stack and at a lower
11 temperature.
12 Under those conditions, there
13 would be higher ambient concentrations
14 predicted than, say, when there was a higher
15 flow rate and a higher temperature. Now,
16 that's juxtaposed against a higher emission
17 rate at the higher temperature, so there's
18 really competing variables that -- that go
19 in. So for some of the cases, the maximum
20 impact may be at 50 percent load, and for
21 other pollutants the maximum impact may be at
22 a hundred percent load.
23 MR. PIETRORAZIO: I see.
24 THE WITNESS (Seller): But in
25 our -- air modeling to support our air permit

1 application, that's why we look at a whole
2 range of cases from very, very cold to very,
3 very hot, from the lowest, the minimum load
4 to the maximum load.
5 MR. PIETRORAZIO: Is that why
6 173 degrees Fahrenheit was just testified to
7 as the exit temperature a little while ago?
8 THE WITNESS (Donovan): That
9 varies, though, too, with ambient temperature
10 and load.
11 MR. PIETRORAZIO: Yes. The
12 point I'm making, that wasn't clarified.
13 THE WITNESS (Gresock): It
14 was -- it was 183 degrees Fahrenheit.
15 MR. PIETRORAZIO: 183.
16 THE WITNESS (Gresock): And
17 again, that was that same referenced ISO
18 condition that is the hundred percent load
19 case, which is what we consider to be the
20 representative operating case.
21 Now, it's correct that for the
22 air permit application a multitude of
23 operating scenarios were run and the
24 worst-case evaluated out of all of those.
25 MR. PIETRORAZIO: So the exit

1 stack temperature will be lower at, say, 30
2 percent of input?
3 THE WITNESS (Donovan): Yes,
4 but not -- not significantly lower. It's
5 probably about 10 degrees lower.
6 MR. PIETRORAZIO: Thank you.
7 Do temperature inversions take
8 place at the site in Oxford, Connecticut?
9 THE WITNESS (Seller): Yes,
10 temperature inversions take place everywhere.
11 MR. PIETRORAZIO: Thank you.
12 If the stack is located where
13 temperature inversions take place, should the
14 stack be designed so it extends through the
15 inversion layer?
16 THE WITNESS (Seller): That's
17 typically not practical nor necessary as the
18 inversion may -- may be at a very high
19 altitude, or it may be at a lower altitude.
20 Most of the inversions, when you have gently
21 rolling terrain like in the Oxford area,
22 would be rather weak thermal inversions.
23 When you have a very, very
24 warm plume, it would -- it would be able to
25 penetrate the inversion pretty readily.

1 That's why in the modeling for the air permit
2 application we use five years of hourly
3 meteorological observations to simulate
4 virtually every possible meteorological
5 condition that can be encountered, including
6 thermal inversions.
7 MR. PIETRORAZIO: Thank you.
8 Is CPV familiar with the
9 incidence of temperature inversion that
10 claimed a number of lives in Donora,
11 Pennsylvania in 1948 and the deadly London
12 smog which caused over 4,000 deaths from SO₂,
13 that's sulfur dioxide -- in 1952?
14 THE WITNESS (Seller): I don't
15 know if CPV is, but I certainly am.
16 MR. PIETRORAZIO: Thank you.
17 Are stack gases from the
18 combustion of natural gas usually invisible
19 to the naked eye above 45 degrees Fahrenheit
20 ambient?
21 THE WITNESS (Seller): It
22 would depend on the humidity, but -- but what
23 you're referring to is when the water would
24 condense in the plume and make it visible, is
25 typically with the lower temperatures.

1 MR. PIETRORAZIO: Around 45
2 degrees Fahrenheit?
3 THE WITNESS (Seller): Subject
4 to check, I'll take your word for that.
5 MR. PIETRORAZIO: Thank you.
6 Are stack gases from the
7 combustion of natural gas usually opaque
8 below 45 degrees Fahrenheit ambient, and also
9 on humid summer days, very humid summer days,
10 above that temperature; that is, it forms a
11 visible plume or white cloud that one cannot
12 see through?
13 THE WITNESS (Seller): A
14 visible plume would be the condensing water
15 vapor plume which you talked to, and those
16 would be associated with lower temperatures
17 and higher humidity.
18 MR. PIETRORAZIO: And those
19 are opaque?
20 THE WITNESS (Seller): Those
21 would be opaque.
22 MR. PIETRORAZIO: Thank you.
23 How much water vapor is
24 produced for each mole of natural gas burned,
25 in equivalent moles?

1 THE WITNESS (Seller): I would
2 have to calculate that.
3 MR. PIETRORAZIO: Well, isn't
4 it true that for every mole of natural gas
5 that is combusted in the combustion process
6 you produce two moles of H₂O?
7 THE WITNESS (Seller): Again,
8 I would have to check on that. The -- the
9 water from a volume percentage, the water
10 content in the plume is typically from a high
11 7 percent to about 11 percent.
12 MR. PIETRORAZIO: Thank you.
13 How does this water vapor
14 emitting from the stacks appear in cooler
15 Connecticut weather? It's kind of a
16 redundant question, but I'd like your
17 explanation.
18 THE WITNESS (Seller): In very
19 cold weather, it would look, you know, much
20 like a cloud.
21 MR. PIETRORAZIO: A cumulus
22 cloud?
23 THE WITNESS (Seller): No, I
24 wouldn't say a cumulus cloud necessarily.
25 MR. PIETRORAZIO: Not a cirrus

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1 cloud?
2 THE WITNESS (Seller): It
3 certainly would not be a cirrus cloud.
4 MR. PIETRORAZIO: Okay. Thank
5 you.
6 THE WITNESS (Seller): It
7 would be puffy, but have none of the other
8 characteristics of cumulus.
9 MR. PIETRORAZIO: Thank you.
10 Will the water vapor clouds
11 cause shadows to be cast in otherwise clear
12 weather?
13 THE WITNESS (Seller): Shadows
14 from water plumes would be pretty finite and
15 pretty limited spatially, and would depend on
16 the sun angle and a number of other factors.
17 MR. PIETRORAZIO: The physical
18 size of the plume. Correct?
19 THE WITNESS (Seller): Most --
20 and its juxtaposition to the sun, so if the
21 sun --
22 MR. PIETRORAZIO: Absolutely.
23 THE WITNESS (Seller): -- was
24 between the -- if the plume was between the
25 sun and the ground, it would do the same

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1 thing that a cloud would do between the sun
2 and the ground.
3 MR. PIETRORAZIO: Or if it was
4 between your cookout that you were having at
5 home?
6 THE WITNESS (Seller): If you
7 were having a cookout right underneath the
8 stack, yeah, I suppose there would be --
9 MR. PIETRORAZIO: No, in line
10 with the sun and the plume?
11 THE WITNESS (Seller): Again,
12 depending on the distance, if the distance
13 goes around the plume is pretty finite in
14 size. So you know, light tends to bend
15 around -- around things like that. So the
16 physical shadow from a plume would not be
17 expected to occur a great distance from --
18 from the facility itself. It would have to
19 be quite a plume in order to do that.
20 THE WITNESS (Donovan): This
21 is a dry-cooled plant with a minimal plume
22 that's just coming off the stacks, whereas a
23 wet-cooled plant with cooling tower would
24 have a much bigger plume.
25 MR. PIETRORAZIO: Yes, I

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1 understand that. Thank you.
2 All this discussion, I'm
3 sorry, has been with regard to the plumes
4 exiting the stacks, at least that was my
5 intention.
6 During the winter when the
7 temperature is below 32 degrees Fahrenheit,
8 will the water vapor condense to liquid and
9 freeze?
10 THE WITNESS (Seller):
11 Certainly not -- you wouldn't find any ground
12 level freezing or ice that would be typically
13 associated with, say, a wet-cooling tower.
14 As far as forming ice crystals in the
15 atmosphere, it would behave the same as any
16 other water in the atmosphere. If there was
17 a particle to absorb onto, it could do that.
18 MR. PIETRORAZIO: Thank you.
19 Therefore, will the freezing
20 created by the condensation of water vapor
21 cause slippery road conditions, icing of
22 tarmacs, aircraft and other services that the
23 condensation comes in contact with as
24 experienced with high water vapor stack
25 plumes from paper mills?

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1 THE WITNESS (Seller): No.
2 The -- the plume would be considerably too
3 high to come into contact with the ground and
4 cause icing. Those types of plumes are
5 associated with, say, a wet-cooling tower
6 that's not very, very hot and was released
7 very close to the ground and close to a
8 surface.
9 There's not any significant
10 risk of fogging or icing on a roadway
11 surface, a tarmac or a runway from a stack
12 plume. It's just released at too high a
13 height, and it's also too warm when it
14 releases the stack. So by the time it could
15 possibly get to ground level it would have
16 dispersed.
17 MR. PIETRORAZIO: Thank you.
18 Will aircraft in flight
19 experience icing conditions and icing of
20 carburetors from their engine's air intakes
21 from the water vapor present in their
22 airspace?
23 THE WITNESS (Seller): I don't
24 know. I'm not an expert on that, but --
25 MR. PIETRORAZIO: But you did

1 design this plant in the vicinity of the
2 airport.

3 THE WITNESS (Gresock): And as
4 we've already stated, under cold conditions,
5 the plume would be visible, and pilots
6 certainly should have the opportunity to
7 avoid flying through the plume for a variety
8 of reasons.

9 MR. PIETRORAZIO: Yes, but
10 isn't it true that most good flying weather
11 is when you cannot see the plume? It's above
12 45 degrees.

13 THE WITNESS (Seller): And
14 under those -- under those circumstances, it
15 wouldn't be condensed water vapor, so the
16 risk of any icing would be very, very
17 negligible.

18 MR. PIETRORAZIO: Well, okay.
19 The icing of aircraft carburetors, if you've
20 looked into this, takes place at
21 temperatures, at normal temperatures well
22 above freezing, well above 40, 50 degrees
23 because of the vacuum on the carburetor, it
24 causes the freezing. So --

25 THE WITNESS (Seller): It's

1 THE WITNESS (Seller): Yes,
2 and that would be released into an atmosphere
3 over, say, Oxford that would weigh
4 approximately a billion tons. So it's a
5 small amount of water that's being
6 introduced.

7 MR. PIETRORAZIO: It is a
8 small amount of water that is placed directly
9 in the path of the aircraft. Isn't that
10 correct?

11 THE WITNESS (Seller): No, I
12 would not agree with that.

13 MR. PIETRORAZIO: Thank you.
14 I think that's all I have for
15 this afternoon, but I certainly want to
16 reserve my -- I don't know if it's right or
17 not, but I had certainly planned to have many
18 more questions, and I beseech the Council to
19 allow me to continue at a later date with
20 regard to cross-examination.

21 Thank you.

22 MR. SAVARESE: Mr. Chairman, I
23 have questions.

24 THE CHAIRMAN: Oh, okay.

25 CROSS-EXAMINATION

1 also my understanding that that would occur
2 quite a residence time. You'd have to be
3 flying in the plume for a fair amount of
4 time, not passing through a plume. You'd have
5 to be hovering over a plume or flying in a
6 plume or flying in a cloud for that matter,
7 for a considerable period of time.

8 MR. PIETRORAZIO: And -- and
9 couldn't that be very dependent on the type
10 of plume, whether it was a fumigation plume
11 or whether it was a conical plume, what the
12 wind direction and speed was, as to the
13 physical size of the plume which could be
14 stretched out for literally miles?

15 THE WITNESS (Seller): Yeah.
16 The plume is going to dissipate pretty fast
17 when it leaves the stack, and so you're not
18 going to have a high condensation of, you
19 know, a high concentration of water from that
20 plume that would cause that, that effect.

21 MR. PIETRORAZIO: Isn't the
22 water vapor to be produced by the combustion
23 of natural gas for this size plant on the
24 order of over a million gallons per day if
25 the plant were at full output?

1 MR. SAVARESE: And my
2 questions are directed mostly at Exhibit 2,
3 but my first question is based on the
4 petition dated November 3, 2014, to reopen
5 and modify.

6 Is the applicant abandoning
7 the proposal to construct, operate and
8 maintain the 512 megawatt dual-fuel
9 combined-cycle electric energy plant in
10 Oxford?

11 THE WITNESS (Bazinet): No.

12 MR. SAVARESE: Is the
13 applicant prepared to commence construction
14 of the 512 megawatt facility based on the
15 reopening of Docket 192 in 2006, resulting in
16 a decision issued in 2007?

17 Are you prepared to build the
18 plant that you're not abandoning if, in fact,
19 this 805 is denied?

20 THE WITNESS (Bazinet): At
21 this point, at this current juncture, today,
22 no.

23 MR. SAVARESE: What would be
24 required to revert to the 512 megawatt
25 facility to get under construction?

1 THE WITNESS (Bazinet): There
2 will be a few different items that would be
3 required. Certainly a lot of the work we've
4 done since proposing the expansion has gone
5 toward revising certain approvals or
6 modifying certain approvals that currently
7 exist. So certainly a lot of that work would
8 need to be undone.

9 But with respect to -- and we
10 could -- we could put together a more
11 comprehensive list, but there's a few
12 different things that would need to be done
13 in order to commence construction of that
14 facility.

15 MR. PIETRORAZIO: Can you say
16 whether you're --

17 MR. SMALL: Excuse me for one
18 second, please.

19 MR. SAVARESE: Would your
20 current filing with the DEEP be satisfactory
21 to allow for the air modeling, to allow you
22 to maintain an air quality permit?

23 THE WITNESS (Seller): The
24 facility has a valid air quality permit right
25 now for the 512 megawatt facility.

1 from the FAA?

2 THE WITNESS (Gresock): Not
3 currently.

4 MR. SAVARESE: If denied on
5 the 805, how much time do you think it would
6 require to thereby proceed with the 512
7 megawatt approval process?

8 THE WITNESS (Bazinet): It's a
9 great question. As I said, there are a
10 number of different things that are at play
11 there including our own internal analysis and
12 evaluation of whether or not we would proceed
13 with that 512 megawatt plant. But there are
14 a few variables at play including the DEEP
15 review process that you just mentioned, an
16 FAA permit. To project the exact amount of
17 time, I'd be guessing.

18 MR. SAVARESE: Is it fair to
19 say that the electric-gas market conditions
20 were known to the Council at the time of its
21 decision on Docket 192 in 2007?

22 MR. SMALL: Which electric
23 market conditions were known, Mr. Savarese?

24 MR. SAVARESE: All of them.

25 MR. SMALL: Could you just

1 MR. SAVARESE: That has no
2 expiration date?

3 THE WITNESS (Seller): Yes, it
4 has to be refreshed every five years. And so
5 there would be a recertification of -- that
6 the facility still represented best available
7 control technology. That would need to be
8 submitted.

9 MR. SAVARESE: So that there
10 would still have to be a review by the DEEP?

11 THE WITNESS (Seller): That's
12 correct.

13 MR. SAVARESE: That is not
14 going concurrently?

15 THE WITNESS (Bazinet): That's
16 correct. It's not going concurrently.

17 MR. SAVARESE: What about the
18 FAA review that you held previously on the
19 512 before you suggested that the stacks
20 move? Do you hold a current FAA approval to
21 build the 512 megawatt plant?

22 THE WITNESS (Gresock): No,
23 the project does not.

24 MR. SAVARESE: Are you
25 concurrently seeking a 512 megawatt approval

1 clarify that question?

2 MR. SAVARESE: The knowledge
3 of the Council, do you think it's fair to say
4 that the electric and gas market conditions,
5 in general, were known to the Council and
6 incorporated into their decision in
7 Docket 192?

8 MR. SMALL: Are you talking
9 about the conditions at that time or the
10 conditions at this time?

11 MR. SAVARESE: Yes, the
12 conditions at that time.

13 MR. SMALL: Thank you.

14 THE WITNESS (Bazinet):
15 Absolutely.

16 MR. SAVARESE: All right. So
17 is there any reason to have to review the
18 conditions between 1999 and 2007 for this
19 Council?

20 MR. SMALL: I think that's a
21 legal question which I can address, if you
22 would like it, but if it's not a question
23 for -- not an evidentiary question.

24 MR. SAVARESE: I think it is
25 because part of this is a review from 1999 to

1 present, and I don't think it's necessary to
2 be reviewing from 1999 to present when this
3 Council has reviewed this application most
4 recently, going through the public hearing
5 process, had issued a decision in 2007, and
6 that should be the base point of what we're
7 suggesting are changed circumstances.

8 I'm trying to determine from
9 what changes are we trying to go forward.
10 Because the longer the period of time the
11 more obnoxious it is to suggest that there
12 aren't some changed circumstances.

13 MR. SMALL: I think that's,
14 you know, Mr. Chairman, I think that's an
15 issue for the Council. We approached it both
16 ways in the sense that we had a 1999
17 approval, and that was the approval we
18 requested -- we were requesting through this
19 process be changed. We also pointed out the
20 changes, which, in some ways, are even more
21 radical ironically since 2007. So the record
22 has both sets of changes. It's really up to
23 the Council and its legal advisors as to
24 which is a relevant date. But I just
25 think -- I therefore, on that basis, I guess,

1 The paragraph continues: "In
2 the ISO New England draft 2014 regional
3 system plan, ISO New England is projecting a
4 regionwide capacity shortage of 424 megawatts
5 in 2019, increasing to 1,155 megawatts in
6 2023. In addition, the ISO New England 2004
7 CELT report projects the region to fall below
8 the target reserve margin by 2018. Towantic
9 will provide critical generation to meet the
10 region's reliability needs identified by ISO
11 New England."

12 Isn't this entire report a
13 type of Monday morning quarterbacking of the
14 Council's prior findings and forecasts?

15 THE WITNESS (Powers): This
16 report reflects what's known and knowable
17 today. Today we have capacity shortage in
18 New England that Towantic will help to
19 alleviate. Back in '99 it was a completely
20 different set of circumstances, so we are
21 basing this report on what we know today,
22 which is a capacity shortage.

23 MR. SAVARESE: Right. Well,
24 the quote I just read specifically talks
25 about '07's decision, 2005-2006 10-year

1 I object to the question as being irrelevant.

2 THE CHAIRMAN: We'll take that
3 under advisement. I'm not prepared. The
4 Council is not being cross-examined.

5 MR. SAVARESE: I understand,
6 Mr. Chairman.

7 With respect to Exhibit 2 of
8 the petition prepared by Concentric Energy
9 Advisers, CEA, and entitled, "The New England
10 Wholesale Power Market Changes, 1999 to
11 Present," it provides at the last paragraph
12 on page 26, "All of the changes in the
13 wholesale market since 1999, as described
14 above, have increased the need for plants
15 like Towantic."

16 In the Connecticut Siting
17 Council findings of fact in Docket
18 Number 192-A, dated January 4, 2007, the
19 Siting Council noted that "The 2005 to 2006
20 10-year forecast of load and resources of
21 Connecticut electric utilities showed that
22 supplies were expected to meet demand under
23 normal weather conditions in the near-term,
24 although a more conservative load forecast
25 showed a shortage of supply."

1 forecasts that bring us to this era, 2005 to
2 2015, 2016, which is when we were supposed to
3 have a 512 plant that would have otherwise
4 addressed the shortfalls that have been cited
5 or possibly addressed by the need.

6 What assurances are we going
7 to have that we're ever going to see a plant
8 going forward when, in fact, for 15 years
9 there has been no action at the repeated
10 extensions being granted by this Council?

11 THE WITNESS (Bazinet): The
12 CPV Towantic is attempting to move the
13 project forward based on the market signals
14 that Ms. Powers just mentioned.

15 With respect to assurances, I
16 don't think anybody could guarantee the
17 project will move forward. It's dependent on
18 a number of different circumstances that
19 includes Siting Council approving -- approval
20 of our petition, as well as an air permit
21 application that's pending at DEEP, and
22 other -- other forces that, while we will put
23 our best foot forward, we certainly don't
24 control entirely.

25 MR. SAVARESE: That's fair.

1 Isn't one of the premises of the CEA report
2 that all the changes in the wholesale market
3 since 1999, as described above, have
4 increased the need for plants like Towantic
5 as the reference to "like Towantic" referred
6 to only generating facilities larger than
7 512 megawatts?

8 THE WITNESS (Powers): No.
9 I -- I think that the need for facilities
10 like Towantic is based on a couple of things.
11 It's replacement of -- of, you know, capacity
12 that's already announced retirement, and
13 integration of renewables into the market
14 where you need flexible resources, and
15 reliable resources, which is the dual-fuel
16 component of Towantic. So it's not a
17 statement based on any size. It's a
18 statement based on the type of facility.

19 MR. SAVARESE: Okay. And does
20 it matter where in the region it's going to
21 add this capacity?

22 THE WITNESS (Powers): It --
23 it does based on how the market clears and
24 how the market is structured, but it is safe
25 to say that based on the shortage of capacity

1 THE WITNESS (Powers): There
2 are two pieces as -- as we talked about
3 before. There's an adequacy piece, which are
4 correct. You can put a facility in a number
5 of different places. Connecticut has ongoing
6 local reliability concerns that help will --
7 this plant will help to address.

8 MR. SAVARESE: Is there any
9 particular advantage to the wholesale market
10 for locating the next electric generating
11 facility greater than 500 megawatts at
12 Towantic Hill in Oxford, Connecticut?

13 THE WITNESS (Powers): There
14 is a benefit to Connecticut in general.
15 Connecticut is not an isolated -- it's not an
16 island. Connecticut made a decision many
17 years ago to join ISO New England, so to the
18 extent that there's a shortage of other parts
19 of the system and Connecticut helps to solve
20 that shortage, prices will decrease.

21 MR. SAVARESE: So these -- is
22 on the Algonquin Pipeline. Kleen Energy is
23 on the Algonquin Pipeline. Doesn't this rob
24 from the capacity of Kleen Energy to continue
25 to satisfy ISO New England's demands?

1 in New England, Connecticut CEMA, NEMA, those
2 are all areas that are import constrained
3 where any addition of generation will help
4 alleviate reliability concerns.

5 MR. SAVARESE: But isn't
6 mostly what it's directed at is that there's
7 a need for baseload facility in the system?

8 THE WITNESS (Powers): There
9 is a need for all kinds of facilities on the
10 system. We are in a -- in a capacity
11 shortage which means we need -- megawatts can
12 come from a number of different sources.
13 They could come from demand response. They
14 can come from renewables. They can come from
15 resources like Towantic that are flexible.
16 We need a lot of different solutions to the
17 problem. Towantic is one solution.

18 MR. SAVARESE: So trying to
19 understand the premises of Exhibit 2 of the
20 petition. My reading of it was that the
21 electric generating facility of more than 512
22 megawatts located anywhere in Connecticut,
23 Rhode Island, Massachusetts, Vermont,
24 New Hampshire or Maine satisfies the ISO New
25 England region. Is that correct?

1 THE WITNESS (Bazinet): No.

2 MR. SAVARESE: And why not?

3 THE WITNESS (Bazinet): The
4 pipeline of the Algonquin system capacity is
5 available to a number of different generating
6 units, including Kleen and including Towantic
7 should it be built.

8 MR. SAVARESE: My
9 understanding is there are times of year that
10 there's not enough energy to keep the plants
11 operating on gas, therefore, you would think
12 that there's competition for the gas. Does
13 that only happen one time a year? January 6,
14 2014, was that the only time in that '13-'14
15 winter?

16 THE WITNESS (Bazinet): You're
17 not far off by saying that it only happens
18 one time a year. The expansion projects that
19 are proposed are, you know, major capital
20 investments that are intended to solve a
21 problem that happens very infrequently.
22 Certainly, you know, less than say, maybe two
23 or three weeks out of the year and not
24 contiguous. It's dependent on a number of
25 different factors and that can change on a

1 short-term basis.
2 For instance, the cold period
3 that was experienced, I believe it was two
4 weeks ago, the market has responded to that.
5 And LNG imports have been coming into New
6 England on the other side of the pipe
7 providing gas to the system to allow all
8 gas-fired generators to run despite the
9 extremely cold temperatures.
10 So unlike 2014 where that
11 might have been a scenario where gas supply
12 was curtailed and Towantic would have been
13 forced to run on fuel oil, that wouldn't be
14 the case in 2015 currently.
15 MR. SAVARESE: On page 39 of
16 Exhibit 2, the petition, CEA's report lists
17 five assumptions as keys to determining the
18 multi-area production simulation model;
19 namely, supply, existing generation, fuel
20 costs, emission costs, forecast of demand,
21 and transmission constraints of delivery.
22 For each of these factors
23 presumptions were made to the conditions in
24 2018, three years in the future. What
25 assurance provides the Council and interested

1 parties and intervenors that this docket
2 underlying two different -- these key
3 assumptions are accurate?
4 THE WITNESS (Bodell): The
5 basis for these assumptions relied on public
6 forecasts that had been made by New England
7 ISO -- ISO New England that had been made by
8 NERC as part of it's reliability assessments.
9 And I think in almost every case we relied on
10 public forecasts -- where available.
11 With respect to the
12 transmission load flows, we took load flows
13 and updated them to account for new
14 transmission that is projected to be built
15 and have that operational according to the
16 time frames announced.
17 For plant additions we took
18 the announced additions that are in the queue
19 at ISO New England. And for retirements, we
20 relied only on the retirements that had been
21 announced as reported by ISO New England and
22 as reported in Ventyx, confirmed by us
23 through our own research. That led to around
24 4,000 megawatts of retirement where there is
25 potentially 8,000 at risk.

1 MR. SAVARESE: Okay. A
2 follow-up on that. Shouldn't the model have
3 been presented based on certain variations
4 based on the most recent three-year
5 operations reported by ISO?
6 THE WITNESS (Bodell): Over
7 the last three years there have been
8 significant changes to the marketplace. To
9 rely on information from three years ago
10 would result in a stale analysis that would
11 not be indicative of the need for this
12 facility sitting here today.
13 MR. SAVARESE: Exhibit 2 of
14 the petition, the CEA report published in
15 October 2014, Anticipate the recent downturn
16 in wholesale oil price that has fallen to
17 less than \$50 a barrel from an average of
18 approximately \$100 a barrel for the past
19 three years, and it's impact to the wholesale
20 market in January 2015?
21 THE WITNESS (Bodell): The
22 assumption for oil prices was based on the
23 projections available at the time in October.
24 MR. SAVARESE: What would be
25 the effect on the model of a sustained price

1 of oil under \$50 a barrel on the
2 profitability and likelihood of retirement of
3 the electric generating facilities operating
4 on oil listed in Figure 18 on page 34 of the
5 CEA report?
6 THE WITNESS (Bodell): There
7 were a lot of factors that would impact that,
8 and I cannot, sitting here today and having
9 not run an alternative oil price scenario, I
10 can't tell you what the net effect would be,
11 but there are countervailing forces.
12 On the one hand, the lower oil
13 price will decrease peak price for energy,
14 which have -- would have an adverse impact on
15 a lot of plants that rely on the higher peak
16 prices for their revenues, yet the oil price
17 going down would result in a lower cost.
18 There may be a change in the
19 supply stack, although for the most part I
20 think oil plants are going to be more
21 expensive than natural gas and coal plants
22 and so it's just a matter of level.
23 But these are the examples of
24 the countervailing forces. You'd have to
25 rerun the model with a new oil price if you

1 wanted to o get a conclusion about how lower
2 oil prices would impact. And I also have to
3 say the question is not what are oil prices
4 today. What are oil prices going to be in
5 2018 to 2028?

6 And the projections that are
7 out there, different projections, although
8 Saudi Aramco is following a long-term
9 strategy, their own projections have
10 indicated \$80 a barrel prices by the end of
11 the year. Of course whether or not that
12 happens is a difference, but I think we have
13 to remember that we're talking about 2018 to
14 2028 and whether or not the oil prices are
15 going to be at the levels they are today, and
16 I think is unlikely.

17 MR. SAVARESE: But my premise
18 here is that you're guessing that at five
19 different parameters, and nowhere would any
20 of us have anticipated that oil prices were
21 going to drop to less than \$50 a barrel,
22 which is one of the major components of the
23 analysis, what the wholesale market is doing.

24 So how reliable is your
25 prediction of where we're going to be in 2018

1 lagging behind some of its brother states in
2 New England in the percentage on natural gas.

3 But here in Connecticut we
4 have an adequate supply of power, and we now
5 have a boondoggle of oil now priced at under
6 \$50 a barrel. Why would we gamble our health
7 on Towantic coming into the region?

8 THE WITNESS (Bodell): I don't
9 agree with you that this is a gamble on
10 health. In fact, I believe that any market
11 that is relying on oil today, and coal, needs
12 a gas plant more than ever to assure
13 reliability and adequacy given the changes
14 that have been occurring and are anticipated
15 to occur in the post 2015-'16 period.

16 MR. SAVARESE: The current
17 locations of the plant in Connecticut have
18 been satisfactory for generations. There is
19 no plant in Oxford. There is no plant on the
20 Middlebury boundary. The location of
21 five 150 megawatts plants distributed
22 throughout New England, two in Connecticut,
23 two in Massachusetts, one in Vermont, New
24 Hampshire or Maine, would then satisfy 800
25 megawatts of demand that are being proposed

1 much less going out to 2028?

2 THE WITNESS (Bodell): I don't
3 accept your premise that these are based on
4 guesses. When running these models you're
5 looking for insights into what the impacts
6 are going to be.

7 The oil price is one factor,
8 but the oil is setting the price on a small
9 number of hours, so it may not have a very
10 large effect. Again, you want to look at
11 that to see if that's the case, but I don't
12 anticipate a huge impact.

13 As far as the other ones are
14 concerned, it's important to look at the
15 information that's available at the time
16 you're running these analyses to come up with
17 conclusions. If anything, I think that there
18 are forces in play that could result in
19 higher retirements, and therefore, higher
20 benefits associated with the Towantic
21 facility.

22 MR. SAVARESE: But again, we
23 talked about generations of different fuel,
24 and we currently are coming out of the oil
25 era, if you will. And Connecticut has been

1 for Oxford. Is there any reason why?

2 For jobs alone, we shouldn't
3 be placing five 150 megawatt plants
4 throughout New England as opposed to
5 centering them all on Towantic Hill in
6 Oxford.

7 THE WITNESS (Bazinet): The
8 reality is that there's a need for more than
9 just Towantic. So there's absolutely no
10 reason that what you're proposing couldn't
11 happen. It obviously requests private
12 investment -- or requires, excuse me, private
13 investment and a sponsor to move that private
14 investment forward.

15 I -- I can say, however, that
16 by building five separate 150 megawatt plants
17 you're doing so at significant economies of
18 scale disadvantages and also at thermal --
19 excuse me, efficiency disadvantages because
20 there is no combined-cycle configuration that
21 can be set forth at heat rates that we're
22 proposing today and at that size level.
23 Excuse me.

24 MR. SAVARESE: Under today's
25 technology, but you don't know where you're

1 going to be in 2028.
2 Mr. Chairman, that's all the
3 questions I have for the applicant.
4 THE CHAIRMAN: Okay. Thank
5 you.
6 CL&P, do you have any cross?
7 MR. MORISSETTE: No, we don't.
8 We have no present questions, Mr. Chairman.
9 THE CHAIRMAN: Thank you.
10 And the Town of Oxford, do you
11 have any cross-examination?
12 MR. CONDON: We have no
13 questions, Mr. Chairman. Thank you.
14 THE CHAIRMAN: The next on the
15 list are grouped from -- starting with
16 Naugatuck Valley Chapter Trout unlimited.
17 Since I wanted to close at five, since
18 obviously we're not going to end everything
19 this afternoon, I think what we'll do is
20 we're going to adjourn the hearing now, and
21 we will continue the evidentiary portion of
22 this hearing in New Britain on Tuesday,
23 February 10th, at 11 a.m. in the same place.
24 Please note that anyone who
25 has not become a party or intervenor, but who

1 desires to make his or her views known to the
2 Council, may file written statements with the
3 Council until the record closes.
4 Copies of the transcript of
5 the hearing will be filed at the Oxford and
6 Middlebury Town Clerk's offices. And thank
7 you all for your participation and patience,
8 and drive home safely.
9 (Whereupon, the witnesses were
10 excused, and the above proceedings were
11 adjourned at 4:39 p.m.)
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1 CERTIFICATE
2 I hereby certify that the foregoing 247
3 pages are a complete and accurate
4 computer-aided transcription of my original
5 verbatim notes taken of the Continued Public
6 Hearing in Re: DOCKET NO. 192B, MOTION TO
7 REOPEN AND MODIFY THE JUNE 23, 1999
8 CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY
9 AND PUBLIC NEED BASED ON CHANGED CONDITIONS
10 PURSUANT TO CONNECTICUT GENERAL STATUTES
11 §4-181A(B) FOR THE CONSTRUCTION, MAINTENANCE
12 AND OPERATION OF A 785 MW DUAL-FUEL COMBINED
13 CYCLE ELECTRIC GENERATING FACILITY LOCATED
14 NORTH OF THE PROKOP ROAD AND TOWANTIC HILL
15 ROAD INTERSECTION IN THE TOWN OF OXFORD,
16 CONNECTICUT, which was held before ROBERT
17 STEIN, Chairperson, at the Connecticut Siting
18 Council, 10 Franklin Square, New Britain,
19 Connecticut, on January 29, 2015.
20
21
22
23
24
25

26 Robert G. Dixon, CVR-M 857
27 Court Reporter
28 UNITED REPORTERS, INC.
29 90 Brainard Road, Suite 103
30 Hartford, Connecticut 06114

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