

In The Matter Of:

*Motion to Reopen an Application from NTE Connecticut
LLC, for a Certificate of Environmental Compatibility*

*Hearing
May 2, 2019*

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STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Docket No. 470B

Motion to Reopen an Application from NTE Connecticut,
LLC, for a Certificate of Environmental Compatibility
and Public Need for the Construction, Maintenance, and
Operation of a 550-Megawatt Dual-Fuel Combined Cycle
Electric Generating Facility and Associated Electrical
Interconnection Switchyard Located at 180 and 189 Lake
Road, Killingly, Connecticut

Regular Hearing held at the Connecticut
Siting Council, 10 Franklin Square, New Britain,
Connecticut, Thursday, May 2, 2019, beginning at
11:00 a.m.

H e l d B e f o r e :

ROBERT SILVESTRI, The Hearing Officer

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

2 Council Members:

3

4 ROBERT HANNON,

5 DEEP Designee

6

7 LARRY LEVESQUE,

8 PURA Designee

9

10 DANIEL P. LYNCH, JR.

11 MICHAEL HARDER

12 EDWARD EDELSON

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14 Council Staff:

15 MELANIE BACHMAN, ESQ.,

16 Executive Director and Staff Attorney

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18 MICHAEL PERRONE,

19 Siting Analyst

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21 LISA FONTAINE,

22 Fiscal Administrative Officer

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1 THE HEARING OFFICER: Good morning, ladies
2 and gentlemen. This hearing is called to order
3 this Thursday, May 2nd, 2019, at 11 a.m. My name
4 is Robert Silvestri, member and presiding officer
5 of the Connecticut Siting Council.

6 This evidentiary session is a
7 continuation of the public hearings held on
8 April 4th, 2019, and April 18, 2019. It is held
9 pursuant to the provisions of Title 16 of the
10 Connecticut General Statutes and of the Uniform
11 Administrative Procedure Act upon a motion to
12 reopen an application from NTE, Connecticut, LLC,
13 for a certificate of environmental compatibility
14 and public need for the construction, maintenance
15 and operation of a 550-megawatt dual-fuel combined
16 cycle electric generating facility and associated
17 electrical interconnection switchyard located at
18 180 and 189 Lake Road, Killingly, Connecticut.

19 On February 14, 2019, the Council,
20 pursuant to a request filed by NTE Connecticut,
21 LLC, and the provisions of Connecticut General
22 Sections Section 4-181AB, reopened the May 11,
23 2017, final decision that was rendered in this
24 matter.

25 A verbatim transcript will be made of

1 this hearing and deposited with the town clerks'
2 offices in Killingly, Putnam and Pomfret for the
3 convenience of the public.

4 We will proceed in accordance with the
5 prepared agenda, copies of which are available
6 next to the door. We'll proceed with the
7 appearance of the group parties, Not Another Power
8 Plant, Wyndham Land Trust and the Sierra Club.

9 And Attorney Bachman, could you please
10 begin by swearing in the witnesses?

11 R O B E R T F A G A N,

12 D E V I G L I C K,

13 called as witnesses, being first duly sworn
14 by the Executive Director, were examined and
15 testified on their oaths as follows:

16
17 THE HEARING OFFICER: Attorney Berman, could
18 you please begin by verifying the exhibits you
19 have filed in this matter, and verifying the
20 exhibits by the appropriate sworn witnesses?

21 MR. BERMAN: Thank you. And if I can
22 begin with -- I believe we have not addressed the
23 administrative notice items identified in the
24 April 11th prehearing submission of the
25 intervening parties.

1 Like the documents in NTE's prehearing
2 submission, these are the documents that were
3 cited to in the direct joint testimony of Robert
4 Fagan and Devi Glick of Synapse Energy Economics.
5 I would offer them at this time for administrative
6 notice.

7 THE HEARING OFFICER: Does any party or
8 intervener object to the admission of the group
9 parties exhibits?

10 MR. BALDWIN: No objection.

11 THE HEARING OFFICER: Thank you. The
12 exhibits are indeed admitted. Thank you.

13 MR. BERMAN: And with regard to exhibits, the
14 interveners have a single exhibit identified, the
15 direct joint testimony of Robert Fagan and Devi
16 Glick, Synapse Energy Economics which included two
17 attachments, the resume of Mr. Fagan and the
18 resume of Ms. Glick.

19 I'll refer to these documents
20 collectively as the Synapse testimony. I'd like
21 to ask the witnesses a couple of questions about
22 the genesis of this testimony so that we can move
23 its admission into evidence.

24 Mr. Fagan and Ms. Glick, did you prepare
25 or assist in the preparation of the Synapse

1 testimony?

2 THE WITNESS (Fagan): Yes.

3 THE WITNESS (Glick): Yes.

4 MR. BERMAN: Do you have any corrections,
5 modifications or clarifications to any of the
6 information in the testimony that you would like
7 to offer at this time?

8 THE WITNESS (Fagan): Yes, one modification.
9 On page 13 of our testimony, on line 9 there's a
10 phrase that says, and is now before the Mass DPU.
11 That should be amended to read, and has been
12 approved by the Mass DPU.

13 MR. BERMAN: Thank you.

14 And with this modification is the
15 information contained in the testimony true and
16 accurate to the best of your knowledge?

17 THE WITNESS (Glick): Yes.

18 THE WITNESS (Fagan): Yes.

19 MR. BERMAN: And do you adopt the information
20 in the Synapse testimony as your direct testimony
21 in this proceeding?

22 THE WITNESS (Glick): Yes.

23 THE WITNESS (Fagan): Yes.

24 MR. BERMAN: Thank you. I would like to
25 offer the Synapse testimony as a full exhibit at

1 this time.

2 THE HEARING OFFICER: And does any party or
3 intervener object to the admission?

4 MR. BALDWIN: No objection.

5 THE HEARING OFFICER: Thank you. The exhibit
6 is indeed admitted. Thank you.

7 MR. BERMAN: The witnesses are available for
8 cross-examination.

9 MS. BACHMAN: Exhibit Number 2 is the
10 interrogatory responses that you submitted on
11 Friday.

12 MR. BERMAN: Okay. In addition the
13 intervener parties submitted responses to
14 interrogatories submitted by NTE Energy.

15 Mr. Fagan and Ms. Glick, did you
16 assist -- or did you supervise the preparation of
17 interrogatory responses that were submitted on
18 April 26th?

19 THE WITNESS (Glick): Yes.

20 THE WITNESS (Fagan): Yes.

21 MR. BERMAN: Is the information contained in
22 those interrogatory responses true and accurate to
23 the best of your knowledge?

24 THE WITNESS (Glick): Yes.

25 THE WITNESS (Fagan): Yes, it is.

1 MR. BERMAN: And do you have any corrections
2 or modifications, or amendments to the information
3 provided in those interrogatory responses?

4 THE WITNESS (Glick): No.

5 THE WITNESS (Fagan): No.

6 MR. BERMAN: I would move the admission of
7 the interrogatory responses at this time.

8 THE HEARING OFFICER: And does any party or
9 intervener have any objection to the admission of
10 that exhibit?

11 MR. BALDWIN: No objection.

12 THE HEARING OFFICER: Very good. Thank you.

13 That exhibit is also admitted.

14 MR. BERMAN: Thank you. Now I believe the
15 witnesses are available for cross-examination.

16 THE HEARING OFFICER: Thank you, Counselor.

17 We'll begin with cross-examination of
18 the group parties by staff. Mr. Perrone?

19 MR. PERRONE: Thank you, Mr. Silvestri.

20 I'd like to start with a general
21 question. NTE was asked to define spinning
22 reserves and they testified that those are plants
23 that are operating, using fuel, but not
24 synchronized to the grid.

25 I wanted to get the group parties'

1 opinion on that. How would you define spinning
2 reserves?

3 THE WITNESS (Fagan): Generally they are
4 plants that are operated -- operating and
5 synchronized to the grid, but generally the
6 spinning reserve has to be available within ten
7 minutes. So it's possible that some resources
8 other than something that's actually synchronized
9 to the grid could serve as a spinning -- a
10 spinning resource.

11 MR. PERRONE: I'm going to turn to page 8 of
12 the Synapse report. And approximately line 13,
13 there is no incremental winter fuel security
14 benefit to New England if this plant is built.
15 Winter fuel security does not require a new fossil
16 generation capacity. It requires assurance of
17 energy availability during winter cold snaps which
18 can be obtained absent this plant.

19 I'd like to focus on the part about
20 energy availability. Just for clarity, when we
21 say energy in this context do we mean fuel for the
22 generators, or electrical energy like megawatt
23 hours?

24 THE WITNESS (Fagan): Megawatt hours, or
25 energy savings that avoids the need for megawatt

1 hours.

2 MR. PERRONE: And also going back to that
3 line 13. From an energy security perspective how
4 would firm gas with backup ULSD not provide
5 incremental winter security benefit?

6 THE WITNESS (Fagan): I think my -- our
7 testimony said, absent this plant. Effectively
8 there's plenty of dual-fueled plants throughout
9 New England that have gas or oil capability
10 essentially, and those plants can provide
11 the incremental fuel security.

12 And in addition to, especially as we
13 look to the early part of the next decade,
14 additional renewable resources coming online and
15 ongoing energy efficiency.

16 MR. PERRONE: Next I'd like to move onto the
17 variable output or ramping topic. Also on page 8,
18 ISO New England's system can incorporate
19 increasing levels of variable output renewable
20 energy while depending on other resources for
21 reliability.

22 My question is -- and I had posed this
23 to NTE as well. Has ISO done any specific studies
24 to try to figure out if we need additional
25 flexible resources, and if so how many?

1 THE WITNESS (Fagan): Yes, they have done
2 those studies. In December 2017 there was a
3 presentation at the planning advisory committee of
4 ISO New England essentially finding that there's
5 more than sufficient load following reserves
6 available to meet the ramping needs in the -- in
7 the region. It's essentially not a problem.
8 There's plenty of reserves.

9 ISO is continuing to think about making
10 sure its energy market structures most efficiently
11 ensure that those resources are available and
12 actually participating, but essentially that study
13 makes it very clear that there's more than enough
14 ramping capability in the existing resource base,
15 existing and projected resource base out through
16 2025, 2030.

17 MR. PERRONE: And that would be to balance
18 variable renewable resources?

19 THE WITNESS (Fagan): Yeah. Well, it -- it's
20 there for balancing everything. It's not just
21 variable renewable resources. The power system is
22 constantly varying well before the introduction of
23 significant amounts of renewables.

24 That's -- that's what power system
25 operators do. They -- they turn the system up and

1 down. That's what they -- that's the nuts and
2 bolts of what they do, and they can take that into
3 account as more renewables come online also.

4 MR. PERRONE: Turning to the top of page 9 of
5 the Synapse report, it gets into battery storage
6 as a fast response capacity. Is that used
7 interchangeably with quick-start capacity, or is
8 that different?

9 THE WITNESS (Fagan): It's actually better
10 than quick-start capacity, as it's usually
11 referred to. Battery storage capacity is, like,
12 instantaneous, faster than quick start. But --
13 but essentially it's a very quick-starting
14 resource.

15 MR. PERRONE: But quick start itself requires
16 startup within 30 minutes or less. Is that
17 correct?

18 THE WITNESS (Fagan): It depends on what
19 category of reserve it's -- it's providing. Some
20 quick-start resources start up and provide within
21 ten minutes. Others are available to meet the
22 30-minute requirements.

23 MR. PERRONE: So with KEC's proposed hot/cold
24 startup time of 35 minutes, would it be fair to
25 say it would not fall within that category?

1 THE WITNESS (Fagan): Well, it's not as fast
2 as batteries. That's for sure.

3 Yeah. Essentially, you know, it -- it
4 can provide those types of ancillary services just
5 like all the other plants in New England that
6 currently provide them. You know, that it can
7 provide them doesn't mean that they're -- they're
8 needed.

9 There's more than enough of those with
10 the existing resource base, and batteries will
11 just -- the batteries will effectively displace
12 some of the less efficient technologies that are
13 used to provide some of the operating reserve
14 categories when they eventually become present
15 throughout the system in -- in a bigger way than
16 they are now.

17 MR. PERRONE: One more thing on the battery
18 topic. I understand the instantaneous startup,
19 but to participate in FCA, a battery storage
20 project, is there a minimum required runtime that
21 it has to meet?

22 THE WITNESS (Fagan): Yeah, I believe that
23 the minimum required runtime for New England is a
24 two-hour duration, which mean, you know, if you
25 have a hundred megawatt battery it needs to be

1 available to provide 200-megawatt hours of energy.
2 In order to participate it's a hundred-megawatt
3 capacity resource, and that's what it is right
4 now.

5 That's what they want filed to FERC, its
6 compliance filing in the FERC docket that is the
7 process of establishing what those minimum
8 duration requirements may look like at the
9 different RTOs, but it's two hours in New England
10 right now.

11 MR. PERRONE: Page 10, I understand there was
12 the draft 2019 CELT, C-E-L-T data was used. Do
13 you know when the 2019 CELT report is expected to
14 go final?

15 THE WITNESS (Fagan): Yesterday -- actually,
16 Monday night they posted -- I'm sorry, Monday --
17 Tuesday night. It was posted the night of the
18 30th. It's dated May 1st.

19 MR. PERRONE: Lastly on page 28, line 8. ISO
20 New England suggests increasing storage of LNG and
21 oil, increasing imports and greater use of
22 renewables. I'd like to focus on the oil piece.

23 As far as increasing the storage of oil,
24 in this context are they referring to just
25 oil-fired powerplants, or would that also include

1 dual fuel.

2 THE WITNESS (Fagan): In this context they're
3 talking about dual-fuel plants, absolutely, that
4 have the ability to store oil. I mean, they're
5 basically looking at the alternative fossil fuels
6 in addition to renewable energy as being available
7 during the cold snaps, but that -- that's what
8 they're talking about.

9 They're talking about basically market
10 mechanisms to make sure that the owners of dual
11 fuel have the incentive to keep oil in the tank,
12 so to speak, which -- which is what has been
13 happening in New England for a number of years.

14 ISO New England stepped up its concern
15 around that and implemented a winter reliability
16 program and the pay-for-performance program under
17 the capacity structures to help make sure that
18 there were market mechanisms to ensure that there
19 would be oil in the tank for as long as they'll
20 still need to depend on that during winter cold
21 snaps, which hopefully is not going to be for very
22 much longer.

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

24 THE HEARING OFFICER: Thank you, Mr. Perrone.

25 We'll continue with councilmembers

1 starting with Mr. Harder.

2 MR. HARDER: I have no questions. Thank you.

3 THE HEARING OFFICER: Mr. Levesque?

4 MR. LEVESQUE: No additional questions.

5 THE HEARING OFFICER: Mr. Hannon?

6 MR. HANNON: I have no additional questions.

7 THE HEARING OFFICER: I do.

8 Mr. Fagan and Ms. Glick, I'm trying to
9 clean up some thoughts that I have regarding ISO,
10 basically economics on dispatch and I'm hoping you
11 can help.

12 If I recall correctly, first of all, ISO
13 for the most part dispatches based on economics
14 with maybe some exceptions. Is that correct?

15 THE WITNESS (Fagan): Generally yes, that's
16 correct.

17 THE HEARING OFFICER: Okay. And an exception
18 could be must-run units. Would that also be
19 correct?

20 THE WITNESS (Fagan): I would characterize it
21 a little bit differently. The main exception is
22 whether or not they have to make sure that they
23 have sufficient operating reserve in a local area,
24 whether or not there's a transmission constraint
25 that's binding that requires them to turn on units

1 that would otherwise be too expensive.

2 The must-run characterization is often
3 associated with those things, but the reason why
4 they have to go out of economic dispatch is
5 because of the concern about operating reserves or
6 transmission constraints, or contingency events
7 that might otherwise occur, or that might occur
8 and they need to be prepared to deal with the
9 contingency situation.

10 THE HEARING OFFICER: Okay. Thank you. I am
11 hung up, though, on must run. And I'm going to
12 ask you a couple more questions on must-run.

13 THE WITNESS (Fagan): Okay.

14 THE HEARING OFFICER: Would nuclear units,
15 say, Seabrook or Millstone be considered most-run
16 units?

17 THE WITNESS (Fagan): Not -- not necessarily.
18 You know, a must-run unit is -- it would be they
19 need to have something on, and it can't be turned
20 down below a certain level because if something
21 happened, you know, there might be a cascading
22 blackout or something like that.

23 The -- the nuclear units stay on all the
24 time primarily because their variable operating
25 costs are extremely low, and it just makes sense

1 for them to stay on. That's how they make their
2 money, just running constantly.

3 Are they must run? There will be
4 situations where ISO would consider them in that
5 category, but they're not, like, labeled as
6 necessarily as a must-run unit. Must run is
7 probably not necessarily -- something of a legal
8 or a tariff term. It might be.

9 But essentially it means they need to
10 keep something on because if a contingency event
11 occurs and if they didn't have that particular
12 unit on there would be a problem.

13 So that can apply to a lot of different
14 plants in a lot of different circumstances, but
15 for any given plant, you know, looking ahead to
16 tomorrow or next week or next season, or
17 something, there's many instances where a plant
18 wouldn't necessarily have to be must run.

19 For example, the nuclear units obviously
20 when they're taken offline for maintenance the
21 system runs fine without them. You know, and
22 there's many circumstances throughout the year
23 when a given plant -- or a plant is absolutely not
24 required to be must run. But during the more
25 stressful and higher loading times there might be

1 a number of other plants that need that type of
2 designation.

3 And it's mainly for operating reserve
4 purposes in the event of a contingency event.

5 THE HEARING OFFICER: So economics might be
6 the bigger driver for nuclear units rather than,
7 quote, unquote, must run?

8 THE WITNESS (Fagan): Yeah. In short, you
9 know, must run is often associated with -- right?
10 Having -- having stuff available to -- in the
11 event of a contingency event.

12 Nuclear units tend to not ramp up and
13 down much at all, because all of the other units
14 do it better and -- and are -- there's less of a
15 risk of moving other units up and down than there
16 might be with nuclear units.

17 THE HEARING OFFICER: Would you consider
18 solar as a must run?

19 THE WITNESS (Fagan): There could be
20 instances where that's possible, but -- but
21 generally, no.

22 But what it is, is the economics are
23 such that you should make sure the solar goes on
24 as often as possible. If there needs to be
25 situations where solar needs to be curtailed for

1 liability reasons, you know, that that can happen,
2 but hopefully the planning will take into account
3 the fact that it's better to let the solar energy
4 be absorbed up to the grid all the time because
5 it's zero fuel cost.

6 THE HEARING OFFICER: How about wind?

7 THE WITNESS (Fagan): The same with wind.
8 Basically the lower -- the lower of fuel cost the
9 more important it is to make sure that that plan
10 is available for energy, because the energy value
11 is what's highest.

12 THE HEARING OFFICER: How does hydro fit in?

13 THE WITNESS (Fagan): A hydro plant is much
14 more -- can be much more flexible and
15 dispatchable. Some hydro looks more like a
16 must-run because it's not subject to -- it has to
17 run because it's -- the river flows and you
18 can't -- you can't store behind it.

19 So it needs to -- it needs to meet a
20 certain schedule. You can't necessarily use it as
21 a dispatchable resource. And New England splits
22 its hydro into those that are on a river and those
23 that have storage capability, and the ones that
24 have storage capability you can turn them on and
25 off. You can modulate them more easily, where on

1 a river you have less capability to do that.

2 But ISO would have the characteristics
3 of those plants in detail and embedded into its
4 dispatch algorithms. You know, even though it's a
5 run of river they may have a little bit of play in
6 whether or not a run of river plant runs flat out,
7 or some deviation from flat out.

8 THE HEARING OFFICER: So it could vary
9 depending on the source?

10 THE WITNESS (Fagan): Yeah. Its
11 maneuverability, a hydro plant's maneuverability
12 will depend generally on whether or not it's --
13 it's run of river or it has storage capability.

14 THE HEARING OFFICER: Okay. So getting back
15 to ISO, ISO is trying to meet the electrical
16 demand basically at the lowest possible cost?

17 THE WITNESS (Fagan): In short that's the --
18 that's the algorithms they use for commitment and
19 dispatch, yes.

20 THE HEARING OFFICER: And you might have some
21 of the units that we talked about that might not
22 be as economical as other units, but they would
23 still be dispatched based on how they run or what
24 their need might be at any given time?

25 THE WITNESS (Fagan): Yes. And you know,

1 maybe the best as an example, ISO might keep a
2 slightly more expensive unit turned on in the
3 Boston area as an extra operating reserve in case
4 they lose a major line going into Boston and they
5 had to make sure that they had sufficient local
6 reserve capability to -- to not lose the load in
7 Boston, for example.

8 THE HEARING OFFICER: If I could refer you to
9 page 13 of your direct testimony document, and I'm
10 looking at lines nine and ten specifically.

11 You commented that Vineyard Wind would
12 have a levelized price of power of \$65 per
13 megawatt hour. How do you define levelized?

14 THE WITNESS (Fagan): Mass DOER defined that
15 number. They basically take a stream of payments
16 per the contract that start out at -- out at a
17 particular level and increase perhaps by inflation
18 over time. And then they just -- they take that
19 and they correct for inflation.

20 They -- they levelized it to make it
21 look like, you know, here's the -- the average
22 cost if you were paying for this. I believe this
23 is in 2017 dollars.

24 THE HEARING OFFICER: Okay. I want to give
25 you a scenario. As I mentioned at previous

1 hearings, I really like looking at ISO's price map
2 from time to time.

3 And last Friday as a snapshot, you know,
4 looking at the hour of 1345 the overall price for
5 New England energy at that time was \$24.90 cents.
6 Right? If you could bear with me?

7 The day was mild. The system demand was
8 a little over 13,000 megawatts. And the fuel mix
9 was 62 percent natural gas, 17 percent nuclear, 11
10 of hydro, and the balance of that was renewables.

11 Okay so far?

12 THE WITNESS (Fagan): Yeah.

13 THE HEARING OFFICER: My question to you,
14 should Vineyard Wind be constructed and come
15 online, at that 65-dollar price it would seem to
16 me that the price per megawatt hour would increase
17 by some amount. So it wouldn't be \$24.90 anymore.
18 It would be some higher number.

19 Would you kind of agree with that?

20 THE WITNESS (Fagan): No, that's not the way
21 it works.

22 THE HEARING OFFICER: How does it work?

23 THE WITNESS (Fagan): Once Vineyard Wind is
24 in place it basically will offer into the energy
25 market at its marginal cost, the cost of fuel

1 which is basically zero. So it will become a
2 price taker in the energy market and it will
3 participate in the clearing price that will
4 actually end up being a little bit lower than \$24,
5 depending upon the slope of the supply curve at
6 that point in time.

7 At \$65 is the -- is sort of the
8 guaranteed average price that it gets paid outside
9 of the ISO New England energy market construct,
10 essentially. And -- and its effect on the
11 clearing price of New England has to do with
12 its -- how much capacity it's putting out at any
13 given point in time, and what does the rest of the
14 supply curve look like? Because it's always going
15 to be inframarginal.

16 It's always going to be just injecting
17 its energy onto the grid, unless there's some
18 reason why it needs to be curtailed by ISO New
19 England. But the short story would be the price
20 is going to be below \$24, and it's going to be on
21 because its marginal cost are essentially zero.

22 THE HEARING OFFICER: So if I understand
23 correctly, somebody else would be paying the
24 65-dollar figure and not ISO?

25 THE WITNESS (Fagan): The \$65 is basically

1 the amount that rate ratepayers will pay for that
2 on a levelized basis. You know, so in any given
3 month there will be periods of time when the spot
4 price is \$24. There may be other periods when the
5 price is 60, and other periods when the price is
6 120.

7 The spot price will jump all over the
8 place. The -- the people who operate the Vineyard
9 Wind plant will settle with the ISO. And
10 they'll -- sometimes they'll pay them. Sometimes
11 the ISO -- the -- the payments will -- will
12 proceed according to what the spot price is, but
13 ultimately the exposure to the ratepayers is the
14 65-dollar number.

15 So it's sort of -- it's a forward
16 contract and then -- and then everything that's
17 actually delivered is settled at a spot price,
18 and -- and the ratepayers have that exposure of
19 the 65-dollar average price for everything, and
20 the ratepayers get whatever its value is in the
21 energy market plus whatever its value is in the
22 capacity market. That's -- that's sort of the
23 tradeoff.

24 So the ultimate value of the energy in
25 the capacity market, you know, in 2023 might look

1 like 70 dollars and the ratepayers are getting a
2 deal if they've paid 65. If the ultimate value in
3 2023 is 50 dollars and the ratepayer is paying 65,
4 they've paid a little bit too much. But then you
5 just have to take into account that this is a
6 20-year contract.

7 So we're talking about a 20-year term,
8 and then you're talking about delivery on the
9 spot, instantaneous or hourly basis.

10 THE HEARING OFFICER: And the ratepayers
11 you're referring to in this instance with Vineyard
12 would be Massachusetts?

13 THE WITNESS (Fagan): In this instance it
14 would be Massachusetts. I believe that it is all
15 Massachusetts customers that have taken the
16 entitlement for -- for that offshore facility just
17 like the Rhode Island ratepayers will take it for
18 Revolution and Connecticut ratepayers will take it
19 for the portion of Revolution that's going to be
20 for Connecticut.

21 THE HEARING OFFICER: Thank you.

22 Going back to the snapshot that I
23 mentioned with natural gas, with nuclear, with
24 hydro and with renewables, should something like
25 Vineyard Wind or another type of wind power come

1 into play, would you think that it would displace,
2 say, non-economical natural gas units?

3 THE WITNESS (Fagan): It -- it will displace
4 whatever -- whatever otherwise would have been
5 marginal. So it will, you know, the short story
6 is it will displace what otherwise would have been
7 the most expensive stuff necessary.

8 THE HEARING OFFICER: Uh-huh. Okay.

9 THE WITNESS (Fagan): You know, absent some
10 of the tweaks around, you know, must run for
11 operating reserve reasons, for example.

12 So if there's a slug of combined cycle
13 resources that are sitting on the supply curve
14 that might otherwise be dispatched, when you get
15 your 1500 megawatts of offshore wind the system is
16 going to clear at a point lower, and they won't
17 need all of that other stuff upstream, which is
18 essentially what will continue to occur over the
19 next decade as the -- as the additional wind and
20 solar and Canadian hydro comes online, that the
21 marginal units will continue to get pushed down,
22 so to speak. And -- and they'll be less and less
23 clearing from the most expensive units.

24 THE HEARING OFFICER: Uh-huh. Okay. Thank
25 you. And in keeping on that, if KEC is indeed

1 approved construction and operational, wouldn't
2 that also help, say, economics and potentially
3 displace non-economical natural gas units as well?

4 THE WITNESS (Fagan): Well, they haven't put
5 in any analysis in that shows that. You know,
6 there's 1900 megawatts of brand-new combined cycle
7 units that was in place between 2018 and this
8 year. And you know, in a way it's competing with
9 those right off the bat. Those are sort of the
10 newest most efficient units.

11 Ostensibly there's some stuff upstream
12 of that, but you know, as we go on through the
13 decade of the 2020s and you get more and more
14 energy coming from the zero fuel cost resources,
15 the -- the clearing units in the system will -- it
16 will -- it will be those units, or it will be
17 other not-fossil units such as imports that
18 continue to set the -- set the clearing price.

19 Perhaps the best demonstration of this
20 is in the ISO New England air emission reports
21 that I cite in my testimony. The average
22 emissions in New England continues to drop, has
23 continued to drop for quite some time. They don't
24 project what the -- what the emission drop will
25 look like, but the mechanism for what that

1 emission looks -- for what those emissions look
2 like is fairly straightforward.

3 The more you put additional renewables
4 and Canadian hydro onto the grid the smaller that
5 number becomes, because more the frequently
6 you're -- you're setting prices with units that
7 are either renewable or imports, or are the most
8 efficient units out there, you know, which would
9 be plants like -- like the combined cycle plants
10 that are -- that are in place now and which could
11 be KEC if their characteristics are similar to
12 that.

13 So the theory is correct. In reality as
14 we demonstrate in our -- in an illustrative
15 diagram in our testimony, KEC sits on sort of a
16 flat part of the curve. And -- and over time
17 there's going to be more and more resources that
18 have zero fuel costs and zero emissions. And it's
19 going to continue to squeeze out the
20 worst-performing plants, which happen to be the
21 dirtiest plants, too.

22 So very soon there won't be any coal.
23 And very soon there will be a limited amount -- an
24 even more limited amount of oil. I mean, right
25 now there's a limited amount of oil. It's less

1 than 1 percent of the generation in New England.
2 It's tiny. It's just during those winter cold
3 snaps.

4 As the renewables come online even that
5 is going to become less necessary. So you're
6 basically having sort of this race to the bottom
7 of what are the set of natural gas plants,
8 combined cycle natural gas competing.

9 So you've this surplus of gas plants
10 because we don't need all of them if we want to
11 meet the 2030 emissions. And they're sort of
12 competing to, you know, to provide the last slugs
13 of energy that are required from natural gas
14 plants.

15 THE HEARING OFFICER: No, I am familiar.
16 When you start looking at the, quote, unquote, the
17 older fossil fuel plants, particularly boilers
18 that in my opinion those are going away somewhere
19 along the line.

20 You mentioned coal. I think Bridgeport
21 is set to retire in 2021, if I'm not mistaken. I
22 think that's the last coal plant that might be
23 around.

24 THE WITNESS (Fagan): Yeah, there's a couple
25 in New Hampshire, but there they're likely go in

1 the early part of the next decade.

2 THE HEARING OFFICER: Yeah, and oil in my
3 opinion is also up the curve as far as the
4 economics go.

5 THE WITNESS (Fagan): Oil is way up, is way
6 up on the curve. Although still needed during the
7 most, you know, the coldest parts of the winter,
8 they still need some oil and that's -- that's what
9 we've seen. I mean, even less so this year
10 than -- than the previous years because the load
11 keeps dropping and they did a better job this year
12 with LNG in Boston.

13 But -- but that's right. But as -- but
14 critically, you know, solar continues to -- to
15 come in. And even during the wintertime solar
16 contributes to not having to use as much gas or
17 oil during the middle of the day, which helps
18 during the end of the day when the peak period is.

19 But the offshore wind in particular, you
20 know, 800 megawatts, 1500 megawatts, the low
21 2,000 megawatts by 2023 or 2024, that will have a
22 dramatic impact on what's going on during the
23 winter cold snaps. And that will require a lot
24 less of what they currently need from the oil and
25 coal at that point in time, in addition to the --

1 to the imports from Canada the thousand plus
2 megawatts that's on track for being approved by
3 the -- by the Mass DPU you.

4 THE HEARING OFFICER: Thank you.

5 Another area that I'm struggling with
6 concerns the reserve margin. This would be your
7 table 1, on page 19.

8 THE WITNESS (Fagan): Yes.

9 THE HEARING OFFICER: First of all, how is
10 reserve margin defined? And if you would, what's
11 its purpose?

12 THE WITNESS (Fagan): It's -- it's defined by
13 ISO New England's defining an installed capacity
14 requirement. They do that every year. When you
15 define an installed capacity requirement you
16 compare that to what the peak load is. And that's
17 your -- that's your reserve margin, the difference
18 between those, those two things.

19 I'm sorry. What was the second part of
20 your question?

21 THE HEARING OFFICER: Well, one of them was,
22 how is it defined? And what's its purpose?

23 THE WITNESS (Fagan): Oh -- oh, it's purpose,
24 that's pretty straightforward. It's basically to
25 deal with the deviations in the load forecast due

1 to weather and deviations in availability of
2 generation due to outage rates.

3 Those are the -- those are the two
4 components. That's -- that's the thing that
5 requires you to have more than peak load, because
6 you might have outages and the load might go a
7 little higher than your -- than your normal
8 forecast.

9 THE HEARING OFFICER: So can I simplify that
10 and say that's a what-if?

11 THE WITNESS (Fagan): Yeah, you could. You
12 know, statistically, you know, they -- it's --
13 it's, you know, they know that they're going to
14 have some outages, and statistically they know
15 that the load is going to go up above the -- the
16 projected normal 50/50 load.

17 So they know that they're going to need
18 something on, so it makes sense that they have a
19 planning reserve margin that's -- that's in
20 exceedance of the peak load forecast.

21 THE HEARING OFFICER: Thank you.

22 Again, looking at that table there's
23 data from 2019 through -- projected for 2028. And
24 when I look at the data it appears to me that
25 ISO -- and this is my assumption -- is making a

1 they can still earn enough money in the capacity
2 market and the energy market to not shut down.
3 Some people would argue that ISO is a little bit
4 too cautious and that they probably could set some
5 of the parameters in the capacity market
6 differently such that you'd see faster, proper
7 economic exit. That just hasn't that happened.
8 So that's an ongoing battle, but you know, this in
9 no way is -- is a reserve -- is what ISO thinks
10 reserve should be.

11 ISO thinks the reserves, the minimum
12 reserve on the install capacity requirement, that
13 minimum number is on the order of 18 percent or
14 so.

15 THE HEARING OFFICER: But yet the numbers
16 there are going from 27 to 31. That's what I'm
17 struggling with, that if --

18 THE WITNESS (Fagan): ISO is overly cautious
19 and they're not -- they're not setting the
20 parameters that would allow these units to retire.
21 The units can retire at any time they want. They
22 just have to notify us at ISO.

23 If the ISO -- in the very beginning of
24 the capacity market structure going back over a
25 decade the -- the clearing prices were even lower

1 than the relatively low clearing price we've seen
2 today. Some argue that you really should let that
3 price go even lower and we should allow those
4 other units to retire. ISO is worried right now
5 around fuel, but the units that would retire from
6 a capacity market perspective are those units that
7 still have oil capability and can help out during
8 the winter.

9 This requirement is set based on summer
10 needs. They're most stressed in the summer, and
11 the only reason that this is high is that a whole
12 bunch of units are continuing to hang on, because
13 they're sort necessary in the winter. So it's
14 not -- it's not a perfect metric, but the
15 requirement is 18 percent.

16 You could think about layering on the
17 winter energy security effect and saying that
18 that's contributing to these numbers being higher
19 and the -- and the older oil and coal units not
20 retiring as quickly as you would otherwise expect
21 them to do from an economic perspective.

22 THE HEARING OFFICER: So if price goes down
23 and these older units drop off, wouldn't KEC help
24 kind of maintain that 18 or something
25 greater percent for the reserve?

1 THE WITNESS (Fagan): It's a couple of
2 percentage points, but it's not -- it's not
3 needed. All of the other plants have the
4 dual-fuel capability that can provide in the
5 wintertime what these oil units that stay on are
6 currently providing.

7 So you know, we lose -- part of the key
8 would be, okay. Well, what is ISO New England
9 doing to make sure that there's resources or other
10 resources available to provide winter energy?
11 Well, they're doing their sort of market changes
12 to make sure that they pay people to have oil in
13 the tank.

14 Separate from what the ISO is doing the
15 load is -- continues to drop separate from what
16 the ISO is doing. PV and wind are coming onto the
17 grid and -- and energy efficiency is doing what
18 it's doing. All of those things would put
19 downward pressure on the need for the oil or the
20 coal in the wintertime.

21 KEC, you've got plenty of plants that
22 have oil and gas capability. It's just another
23 oil and gas capability plant with a little tweak
24 on its firm gas contract, but that's a lot less
25 important compared to, sort of, the broader

1 drivers here, you know, that there's less of a
2 need.

3 I mean, even in this past winter, in
4 January of this year during cold snap, you know,
5 we had more than 8,000 megawatts of resources on
6 gas during -- during the coldest winter peak day
7 this year because a lot of LNG had come into
8 Boston and sort of, you know, relieved the
9 pressure on the gas systems, you know, so to
10 speak.

11 Looking forward the offshore wind in
12 addition to the continuing declines in load is
13 just one other contributing factor that will put
14 downward pressure on -- on what's required during
15 the -- during the extreme cold snaps.

16 THE HEARING OFFICER: One other question that
17 I have on this topic is, again if the price goes
18 down and you lose your coal and you lose your oil
19 based generators where do you see the reserve
20 margin going? Do you see it going closer to
21 18 percent?

22 THE WITNESS (Fagan): It will go closer to
23 18 percent. I actually show that in table two.
24 It will drop down. It will drop down below the 27
25 or 28. Depending upon how the market shakes out

1 that number will be whatever it will be in any
2 given year.

3 I show the loss of -- of pretty much
4 everything. It's not clear that you're going to
5 lose everything, it and -- it and drops to
6 18 percent. And that's before I even take into
7 account what battery storage will do over the next
8 decade and any continuing increases on the
9 renewable energy side or the Canadian side, beside
10 what I already have reflected here.

11 So in a way, you know, the shakeout is
12 we take care of the winter energy problem through
13 ISO's market mechanisms that continue to retain
14 some oil, but as we see the slugs of Canadian
15 hydro and offshore wind, this winter concern is
16 lessened considerably. Between those new clean
17 resources and ISO's market mechanisms there's a
18 lot less of a winter concern.

19 You know, that translates into a
20 lower -- a lower reserve because plants have
21 retired. All is copesetic.

22 THE HEARING OFFICER: And 18 percent would be
23 a magic number?

24 THE WITNESS (Fagan): Yeah. If there's a
25 magic number it's what their requirement is. In

1 reality reserve margins, actual reserve
2 margins are almost always above the minimum
3 thresholds that the RTOs put out.

4 Some regions are tighter than other
5 regions. ERCOT is actually well below its -- its
6 requirement, but they do fine because they have
7 some pretty strong energy market incentives. It
8 will bounce around, but you know, the only reason
9 it's that higher is because of this winter
10 conservator that exists right now which is being
11 worked out through the renewable resources, the
12 imports from Canada and ISO continuing to make
13 sure that whatever actually is needed oil units
14 will stay online.

15 I mean, if ISO does it right they're
16 basically going -- going to setup competition
17 between which of the dual-fuel units are best
18 positioned to most efficiently have enough oil in
19 the tank to help them ride out winter -- winter
20 cold snaps. Until the overall conditions are such
21 that they don't even need that as much, because of
22 the presence of the -- of the renewable and import
23 resources that are -- that are coming in.

24 THE HEARING OFFICER: You gave me a segue in
25 there about battery storage, and I want to jump

1 from that topic into batteries. Table 3 that you
2 have on page 25 lists a 100-megawatt battery
3 storage. Does that currently exist?

4 THE WITNESS (Fagan): This is -- no, that
5 doesn't currently exist. There is some battery
6 storage in New England. There's not a lot.

7 This is to demonstrate, you know, by
8 2022 that actually certainly will exist because
9 Massachusetts has a hundred megawatt -- a
10 200-megawatt hour 100-megawatt target for 2020.
11 And then they have a thousand megawatt hour, which
12 would be a 500-megawatt two-hour resource targeted
13 for 2025.

14 So there's targets in place in
15 Massachusetts for storage, the economic attributes
16 of the storage technology are such that the costs
17 have been dropping steadily. FERC has -- is in
18 the process of finalizing the requirements around
19 RTOs needing to make sure that batteries can
20 compete in both the capacity and the energy
21 markets.

22 So you know, there's a bit of a perfect
23 storm going on between the FERC requirements, the
24 cost of the technologies and the fact that the
25 State of Massachusetts -- I'm less familiar with

1 the State of Connecticut. I'm sorry -- has
2 targets in place.

3 All of those things are resulting in
4 increased market activity and the ISO New England
5 interconnection queue now has more than
6 3,000 megawatts of potential battery storage, you
7 know, thinking about connecting and wanting to get
8 their -- their connection approvals in place.

9 So it's a part of the overall
10 transformation of the power sector that is lagging
11 the solar and the wind pieces, but it's -- but
12 it's right there. And this is just to demonstrate
13 that given the current projection of costs for
14 battery storage, it's completely feasible to think
15 of it as part of a portfolio of resources that
16 would provide what KEC would otherwise provide,
17 but obviously at nine times better, a nine times
18 cleaner resource, because the emissions associated
19 with this type of a portfolio are much better.

20 There's an infinite number of possible
21 portfolios that could have these types of
22 characteristics that are cleaner than KEC.

23 THE HEARING OFFICER: Staying with the table,
24 do you know the nature of what that storage would
25 be? Would it be coming from solar, or would it be

1 coming from something else?

2 THE WITNESS (Fagan): Generally, battery
3 storage can be connected directly to the grid or
4 it can be coupled directly to a solar or a wind
5 plant and sort of dedicated with that plant. It
6 doesn't need to be dedicated with the plant.

7 It's best used as a resource that's
8 generic to the grid. It's a capacity resource
9 with a very low capacity factor. It's only used
10 during peak times, or it's used to provide some --
11 some ancillary services.

12 THE WITNESS (Glick): And the emissions that
13 associated with this battery storage are assuming
14 the average emissions rate of the ISO New England
15 grid.

16 So in this case we have modeled just for
17 the emissions calculation the average emissions
18 rate of the whole grid, not assuming it's
19 necessarily charging directly from a zero-emission
20 resource.

21 THE HEARING OFFICER: Yeah, I'm trying to
22 figure out what's going to charge the battery --
23 is what I'm trying to figure out?

24 THE WITNESS (Glick): The grid, anything.

25 THE WITNESS (Fagan): In this context its

1 value is as a capacity resource, basically a peak
2 potential as a peak shaving type of a resource.
3 Whether or not it's coupled directly to solar or
4 wind, or whether or not it sits on the grid
5 doesn't really matter. We've modeled it as if it
6 sits on the grid. You know, and therefore it's --
7 the average emissions associated with its charging
8 energy looked like the average.

9 If it was -- if it was coupled directly
10 instead to a solar resource, for example, you
11 know, this type of a computation might assign it a
12 much lower or zero level of emissions if it was
13 always charged by solar. But economically right
14 now it sort of makes more sense to just put it on
15 there as a capacity resource. So it will charge
16 when it needs to charge and those, that might be
17 during the nighttime when -- when there's no solar
18 resource on the grid.

19 THE HEARING OFFICER: Now stay with the
20 table. You have an estimated capacity factor in
21 megawatt hours per year listed as negative
22 numbers?

23 THE WITNESS (Fagan): Yes.

24 THE HEARING OFFICER: Why are they negative
25 numbers?

1 THE WITNESS (Fagan): Because battery storage
2 doesn't produce energy, it absorbs it. So it's
3 negative in that. In this instance you -- you
4 need to charge it in order for it to be the
5 capacity resource that it -- that it is.

6 Everything else produces energy. It
7 needs to absorb energy and if there's -- there's a
8 loss. That's -- that's why it's not zero.
9 Batteries have, like, a 85 to 90 percent
10 efficiency. So for every megawatt hour of
11 generation you get from a battery when you need it
12 you need to give it 1.15 megawatt hours when you
13 charge it up. So there's a little bit of a loss
14 there. That's why that's negative as opposed to
15 zero.

16 THE HEARING OFFICER: Okay. No. Thanks for
17 the clarification. I was trying to figure that
18 one out based on my question.

19 THE WITNESS (Fagan): Okay. Sorry, I --

20 THE HEARING OFFICER: Yeah.

21 In your opinion, does the output from
22 battery storage come mainly at nighttime?

23 THE WITNESS (Fagan): No, it would -- most
24 likely it would come during the day, but it can
25 come anytime. That's what's important. It comes

1 when it's needed. That's what capacity resources
2 do.

3 If some -- if something happened on the
4 grid overnight and you needed an instantaneous
5 injection it's going to be first in line. It's
6 going to be faster than a fossil spinning
7 resource, for example, if you had a contingency
8 event.

9 And -- and batteries do that. They do
10 that in -- in PJM. I believe they do that in New
11 England also, the little bit that are on. They
12 participate in the regulation market and they,
13 they are sort of the first responders because they
14 have this technic -- technological characteristic
15 that allows them to instantaneously discharge as
16 long as it's set up in -- in that way.

17 We haven't modeled a particular profile
18 of when this resource might actually output onto
19 the grid. You know, we didn't do, nor did the
20 applicant, any kind of detailed production cost
21 modeling where you might do that. You can run
22 scenarios that said, what if we had Massachusetts,
23 a thousand megawatt hours of batteries in 2025?
24 What does that look like?

25 It's pretty straightforward. Most

1 likely it looks like during the peak periods
2 it's -- it's running during those peak periods.
3 During the non-peak periods it might be providing
4 some standby reserve capability, not energy, but
5 ability to respond.

6 And then it's charging during times when
7 the prices are lowest, basically. That's when you
8 would charge a battery from an economic
9 perspective.

10 THE HEARING OFFICER: Yeah. The reason I
11 asked -- not to get too far offtrack, looking at
12 solar, solar has been a plus during the daytime to
13 drop down, you know, electricity coverage, if you
14 will. But nothing happens with solar at night.
15 That's why I kind of asked the question, if you
16 balanced it out, and with the batteries or in the
17 nighttime?

18 THE WITNESS (Fagan): Yeah, you could. You
19 could think of it that way, but because we operate
20 the grid holistically you don't have to pair the
21 solar with the storage. You can, and there's
22 some -- there's some savings when you actually do
23 it that way.

24 But as -- as a resource you -- you just
25 put it on the grid and it's a capacity resource

1 that's there, you know, with -- with, you know,
2 instantaneous dispatchability, essentially,
3 based -- based on these parameters. It's a great
4 resource, and it's -- it's only because
5 technologically the costs have come down, you
6 know, that we now have this as -- as a real
7 commercial option, whereas five, six, seven years
8 ago we didn't really have this as a real
9 commercial option.

10 THE HEARING OFFICER: Would it be fair to
11 classify the batteries as a peaking unit or units?

12 THE WITNESS (Fagan): Yeah, it -- it goes
13 beyond that. A significant part of its value is
14 going to provide coverage during peak periods, but
15 it also is very valuable as a regulation unit. I
16 mean, there's a limited amount of regulation
17 capacity you actually need, but batteries are
18 particularly good at that because that's a service
19 that you don't need a lot of energy. You just
20 need to move around a lot, and batteries do that
21 well.

22 And -- and the value of energy is often
23 highest at peak periods, therefore if the battery
24 can discharge during those times that's like the
25 highest value used for the battery, if you're

1 discharging it during -- during peak periods.

2 THE HEARING OFFICER: Would there be a cost
3 per megawatt in that case?

4 THE WITNESS (Fagan): The -- the cost per
5 megawatt, or per megawatt hour for batteries, the
6 cost depends on sort of the underlying technology.
7 And there's -- there's a set of costs irregardless
8 of -- mostly irregardless of, you know, when
9 you're charging it and how you're using it.

10 But for a given battery, a hundred
11 megawatts and 2 hours duration, 200-megawatt hours
12 capability there's a cost tied to the equipment.
13 In the marketplace the cost to charge it would be
14 well, what's the price. Well, I'm going to charge
15 it when the price is \$10 or \$5, or \$20. I'm not
16 gonna charge when the price is \$60. I'm never
17 going to charge it on peak. That would be crazy.

18 And then I'm going to discharge it when
19 the prices are highest during peak, when the
20 prices are a hundred bucks, or \$150. And then at
21 the same time I'm going to do my economics and
22 say, I want to continuously provide operating
23 reserve service, regulation service from this
24 resource because it can do a better job of that
25 than certain spinning fossil units, for example.

1 So there's competition for some of the
2 ancillary services between batteries and resources
3 that currently provide that in addition to the
4 battery providing this ability to arbitrage
5 between high and low prices and deliver energy
6 during peak periods.

7 So it's sort of this multifunctional
8 resource in a significant way, and the fact that
9 its costs have come down so dramatically makes it
10 a lot more important, not just because it stores a
11 bunch of solar and puts it back on the grid, but
12 because it's this dispatchable fast capacity
13 resource that's -- that the ISO can have at its
14 fingertips.

15 THE HEARING OFFICER: Two other questions on
16 this topic. You mentioned the 3,000 plus
17 megawatts that were requesting interconnection as
18 of April 10th. Do you know the status on that?
19 Did they go through, or they're still requesting?

20 THE WITNESS (Fagan): The -- that number,
21 those are the active -- I believe those are the
22 active interconnection requests. They have to
23 work through -- I don't know the status of that.
24 ISO has to work through, you know, they do all the
25 engineering. Can we put a 50-megawatt battery at

1 this substation and do we have, you know, they do
2 all that.

3 That's part -- it's the same
4 process-wise, it's the same thing as generators do
5 under the FERC open access tariff, that ISO has to
6 do the studies to make sure that they can connect
7 the resource. They're doing that with the
8 batteries. It doesn't mean that all that's going
9 to come to fruition just like with generation, but
10 some portion of that will be the most economically
11 attractive and will -- and will come to fruition.

12 And we've started to see that. I'm not
13 sure if we have -- I don't know that we have a
14 projection. I don't think we do have a projection
15 from the ISO if it's active, what it thinks. I
16 mean, at this point I would look to the Mass DOR
17 targets as a reasonable -- we should see the 200
18 megawatt hours by 2020. We should see the
19 thousand megawatt hours by 2025.

20 But a lot of this stuff will end up
21 being market-driven, too. Once the FERC rules are
22 completely finalized -- in a way what the --
23 3,000 megawatts in the queue are those resources
24 anticipating that the rules are going to be
25 finalized, that the economics of buying the stuff

1 is going to continue to get better and they're
2 going to be poised to enter into and play in the
3 capacity, energy and ancillary services markets in
4 New England.

5 THE HEARING OFFICER: Do you know if any of
6 these are proposed for Connecticut?

7 THE WITNESS (Fagan): I don't know offhand.
8 I can easily find that out. This is the public
9 queue data. And I did -- and I did a summary of
10 the -- of the total without breaking it down by
11 state just to have a sense of what's the -- what's
12 the current to put in our testimony, but I don't
13 know offhand how much of this is Connecticut.

14 THE HEARING OFFICER: That was just a
15 curiosity question.

16 THE WITNESS (Fagan): Okay.

17 THE HEARING OFFICER: One final topic I have
18 for you. Your testimony seemed to be silent on
19 fuel cells, unless I missed it. Any comments, any
20 thoughts about fuel cells and how they fit into
21 the scheme of things?

22 THE WITNESS (Fagan): A fuel cell is a
23 natural gas resource, generally. It doesn't have
24 to be natural gas. This analysis was not -- we
25 did not drill down to, let's look carefully at all

1 the distributed resource alternatives.

2 To the extent that there are existing
3 fuel cells that have a capacity supply obligation,
4 they're reflected in the -- in the existing
5 capacity metrics that are included here. To the
6 extent that there are fuel cells that have just
7 one capacity supply obligation in FCA-13, they
8 would be reflected in here.

9 To the extent that there's fuel cells
10 that are just possibles, they're not necessarily
11 reflected in here. What we focused on was the --
12 sort of the known new renewable resources, the
13 Rhode Island, Connecticut and Massachusetts wind,
14 and the imports from Canada under the -- under the
15 Massachusetts law, along with ISO's projection of
16 net load which takes into account all the small
17 solar. And we also took into account a little bit
18 of large solar that's also in their projections.

19 So we just didn't -- we didn't focus on,
20 where does the incremental capacity associated
21 with fuel cells fit into here. My -- it would --
22 it would be part of the mix to the extent that
23 there are more fuel cells, you know, that are in
24 there, I don't think that they're a dominant
25 capacity resource, you know, they would -- they

1 would have an effect on any ultimate numbers if we
2 were to do this analysis in more detail.

3 THE HEARING OFFICER: Thank you Mr. Fagan.
4 That's all the questions I have. I don't know if
5 councilmembers have any other questions, or
6 Mr. Perrone?

7 MR. PERRONE: No, I'm all set. Thank you.

8 THE HEARING OFFICER: Okay. We'll move on
9 then to the applicant.

10 Attorney Baldwin?

11 MR. BALDWIN: We have no questions,
12 Mr. Chairman.

13 THE HEARING OFFICER: Thank you, Attorney
14 Baldwin.

15 Connecticut Fund for the Environment, do
16 you have any questions?

17 MS. FIEDLER: No questions.

18 THE HEARING OFFICER: Thank you.

19 And the Town of Killingly?

20 MS. CATINO: No questions.

21 THE HEARING OFFICER: Great. Thank you.

22 I believe we're all set. Thank you.

23 Attorney Baldwin, we're going to
24 continue with the appearance of the applicant,
25 NTE. And we'll give you a couple minutes to

1 change places.

2 MR. BALDWIN: Thank you.

3 THE HEARING OFFICER: Thank you.

4

5 (Pause: 11:59 a.m. to 12:01 p.m.)

6

7 T I M E V E S,

8 C H R I S R E G A,

9 L Y N N G R E S O C K,

10 P A U L J. H I B B A R D,

11 called as witnesses, having been previously duly
12 sworn, were examined and testified on their oaths
13 as follows:

14

15 THE HEARING OFFICER: We'd like to begin with
16 the cross-examination of the applicant by Not
17 Another Power Plant and Wyndham Land Trust.

18 MS. MILLER: I guess I can say good afternoon
19 now. I'm Mary Miller from Reid & Reige
20 representing both Not Another Power Plant and the
21 Wyndham Land Trust. I will ask my questions kind
22 of mixed together for both parties.

23 I'm going to start, just so you can take
24 a look at it, with attachments 1B, C and D, to the
25 second set of the CSE interrogatories. Those are

1 the engineering agreements with Yankee Gas and the
2 amendments thereto. I just have a couple of
3 questions on them.

4 Looking at attachment 1D, it does appear
5 to be executed by Mr. Eves. I wasn't sure if it's
6 been executed by Eversource at this point?

7 THE WITNESS (Eves): Is that amendment two?

8 MS. MILLER: That would be amendment two, the
9 last one, 1D?

10 THE WITNESS (Eves): Yes. Yes, that
11 amendment two has been executed by Yankee.

12 MS. MILLER: Okay. And if I have this
13 correct, I think you said that the plan is to
14 replace -- you went back and forth, but I think
15 it's a 6-inch pipeline right now, with what will
16 be a 16-inch diameter pipeline.

17 And I just wanted to confirm it's
18 necessary for the flow of gas, having enough of it
19 into the plant. Correct?

20 THE WITNESS (Eves): The sizes, I -- I still
21 am not sure if a four or six-inch pipe in there,
22 but let's say there's a six-inch pipe. They
23 were -- will replace it with a 16-inch pipe. So
24 there is enough flow for the facility.

25 MS. MILLER: And so looking

1 specifically again at 1D, and I guess 1B and 1C,
2 they're all amendments to the same agreement. It
3 does refer to preliminary engineering and design.
4 So is the pipeline part of the preliminary
5 engineering and design? It was a little general I
6 think purposefully.

7 THE WITNESS (Eves): Yes, it is.

8 MS. MILLER: Okay. And I believe when we
9 were talking about this before in our last session
10 you mentioned that Eversource is handling this on
11 their own. NTE is essentially a customer of
12 Eversource. So can't control what Eversource is
13 doing. Is that correct on this?

14 THE WITNESS (Eves): That's correct.

15 MS. MILLER: So arguably they couldn't decide
16 that, ultimately not install the pipeline?

17 THE WITNESS (Eves): I would say, no. We --
18 we do -- we're working on the service agreement.
19 I mean, we're under this engineering agreement.
20 We're reimbursing them for their -- for their
21 efforts to design the pipe and permit the pipe.

22 Under the service contract that is not
23 yet signed there they will have an obligation to
24 serve us.

25 MS. MILLER: And that's still being

1 negotiated?

2 THE WITNESS (Eves): Yes.

3 MS. MILLER: Do you have an expectation on
4 when that might be signed?

5 THE WITNESS (Eves): I would hope within the
6 next couple months.

7 MS. MILLER: Okay. In the response that NTE
8 had regarding a pipeline, again and this was the
9 CSE interrogatories set one. In question 25 you
10 noted that the entire pipe will be in what is an
11 existing right-of-way. Do you know whether the
12 construction of the pipe will also be in an
13 existing right-of-way?

14 THE WITNESS (Eves): I don't know that. I
15 believe that's true, but I don't -- I don't know.

16 MS. MILLER: I recall that at our last
17 session Mr. Hannon noticed -- noted rather, that
18 when the gas line originally went in this was
19 quite some time ago, and actually prior to the
20 existence of both DEEP and the EPA.

21 He had expressed some thought on whether
22 or not there could be some hurdles. Do you recall
23 him mentioning that?

24 THE WITNESS (Eves): Yes.

25 MS. MILLER: If in the end either DEEP or the

1 EPA tell Eversource they can't put in the
2 pipeline, under your agreement would there be
3 anything that NTE could really do about that?

4 THE WITNESS (Eves): I would say no, however
5 they have looked at -- I mean, they do look at a
6 number of different alternatives. There, I mean,
7 their business is providing gas. So I would think
8 if they ran into a hurdle on one direction they
9 would look at a different direction.

10 MS. MILLER: And possibly going around the
11 area that was of concern to DEEP if there was a
12 concern in the end, something like that?

13 THE WITNESS (Eves): That's reasonable.

14 MS. MILLER: One of my clients, the Wyndham
15 Land Trust has testified prior in this, in this
16 hearing that the smaller pipeline right now is
17 buried under a portion of its property -- both,
18 actually two portions, known as the Dunn Preserve
19 and the Duck Marsh Preserve. It's been a while,
20 but do you remember that?

21 THE WITNESS (Eves): Yes.

22 MS. MILLER: Do you have any reason to doubt
23 the truth of the location?

24 THE WITNESS (Eves): No.

25 MS. MILLER: And that neither of those pieces

1 were protected land at the time the pipeline was
2 installed. Correct?

3 THE WITNESS (Eves): I have -- I'll believe
4 you. I have no idea to know that.

5 MS. MILLER: I think we had said the pipeline
6 would be two miles in distance. Do you know if it
7 runs through any other protected lands or wetlands
8 that may not be owned by my client?

9 THE WITNESS (Eves): It will -- a portion of
10 it will run under Airline Trail, as I understand.

11 MS. MILLER: And in the Duck Marsh Preserve,
12 a portion of it's actually running under an
13 existing brook as well. Correct?

14 THE WITNESS (Eves): I don't know that. I
15 would cross under a river, but I -- I don't know
16 about a brook.

17 MS. MILLER: So if at that point there was
18 any problem with that permitting process -- which
19 I believe is underway but not complete. Correct?

20 THE WITNESS (Eves): That's correct.

21 MS. MILLER: So if there was an issue with
22 it, then NTE would first look to Eversource to see
23 if they could come up with some sort of
24 engineering solution?

25 THE WITNESS (Eves): Correct.

1 MS. MILLER: Would there be any other way if
2 they couldn't, for NTE to get the gas they need.

3 THE WITNESS (Eves): No. We -- I mean, we
4 have the agreement with Yankee. It's their
5 business. We will be a big customer of Yankee.
6 We have -- I mean, we're very hopeful that they
7 will find -- find a way to get that pipeline to
8 us.

9 MS. MILLER: The point where that permitting
10 process will be over, it looks like, at least
11 based on my understanding of the construction
12 schedule KEC might be well underway in its
13 construction?

14 THE WITNESS (Eves): Yes, I think that's
15 reasonable to think that KEC would be under
16 construction by the time that permit is issued,
17 provided we get all the other approvals.

18 MS. MILLER: Speaking about some of those
19 approvals, I believe there was going to be a
20 meeting last week between NTE and the Town of
21 Killingly regarding the planning and zoning and
22 inland wetlands comments and orders?

23 THE WITNESS (Eves): Yes, there was.

24 MS. MILLER: Did that meeting occur?

25 THE WITNESS (Eves): Yes, it did.

1 MS. MILLER: Did anything come out of the
2 meeting to change the state of the appeal that NTE
3 has made to the some of the orders to -- and we
4 can go -- we will go through a few of them.

5 THE WITNESS (Eves): Okay. Yes. And just
6 as, I would say, a high-level summary. So
7 in the -- in our first docket the Town sent in
8 roughly 70 regulate and restrict orders. We
9 provided a response that 18 of those orders were
10 partially agreed upon to us and partially
11 appealed. Nine of those were appealed.

12 And the -- when the Town hired
13 Mr. Stopper to review our new filings, the filing
14 that we put in, in the last docket in response to
15 the regulate and restrict orders, they came back
16 with nine remaining appeals that were unresolved
17 and one new appeal. When we sat down last
18 Wednesday to go through these we resolved all, all
19 ten open appeals.

20 MS. MILLER: Correct. I would actually like
21 to go through those so we have an idea of how they
22 were resolved, if that's all right. Or at least
23 the ones of most interest to my clients.

24 So do you have access to the appeal? Do
25 you want me to give you a clue of what I'm talking

1 about to make it easier?

2 THE WITNESS (Eves): I've got it here. I
3 mean, if you give me the number I will -- I will
4 tell you what we discussed.

5 MS. MILLER: Sure. So for the IWWC number
6 seven?

7 THE WITNESS (Eves): Okay. So IWWC number
8 seven talked about all permitting for gas and
9 water needs to be applied for and approved prior
10 to the construction of the facility, was -- was
11 their concern.

12 MS. MILLER: Uh-huh.

13 THE WITNESS (Eves): Which was a very similar
14 concern that the Department of Health had sent in,
15 in a letter.

16 What we discussed with the Town was, of
17 course, that the gas lines and the -- the water
18 line and the gas lines would be installed by third
19 parties. Under the agreements with both companies
20 we have schedules of when they will have that
21 construction completed.

22 That the overall construction of the
23 facility is a core -- coordinated activity and
24 it's not necessary, or it, you know, in a
25 coordinated schedule some of these things can

1 happen at a later date than -- to make sure that
2 we can finish on time.

3 What we agreed with, like with the Town
4 on was that the -- the third parties, in this
5 case, Connecticut Water and Yankee Gas would apply
6 to the Town for their appropriate permits in a
7 timely matter to support their installation
8 schedule.

9 There was a question here that, what
10 happens if we don't get a permit, we've started
11 construction and we don't get a permit? Under the
12 community environmental benefits agreement we have
13 agreed to post a decommissioning bond which the
14 Town can draw on to remove anything that we may
15 have -- have constructed prior to whatever
16 critical permit had not been issued.

17 MS. MILLER: At any point when you were doing
18 construction, I assume one of the first things
19 would be to clear the land for it?

20 THE WITNESS (Eves): Yes.

21 MS. MILLER: Is part of the bond going to be
22 replacing the trees that are removed in the land
23 clearing?

24 THE WITNESS (Eves): Yes.

25 MS. MILLER: It looks like similar to IWWC

1 number seven would be PZC Number seven possibly
2 also ten and eleven. Do you have anything to add
3 with where you came to with the Town on that, on
4 any of those issues?

5 THE WITNESS (Eves): Yes, there they're the
6 same. They have generally the same answer. PZC
7 Number seven had to do with Connecticut Water
8 getting their permits. PZC Number ten talked
9 about traffic control, permits and traffic
10 control.

11 And what we committed to the Town is
12 under PZC-10 the appropriate contractors will
13 apply to the Town for the required permits and
14 gain approval prior to them starting any work in
15 the Town's right-of-way roadways, et cetera.

16 MS. MILLER: So all, all the permit
17 application would be they would be approved
18 beforehand and so the construction wouldn't be
19 done, but they would know it's going to be done.
20 That's the general --

21 THE WITNESS (Eves): Let's take the road, for
22 example. So the roadway, our contractor who would
23 most likely be subcontracting the roadway, the
24 roadway subcontractor would go to the Town and get
25 the approvals, you know, the safety, the flagmen,

1 all that that needs to be, all those approvals
2 that need to be put in place. They would get
3 those approvals prior to starting construction of
4 the roadway. The same with the gas pipe and water
5 pipes.

6 So approvals would be gained before the
7 construction of that specific activity commenced.

8 MS. MILLER: It looks like with regard to the
9 road construction specifically the Town had wanted
10 authority, and this is PZC Number 19, to shut down
11 the road construction if it looks like the
12 standards probably to come out of their approval
13 aren't in place.

14 My understanding of the order was this
15 would be both for the safety of the road being
16 constructed, and also traffic going by at the
17 time. NTE had appealed that.

18 First, why did NTE appeal that? It
19 seems like a basic safety issue.

20 THE WITNESS (Eves): The -- you know, on
21 reading that regulate and restrict order, it was
22 not clear to the -- it appeared that what the Town
23 was asking for was the right to shut down the
24 construction of the entire project.

25 When we sat down with the Town we talked

1 about putting protocols in place through that
2 whole permitting process. That would take -- put
3 regulations and requirements on us on how we deal
4 with the safety of the road, of the people, of the
5 traffic. And we agreed with the Town.

6 In the case of an issue we'd follow the
7 protocols, but they would absolutely have the
8 right to shut down the road. That specific
9 construction, the road construction, the pipe
10 installations, whatever it is in a public
11 right-of-way.

12 So really we just limited that to they
13 have the right to shut down that specific
14 activity, not the entire project, which was
15 acceptable to the Town.

16 MS. MILLER: Okay. I guess the one other
17 order I was wondering is there was an additional
18 order, and given that this was just made it looks
19 like on April 11th it was unclear what NTE's
20 response was to the initial order -- the
21 additional order with regard, this is to the noise
22 barriers at the very end.

23 So what is NTE's response to that order?

24 THE WITNESS (Eves): So in a word, we -- we
25 agreed with what the Town has requested. What the

1 Town said is, can you tell us what the
2 alternatives are? So we will hire -- we're in the
3 process of finalizing the contracts with our --
4 our contractor. Our contractor, our design, our
5 engineering procurement and construction
6 contraction our EPC contractor, they're in the
7 process now of finishing the design.

8 They will guarantee the noise at the
9 boundaries as required by ordinance and they will
10 guarantee that to us. They may come up with a
11 slightly different noise abatement plan than what
12 Lynn's company has -- has developed.

13 What we've committed to the Town is
14 prior to filing that final plan in our D and M
15 plan we'll sit down and we'll go through the
16 various alternatives that we've looked at. We'll
17 explain why we came up with the -- with the
18 abatement process, the abatement design that we
19 came up with.

20 And if the Town has -- has questions or
21 inputs, or comments on that we will -- we'll work
22 with the Town on -- on those comments.

23 MS. MILLER: And this might be more, I guess,
24 a question for Ms. Gresock, but with regard to
25 when those new barriers were designed, which it

1 looks like that was in Exhibit 3 that came in on
2 January 19th, at least based on the Town's order,
3 was construction noise taken into account when
4 considering the best design for the barrier? I
5 understand you don't take it into account for
6 coming up with the actual limits, but in terms of
7 considering where the placement might be best or
8 things of that nature?

9 THE WITNESS (Gresock): The barriers are
10 solely an operational measure.

11 MS. MILLER: A few more questions regarding
12 noise, so since we're already beginning to talk
13 about it. This is just in confirmation. It
14 sounds like as far as construction goes discrete
15 tones won't be an issue with that construction?

16 THE WITNESS (Gresock): That's correct.

17 MS. MILLER: I also read at least in two
18 locations -- I think it was the -- there was one
19 of the responses to the planning and zoning
20 commission order. It looks like number 39, but
21 also in the original filing of the environmental
22 report from Tetra Tech, that louder construction
23 would be limited to daytime hours to the greatest
24 extent possible.

25 And I guess I was wondering, kind of,

1 what would be considered louder construction? Can
2 you tell me a little more about that limit? I
3 mean, it obviously sounds appealing, but what
4 would that involve exactly?

5 THE WITNESS (Rega): Well, certainly any --
6 any of the blasting activities, you know, that
7 would occur early on we would limit to day --
8 daytime hours. I think the one other area that we
9 noted in construction which is really
10 commissioning activity, but during the entire
11 construction cycle were the steam blows, and any
12 of those free-blows atmosphere, you know, we would
13 also do during daytime hours.

14 MS. MILLER: And the nighttime hours, just to
15 again clarify, is 9 p.m. to 7 a.m. That's night.
16 Meaning 7 a.m to 9 p.m. is day?

17 THE WITNESS (Gresock): I mean, it varies for
18 the State's definition and the Town's definition,
19 but approximately.

20 MS. MILLER: Okay. So construction that
21 isn't that level of noise could be occurring at
22 night as needed to get the project done as quickly
23 as possible?

24 THE WITNESS (Rega): Can you repeat the
25 question?

1 MS. MILLER: So construction that doesn't
2 fall into those categories might be occurring at
3 night?

4 THE WITNESS (Rega): There, there could be
5 activities at night, but -- but they would not be
6 the loud activities. Correct.

7 MS. MILLER: Given the exception for
8 construction noise it could be activities that
9 would exceed 51 dBa at the property lines, though?

10 THE WITNESS (Gresock): That's right.

11 MS. MILLER: And the 51 dBa limit that has
12 been determined for plant operation, that's taking
13 the noise barriers into account?

14 THE WITNESS (Gresock): In this design
15 scenario that's reflected that, that is how
16 compliance has been demonstrated, yes.

17 MS. MILLER: Okay. When doing the noise
18 study was there any consideration for the impact
19 of the operation of the plant from the sense of
20 the flora and fauna that's in around the Quinebaug
21 River?

22 THE WITNESS (Gresock): The compliance
23 standard that has been applied is the sound level
24 that has been established by the local and state
25 regulations.

1 MS. MILLER: To your knowledge in the
2 environmental work that you do is there any impact
3 that could differ for more sets of organisms than
4 humans such as salamanders, for example? Or does
5 the noise impact everyone the same?

6 THE WITNESS (Gresock): In my -- in my
7 experience I would expect that during construction
8 some of the local species will move away from the
9 construction area due to the sound, but in my
10 experience at these facilities typically the areas
11 immediately surrounding them repopulate following
12 construction.

13 MS. MILLER: One of the things that you
14 mentioned was there's going to be a buffer of
15 trees, I believe, of 50 feet from the property
16 lines. Is that all of the property lines, or just
17 certain areas of the perimeter?

18 THE WITNESS (Gresock): It will be around
19 most, most of the -- the perimeter. Obviously
20 there won't be a buffer where the access drives
21 will be, but the plan is to have a 50 feet of tree
22 vegetation around all the rest of the property.

23 MS. MILLER: Will that be trees that are
24 retained, or will new trees be planted?

25 THE WITNESS (Gresock): It will depend.

1 Where we can we'll -- we'll leave the trees in
2 place, but there may be a need for construction
3 logistics to clear and then replant.

4 MS. MILLER: If they are replanted what do
5 you expect the height of the trees will be?

6 THE WITNESS (Gresock): I don't think we've
7 given any thought to what height they would be at
8 planting, but --

9 THE WITNESS (Rega): Yeah, we have not
10 thought about that detail.

11 MS. MILLER: The noise report, I just
12 realized I missed one thing. It indicated there
13 would be three years of construction. It was an
14 estimate, but seven days a week for three years.

15 Do you expect there will be peaks and
16 valleys in that?

17 THE WITNESS (Gresock): Construction sound
18 levels always have variable sounds. Certainly
19 every phase of construction has different
20 equipment requirements and different levels of
21 activity.

22 MS. MILLER: And do you still expect that to
23 be a good level estimate, the seven days a week
24 for three years.

25 THE WITNESS (Gresock): It certainly

1 represents a possible, yes.

2 THE WITNESS (Rega): It's certainly an
3 outside boundary. The initial plan going in
4 certainly will not be seven days a week. You
5 know, our contractor would really just prefer to
6 work five days a week. You know, they don't want
7 to work a lot of overtime. They don't want to
8 work weekends either.

9 So if everything stays on track we would
10 expect five, five days a week -- in our
11 construction schedule is something less than the
12 three years as well, so that is an outside
13 boundary.

14 THE WITNESS (Gresock): But we definitely
15 wanted to reflect that there are times that in
16 order to catch up with work it can make sense
17 to -- to work extra days.

18 MS. MILLER: And in terms of the construction
19 noise, there haven't been determinations of the
20 peak levels. Say, during blasting, you said that
21 was one of the loudest things?

22 THE WITNESS (Rega): In terms of the noise
23 level itself? I don't have that information.

24 THE WITNESS (Gresock): Yeah, we -- we have
25 not specifically calculated that.

1 MS. MILLER: So shifting gears a bit,
2 Mr. Eves, I believe you had suggested that NTE
3 would add new control technologies to KEC if they
4 become available to deal with the greenhouse gas
5 issues?

6 THE WITNESS (Eves): Right.

7 MS. MILLER: Now when you were seeking
8 approval for KEC's minimum bid price in the most
9 recent forward capacity auction did you take any
10 of those potential add-on technologies into
11 account?

12 THE WITNESS (Eves): Well, as we do the
13 modeling, our financial modeling out over a
14 20-year life we, of course, put money in their
15 capital funds for improvements and -- and working
16 capital and those things.

17 So I would -- for a specific technology,
18 no, but there's definitely a pot of money in there
19 to -- in our budgets to keep the -- the facility
20 running and upgraded as improvements come along.

21 MS. MILLER: And in terms of the technologies
22 themselves, were you expressing just confidence
23 that they would be developed? Or did you have
24 anything specifically in mind that might be -- you
25 think might work well with the Mitsubishi models?

1 THE WITNESS (Eves): Just confidence they
2 will with the -- with the fallback position as we
3 get later in the period that can buy offsets.

4 MS. MILLER: With regard to that auction, are
5 you aware that there are now four current capacity
6 suppliers protesting the results?

7 THE WITNESS (Eves): Yes, at FERC.

8 MS. MILLER: Right, at FERC. Yes, at FERC.

9 In that auction unless you can make an
10 additional showing on new units such as KEC, it
11 would be subject to a floor bid price. Correct?

12 THE WITNESS (Eves): That's correct.

13 MS. MILLER: And the floor bid price is \$8.19
14 per kilowatt month. Or is it something else? You
15 are shaking your head. So you award my bid?

16 THE WITNESS (Eves): No, it's -- no. They
17 set -- they set a price that if you're that type
18 of resource you can bid at that price. If you
19 want to bid lower than that price then you have to
20 go through the approval process, which is like, I
21 don't know, a three or four-month process where we
22 submit all of our cost estimates, our revenue
23 estimates.

24 We go through the -- the whole operating
25 history financially of expectations for the

1 project. We go through a schedule. The IMM, the
2 independent market monitor looks at our -- the
3 technology that we're considering using. So they
4 do, you know, through that three or four-month
5 period they do quite an evaluation before they
6 approve us.

7 And they're really approving two things.
8 One, is it likely that we can meet the capacity
9 supply obligation in-service date, which for us is
10 June 1, 2022. And two, that we're -- that they,
11 they are approving a minimum offer price which is
12 lower than the \$8.19 so that we specifically
13 can -- can bid down to. So they approve a price
14 and a schedule.

15 I mean, there, what the IMM is trying to
16 do is make sure that nobody comes into the auction
17 that's going to, you know, alter the results of
18 the auction without realistically having an
19 opportunity to, you know, to build it at -- at a
20 good price or on a reasonable schedule.

21 MS. MILLER: And so you went through that
22 process for KEC and cleared at \$3.80?

23 THE WITNESS (Eves): Yes.

24 MS. MILLER: Mr. Hesketh?

25 MR. BALDWIN: He's not here today.

1 MS. MILLER: Well, it may actually be
2 questions specifically for him, but they're kind
3 of general. So hopefully someone can answer. I'm
4 just going to ask the panel.

5 Poor guy. He's been waiting to answer a
6 question for the past couple of hearings.

7 So it looks like it was the update for
8 this round of hearings, was that the number of
9 workers was increased to 450 workers during the
10 construction of the project. The reasoning for
11 that was that simply NTE's experience on other
12 projects indicated.

13 So could someone establish kind of what
14 that experience was to cause the increase of what
15 I believe was a hundred employees?

16 THE WITNESS (Eves): Right. So we have two
17 other projects that we've developed, built and are
18 now in -- in operation. One of them is in
19 Middletown, Ohio, and was built by union labor.
20 And was really based on our -- and a very
21 comparable facility to what we're proposing here.
22 And it was based on that experience that we
23 increased that, that craft quantity on site.

24 MS. MILLER: Okay. And that was for the peak
25 construction?

1 THE WITNESS (Eves): Yes.

2 MS. MILLER: How long is the construction in
3 terms of months?

4 THE WITNESS (Rega): A few months.

5 MS. MILLER: And is that, like, a few months
6 at the beginning of the project? Or just kind of
7 a few months of random throughout the project?

8 THE WITNESS (Rega): No, no. It's more in
9 the middle of the project.

10 MS. MILLER: The middle of the project?

11 THE WITNESS (Rega): Yes.

12 MS. MILLER: How close are other months to
13 peak months? So we're talking about three years.
14 We have, say, three months that are peak. What
15 about the other months?

16 THE WITNESS (Rega): I mean, I don't have a
17 curve year, but it -- but it constantly changes.
18 I mean, every month is a little bit different
19 depending on the activities that -- that are
20 occurring on site.

21 You know, initially I would say it
22 starts off pretty low, but it is somewhat of a
23 bell curve, I suppose, if you sort of picture it
24 that way. With -- yeah, that peak construction
25 happening at the beginning when -- when most of

1 the activities of erecting the major equipment are
2 going up. Toward the end that does tail off and
3 as we get to commissioning time, obviously, which
4 is, you know, the last nine months or so of the
5 project. There's significantly less people on
6 site.

7 MS. MILLER: Okay. It looked as though from
8 the report that this increase to 450 workers would
9 also increase the peak hour traffic volume to 495
10 trips. Correct?

11 THE WITNESS (Rega): I'll take your word for
12 it. Yeah, I don't have that in front of me.

13 MR. BALDWIN: What report are you talking
14 about?

15 MS. MILLER: I don't remember what you called
16 it. This updated report, the environmental
17 overview in support of petition for changed
18 conditions.

19 Yeah, so that's actually what I was
20 wondering because I wasn't sure. What is the
21 current number of trips? What is 495 being
22 compared to?

23 THE WITNESS (Gresock): So the original
24 report projected a total of 385 trips during the
25 morning and afternoon peak hours during the

1 construction period.

2 MS. MILLER: Do you know what they are now
3 when there is no construction going on?

4 THE WITNESS (Gresock): Oh, so this estimate
5 is not existing traffic on the roadways. This is
6 the added traffic to the roadways.

7 MS. MILLER: Right, but so he did make a
8 conclusion that it would add an 18-second delay.
9 So I assume it's 18 seconds in comparison to right
10 now. That was my assumption.

11 THE WITNESS (Gresock): So there is detailed
12 information in both the original report and I
13 believe in the update as well about the background
14 traffic data. I'm looking at the original report
15 right now and, for example, there's an average
16 daily traffic of -- at Attawaugan Crossing Road,
17 east of Tracy Road of 9,200 vehicles.

18 And that reflects a morning peak hour
19 volume of 773 vehicles around 7 a.m. and an
20 afternoon peak hour volume of 927 vehicles at
21 about 3 p.m.

22 MS. MILLER: So if we are suspecting that at
23 least some of those vehicles are very close to
24 where the additional trips will be coming, it will
25 be, say, that in addition to the 700 and some odd

1 vehicles currently on the road?

2 THE WITNESS (Gresock): So Mr. Hesketh's
3 analysis would have Incorporated the existing
4 usage -- usage of the road projected into the
5 future period of time, and would also have added
6 the project's peak trips to that analysis. That's
7 correct.

8 MS. MILLER: So I was surprised by the delay
9 of 18 seconds given that that he also said there
10 would be a 70-foot queue. Do you have any
11 thoughts on how he came to that conclusion based
12 on -- I also read through the appendix, but I'm
13 not a traffic expert by any means.

14 THE WITNESS (Gresock): I -- I don't have
15 specifics on that. I -- I do know that there is
16 very standard traffic methodology. And also I do
17 know that the analysis he presented doesn't take
18 into account some of the manual control measures
19 that -- that we expect to be using during --
20 during peak delivery time periods.

21 So for example, I think we all
22 experience construction activities going on where
23 there's manual control by a police officer or
24 others allowing certain pent up traffic and -- and
25 directions to go forward.

1 And really the goal for construction
2 like this is to try to minimize the effect on the
3 existing road users to the greatest extent
4 possible. So trying to time the -- the peak
5 activities associated with the project so that
6 they are -- are not within the peak time of
7 existing roadway usage would be a goal, and then
8 also, of course, using such measures as manual
9 control.

10 MS. MILLER: Do you anticipate that peak
11 construction -- well, I guess what's called your
12 peak hour traffic volume, the 495 trips which I
13 think is associated with people coming to the site
14 to do construction of the site, do you anticipate
15 that overlapping with the road construction that
16 would be going on?

17 THE WITNESS (Gresock): No. I mean, as Chris
18 mentioned, the peak -- the peak construction and
19 peak activity on the site occurs much later in the
20 construction timeline.

21 We are anticipating that some of the
22 earlier site preparation and clearing activities
23 may occur prior to the road improvements, but
24 certainly the -- the geometrical improvements of
25 the road are -- are intended to be very early in

1 the construction process.

2 MS. MILLER: Okay. Do you know how he took
3 the railroad crossing at Lake Road into account?
4 Can you tell that from his study?

5 And I ask that, because as I do recall
6 this is back up just from being off a railroad
7 crossing.

8 MR. BALDWIN: Is that your testimony,
9 Ms. Miller?

10 MS. MILLER: I did notice it the other day.
11 But no, I'm not testifying.

12 THE WITNESS (Gresock): He does note in the
13 original report that the train crossings are
14 infrequent with two to three crossings a day. He
15 does note that external intersection approaches
16 are stopped at that time, and certainly notes that
17 when a train crossing occurs the intersection
18 might take two or three cycle lengths to return to
19 normal operations.

20 That is not, I don't believe, reflected
21 directly in his analysis, but it is obviously a
22 characteristic of the setting that will be a
23 factor in planning for project activities.

24 MS. MILLER: Mr. Hesketh came to a few
25 conclusions where he said there was no significant

1 impact. Do you know how he is defining
2 significant impact? Is that just statistically
3 significant or does it mean something else?

4 THE WITNESS (Gresock): There are very well
5 defined metrics in -- in transportation analysis
6 that relate to level of service and level of
7 service at signalized and un-signalized
8 intersections, are defined in different ways.

9 My recollection of his analysis was that
10 there was very little change for the majority of
11 the intersections as compared to -- as compared to
12 activities with -- without the construction peak
13 traffic.

14 MS. MILLER: I believe one of the times he
15 spoke of significant impact in the report looks
16 like it had to do with the potential ULSD
17 delivery, which we have determined for these
18 hearings is not actually two trucks an hour, but
19 more.

20 Do you know if he reran his tests to
21 determine if it's still not significantly --

22 THE WITNESS (Gresock): Well, we do know that
23 even -- even if it's considerably more than that
24 it's -- it's less than the peak construction
25 traffic.

1 So I know that Mr. Hesketh has continued
2 to express his confidence that even with increased
3 truck deliveries over the course of an hour, and
4 even with the potential for oil deliveries at, for
5 example, the Lake Road facility that's nearby,
6 that he would continue to maintain that level of
7 service would be acceptable.

8 MS. MILLER: One of the other things that is
9 noted associated with traffic -- and this, I'm
10 looking again at the environmental overview in
11 support of petition for change conditions. On
12 page 22 there's a note that NTE is working with
13 the Town to improve the roadway geometry.

14 I'm just looking for a status update on
15 that work and whether or not it's a reference to
16 the conceptual design that was approved in October
17 of 2016, or stuff has happened in the few years
18 that have passed since then.

19 THE WITNESS (Eves): No, that's -- that's it,
20 the conceptual design that's been approved.

21 MS. MILLER: Okay.

22 Mr. Eves, I don't recall which of the
23 hearings it was at, but I believe you had said
24 that you had been encouraging your contractor to
25 use union work for the project?

1 THE WITNESS (Eves): Yes.

2 MS. MILLER: But at this --

3 THE WITNESS (Eves): Can I? I don't think we
4 said, encouraging. We are requiring our
5 contractor to use union work.

6 MS. MILLER: You are requiring your
7 contractor?

8 THE WITNESS (Eves): Yes, yeah.

9 MS. MILLER: But you, I think you also said
10 there was no project labor agreement in place. Is
11 that still the case?

12 THE WITNESS (Eves): That is the case. I
13 mean, for every project -- so there's a number of
14 ways that contractors can work with unions, under
15 national agreements or under specific agreements
16 related to a project, which they would negotiate
17 with the unions when the project started, or just
18 prior to the work commencing.

19 Because we hadn't selected and have
20 still not finished selecting our contractor we
21 didn't want to make a commitment on what kind of
22 an agreement they would use with the unions. So
23 we have -- we have been upfront with the unions
24 from the beginning that this will be a union
25 project, but we're going to have to leave the

1 determination on exactly what the contractual
2 arrangement is between them, to be between the
3 unions and our contractor.

4 MS. MILLER: If you do select a contractor
5 and they decide not to enter an agreement with a
6 union or try to use some nonunion workers would
7 you drop the contractor?

8 THE WITNESS (Eves): That was part of our
9 review process, and we are not going to use a
10 contractor who does not use union labor.

11 MS. MILLER: Okay.

12 And just to confirm, that's completely
13 union labor for construction, or just partially?

14 THE WITNESS (Eves): Well, this is -- it's
15 going to be completely a union job. Now will
16 there be specific little pieces here and there
17 that would not be union? I can't -- I can't
18 answer that, but this is going to be a union. I
19 mean, when you think of a typical union job this
20 is -- this is going to be a union job.

21 MS. MILLER: Okay. I have no further
22 questions.

23 THE HEARING OFFICER: Thank you, Attorney
24 Miller.

25 I'd like to continue cross-examination

1 by the Town of Killingly.

2 MS. CATINO: Thank you. For the record my
3 name is Ann Catino. I'm Counsel for the Town of
4 Killingly with the law firm of Halloran & Sage.
5 Good afternoon.

6 During my cross I would like to make
7 reference to the April 11, 2019 town exhibit. It
8 was, I believe, the prefiled testimony of
9 Ms. Calorio. It is the update, the town IWWC and
10 PZC update to the order of regulations and
11 restrictions.

12 Are you familiar with the document?

13 THE WITNESS (Eves): Yes, ma'am.

14 MS. CATINO: And have you reviewed it
15 recently?

16 THE WITNESS (Eves): Yes.

17 MS. CATINO: Generally speaking I would say
18 there's probably three categories of responses in
19 the document, those in which you accept the
20 conditions that have been imposed by the Town,
21 those that you accept an appeal, and then there's
22 also the category where you're appealing, there is
23 the appeal that you have made. And those are
24 largely nine of them. Is that correct?

25 THE WITNESS (Eves): In there, to their prior

1 regulate and restrict orders --

2 MS. CATINO: Yes.

3 THE WITNESS (Eves): -- prior to the
4 April 11th document.

5 MS. CATINO: Yes?

6 THE WITNESS (Eves): Right, I agree.

7 MS. CATINO: Okay. So for the ones in
8 Ms. Calorio's update in the document there's a
9 number of them that you had previously accepted?

10 THE WITNESS (Eves): Correct.

11 MS. CATINO: And do those conditions remain
12 acceptable to NTE today?

13 THE WITNESS (Eves): Yes.

14 MS. CATINO: And are you willing to follow
15 the explanation provided to the extent that you
16 did provide an explanation for each of the
17 acceptable conditions?

18 THE WITNESS (Eves): Yes, yes.

19 MS. CATINO: Thank you. And when the Town
20 says that future actions and some future
21 submissions may be required, are you in agreement
22 that you will provide and respond to the Town as
23 to those future actions?

24 THE WITNESS (Eves): Yes.

25 MS. CATINO: In some of the responses you

1 have indicated -- and again putting aside the
2 nine, you've accepted them, but you've appealed.
3 And it appears from the responses that the Town
4 and NTE have reached an accommodation?

5 THE WITNESS (Eves): That's correct.

6 MS. CATINO: And --

7 THE WITNESS (Eves): Just -- just to be
8 clear, so originally there were nine regulate and
9 restrict orders that we flat out appealed. After
10 our response, after Mr. Stopper's review, you
11 know, we still have some that were appealed in
12 part and accepted in part. And we had one that
13 was appealed. So prior there that were nine that
14 were appealed straight out.

15 After Mr. Stopper's review there were
16 nine total. There was one appealed straight out,
17 and there were eight that were accepted in part
18 and appealed in part. So just to make sure we're
19 clear on the nine.

20 MS. CATINO: Sure. No, it is a little
21 confusing, but we were going to specifically talk
22 about the nine.

23 But I just -- what I want to make sure
24 is that for purposes of the record you are
25 standing behind all of the commitments that have

1 been referenced, and you are willing to provide
2 additional documentation to the Town?

3 THE WITNESS (Eves): Yes.

4 MS. CATINO: Okay. So moving onto the nine,
5 I think you referenced that there was a meeting
6 last week with town representatives?

7 THE WITNESS (Eves): Yes.

8 MS. CATINO: And during that meeting did you
9 go over each of the various conditions and --
10 issues, rather, that each of the appeals
11 presented?

12 THE WITNESS (Eves): Yes, we went over the
13 nine plus the one additional.

14 MS. CATINO: And the one additional, nine
15 plus one.

16 And I think that Ms. Miller listed some
17 summaries from you regarding IWWC-7, PZC-7,
18 PZC-10, and PZC-11. And those were relating to
19 the installation of gas and water lines during
20 construction?

21 THE WITNESS (Eves): And that coordinated
22 construction schedule, yes.

23 MS. CATINO: And have you submitted a
24 construction schedule to the Town?

25 THE WITNESS (Eves): We -- we have definitely

1 discussed the scheduling and we've provided, kind
2 of let's call it, a generic construction schedule,
3 all the -- that it has months in it, that maybe
4 those months are plus or minus two months here or
5 there that we will definitely work through and
6 coordinate with the Town as we move on with this
7 project, if we move on with the project.

8 MS. CATINO: Sure. Thank you. You answered
9 my question. If you're willing to work through
10 the schedule with the Town and be responsive to
11 their needs?

12 THE WITNESS (Eves): Yes, we will.

13 MS. CATINO: Okay. And there was discussion
14 that the Town had requested and you had agreed to
15 provide a decommissioning bond that the Town can
16 draw upon?

17 THE WITNESS (Eves): Yes.

18 MS. CATINO: And that's -- what's the purpose
19 of the decommissioning bond?

20 THE WITNESS (Eves): Another thing that come
21 up in discussions with the town council is we
22 negotiated the tax and CEBA agreements. The idea
23 was that if something were to happen and we were
24 to disappear, and there was a partially built or a
25 fully built nonoperational facility sitting there,

1 that the town would have some money to draw on
2 to -- to remove whatever was there, and that's the
3 purpose of the bond. If we were to disappear then
4 the Town could drawn on that bond to -- to remove
5 whatever we had put in.

6 MS. CATINO: And would you be willing to
7 amend and modify the community environmental
8 benefits agreement to clearly state that such a
9 bond would be provided and drawn upon, as you have
10 just indicated?

11 THE WITNESS (Eves): Yes, I would say we
12 would be happy to clarify in the community
13 environmental benefit agreement that that drawn --
14 that bond can be drawn on prior to commercial
15 operation.

16 MS. CATINO: You had also referenced that you
17 were going to have and rely upon third parties to
18 install the gas and water lines. Is that correct?

19 THE WITNESS (Eves): Yes. Yes.

20 MS. CATINO: Are you going to have them post
21 bonds performance and payment bonds as -- or are
22 they --

23 THE WITNESS (Eves): I would say if that's
24 part of the Town's process, then they absolutely
25 will post bonds. They -- they will follow the

1 Town's process in getting the permits they need
2 and submitting bonds.

3 MS. CATINO: So you would be requiring these,
4 I'll call them vendors, but these third
5 parties who are doing this work to adhere to all
6 the Town's usual and customary requirements for
7 the installation in the roads -- of the utilities
8 in the roads, and that work that would be
9 performed in the roads?

10 THE WITNESS (Eves): Yes.

11 And just to be clear, I mean, the two
12 that we're talking about are pretty sizable
13 utilities, Eversource and Connecticut Water
14 Company.

15 MS. CATINO: And from a general sequencing
16 standpoint is it your position that the water
17 piping insulation can be completed prior to the
18 operation of the project?

19 THE WITNESS (Eves): Yes.

20 MS. CATINO: Okay. And that's acceptable as
21 well to DPH and DEEP as far as you understand?

22 THE WITNESS (Eves): As far as I understand.

23 MS. CATINO: Are you looking to commence
24 construction of the project before the issuance of
25 all the permits for these, of these gas and water

1 lines?

2 THE WITNESS (Eves): Yes.

3 MS. CATINO: And what would you be looking to
4 do?

5 THE WITNESS (Eves): We'd begin with the, as
6 Chris was talking about, the clearing, the civil
7 work on site. We -- when the -- our contractor
8 has -- has all of the road approvals that it needs
9 from the Town, we'd like to get that roadwork
10 done. And we'd like to coordinate the
11 installation of the water pipes and the sewer
12 pipes with the road construction so we can put it
13 all in at the same time.

14 MS. CATINO: Okay. Would there be anything
15 else?

16 THE WITNESS (Eves): We might -- depending on
17 the permitting for the gas pipe we might start
18 some piling activity prior to a permit on the --
19 on the gas pipe, but I would say that's -- that
20 would be about it.

21 MS. CATINO: But if you were to do anything
22 else, would it be your intent to sit down with the
23 Town and discuss what it is you were planning on
24 doing?

25 THE WITNESS (Eves): Yes. I'd just like to

1 say we, you know, we've been here maybe three
2 years and we communicate with the -- the town
3 staff frequently. I don't see anything causing
4 that to change.

5 MS. CATINO: I'd like to talk about the
6 roadwork and Lake Road a little bit. Could you
7 just describe the plans that you are proposing,
8 you propose to the Town in order to manage and
9 address safety considerations on Lake Road during
10 these construction activities?

11 THE WITNESS (Eves): What we'll do is
12 have our -- our road contractor work with the Town
13 on that. I would imagine it's going to include,
14 you know, proper signage, police if necessary,
15 flagmen, but whatever we -- whatever our road
16 contractor discussed with the Town will be the --
17 the steps that we implement to make sure that that
18 work is done safely.

19 MS. CATINO: And the associated road widening
20 on Lake Road, when is that planned?

21 THE WITNESS (Eves): We'd like to get that
22 done as early as possible. I would think we'd
23 probably get started on that if, you know,
24 depending on the -- I would say that hopefully we
25 would get started on the -- the roadwork early in

1 the process, maybe in the first or two.

2 MS. CATINO: And there's a turn of -- I'll
3 call it, sort of a sharp turn at the site. What
4 are your plans to address the sharp turn?

5 THE WITNESS (Eves): So as you -- as you're
6 heading southeast on Lake Road coming up to Forbes
7 Road, which is the entrance to the Walgreens
8 warehouse there, there's curb edge on both sides
9 of the road. When you pass Forbes Road the curb
10 that -- the curb disappears and the road narrows
11 on the south side.

12 So we are working with Walgreens to
13 obtain a strip of land along the south side of the
14 road. Then we're working with Eversource to
15 obtain rights to property underneath the
16 transmission lines on the Eversource property.

17 Now once you get to the other side of
18 the Eversource property that would be land that we
19 currently have under option that we would
20 purchase. So our intention would be to widen the
21 road in those areas on the Walgreens land, on the
22 evergreen -- on the Eversource land and on our
23 land around the two curves there, and turn -- turn
24 that, the rights to that land, the ownership of
25 that land and the road over to the Town.

1 MS. CATINO: And during the construction
2 activities and the widening are you also improving
3 the turning radius?

4 THE WITNESS (Eves): Yes, that turning radius
5 will be softened.

6 MS. CATINO: Okay. And how about sightlines
7 for oncoming traffic?

8 THE WITNESS (Eves): I know that's been part
9 of the design work.

10 MS. CATINO: And will you be completing a
11 study at the conclusion, or prior to the roadwork
12 being performed that identifies any of the
13 improvements to the sightlines of the turn radii?

14 THE WITNESS (Eves): Yeah, we think that's
15 already been part of the design. But again,
16 that's something we would be happy to sit down
17 with -- the Town with before our work begins to
18 talk about what -- what are on the plans for the
19 road.

20 MS. CATINO: Great. And you had indicated, I
21 believe, in response to Ms. Miller's
22 cross-examination of you that there was a concern
23 that if there was an issue regarding
24 noncompliance, that there was a concern that the
25 Town would shut down the entire project. Is that

1 accurate?

2 THE WITNESS (Eves): That was our concern.

3 MS. CATINO: Okay. And has that concern been
4 resolved?

5 THE WITNESS (Eves): Yes.

6 MS. CATINO: And how has it been resolved?

7 THE WITNESS (Eves): Now we -- we've agreed
8 with the Town that we would put a protocol in
9 place in the event of a situation that they would
10 like to, you know, that it's creating an unsafe
11 condition or whatever. And if we don't resolve it
12 according to our protocol, which will have
13 timelines in it. So if it's a significant issue
14 there will be a very short timeline to rectify it.

15 And if we don't rectify it according to
16 our protocol then the Town will have the right to
17 shut down that portion of activity that's creating
18 an unsafe situation for its -- its residents.

19 MS. CATINO: Okay. And as far as PZC-18, '19
20 and '20 regarding the road concerns that the Town
21 had raised, and that was subject to further
22 discussions, again just to confirm. You are
23 certainly willing to, it sounds like, work with
24 the Town further in order to address their
25 concerns?

1 THE WITNESS (Eves): That's correct.

2 MS. CATINO: Thank you. As far as PZC-27
3 relating to inspections, will NTE, either itself
4 or through its contractor, agree to apply to the
5 Town for the required building permits for the
6 building and structures at an appropriate time in
7 the construction sequence?

8 THE WITNESS (Eves): Yes.

9 MS. CATINO: And will you agree that the Town
10 is responsible for conducting inspection on the
11 work for which it issued the building permits?

12 THE WITNESS (Eves): Yes.

13 MS. CATINO: And again, will you agree that
14 the inspections will occur in accordance with the
15 schedule that has been set forth between the Town
16 and the NTE --

17 THE WITNESS (Eves): Yes, yes.

18 MS. CATINO: -- for such inspections. Okay.
19 And will NTE reimburse the Town for the cost of
20 such inspections?

21 THE WITNESS (Eves): Yes.

22 MS. CATINO: For PZC-43, which was another
23 one under appeal that had to do with additional
24 analysis regarding effective air emissions on
25 sensitive receptors; will NTE be providing an

1 annual payment under the Town's community benefits
2 agreement for asthma respiratory illness
3 assistance fund, to provide funding for
4 unreimbursed medical costs associated with asthma
5 and respiratory illnesses and to fund asthma
6 research?

7 THE WITNESS (Eves): Yes, and that is
8 verbatim from the community environmental benefit
9 agreements.

10 MS. CATINO: Right. I think we had the nine.
11 Now we'll go to the plus one, the sound
12 attenuation alternatives.

13 Generally speaking at what point in the
14 schedule will you be performing a more
15 comprehensive sound abatement analysis?

16 THE WITNESS (Eves): We -- we are in the
17 process of doing that right now.

18 MS. CATINO: And will no work been commenced
19 until this work has been performed in the D and M
20 plan submitted to the Council?

21 THE WITNESS (Eves): Well, the D and M plan
22 will probably -- probably be submitted in phases.
23 The first phase would have to do most likely with
24 tree clearing and civil work. And they have to,
25 you know, a subsequent phase would include the

1 actual design of the facility.

2 We will not do any work on the design --
3 on the construction of that facility or the sound
4 walls until the appropriate D and M plan has been
5 submitted and approved.

6 MS. CATINO: And will you simultaneously
7 submit the D and M plan to the Town for its review
8 at the same time it submits it to the Siting
9 Council?

10 THE WITNESS (Eves): Yes, but I think we've
11 actually made a different commitment on the sound,
12 that prior to submitting the D and M plan we will
13 sit down with the Town and -- and go through with
14 them what we considered in the design of the sound
15 abatement and what we've determined in our opinion
16 to be the best approach.

17 So the Town will have some input prior
18 to us submitting that D and M plan that would
19 include sound abatement procedures.

20 MS. CATINO: Will you be providing
21 alternatives to the Town as far as a variety of
22 sound abatement possibilities?

23 THE WITNESS (Eves): We will, in a word I
24 would say no, but what we -- I mean, this is --
25 this is a big design effort to come up with sound

1 abatement. So our intention would be to sit down
2 with the Town and go through everything that we've
3 considered, the various alternatives that we've
4 looked at and evaluated.

5 If there's something that we've
6 overlooked I'm sure that we can -- we can
7 accommodate input from the Town at that, at that
8 time.

9 MS. CATINO: And are you relying upon the
10 sound contractor to provide a guarantee that the
11 sound levels from the facility will meet the state
12 and local noise ordinances?

13 THE WITNESS (Eves): The -- it's actually
14 our -- our building contractor, our EPC provider,
15 which again stands for engineer procured construct
16 contractor. They are the ones that will providing
17 the sound guaranty. They will be the ones that
18 design how we abate the noise.

19 MS. CATINO: And they will be liable to you
20 to ensure that the sound attenuation plan is
21 appropriate and meets the standards?

22 THE WITNESS (Eves): That's correct. So
23 there's a number of guarantees, some guarantees
24 they can resolve by the payment of liquidated
25 damage. Other guarantees we don't accept final

1 completion without them meeting the guarantee. So
2 this is -- this is a guarantee that cannot be
3 liquidated, damaged around. This is a guarantee
4 that they must meet.

5 MR. BALDWIN: I'd also point out that in all
6 likelihood this type of requirement will be a
7 condition of any approval that this Council issues
8 to the project.

9 So in addition to our obligations to the
10 Town, we've got an obligation to the Siting
11 Council to comply with those conditions.

12 MS. CATINO: Thank you.

13 I have nothing further. Thank you.

14 THE HEARING OFFICER: Thank you, Counselor.
15 At this point why don't we break for lunch. I
16 figure about 45 minutes, and resume back here at
17 1:50.

18 Thank you.

19
20 (Whereupon, a recess was taken from 1:20
21 p.m. to 1:52 p.m.)

22
23 THE HEARING OFFICER: Ladies and gentlemen,
24 I'd like to call the meeting back to order. It's
25 approximately 1:50 in the afternoon.

1 Attorneys for Sierra Club and
2 Connecticut Fund For the Environment, both of you
3 folks finished cross-examination back on
4 April 18th, however I'm going to allow you the
5 opportunity to question the applicant, but it's
6 strictly limited to what may have occurred at the
7 meeting between the applicant and the Town, should
8 you have any questions.

9 MR. BERMAN: I have no questions.

10 MS. FIEDLER: I have no questions.

11 THE HEARING OFFICER: Very good. Thank you
12 very much.

13 At this point I'd like to begin
14 cross-examination beginning with Council staff.

15 Mr. Perrone?

16 MR. PERRONE: Thank you, Mr. Silvestri.

17 On February 28, 2019, ISO New England
18 filed its it's FCA-13 results with FERC. Does NTE
19 know the status of FERC's review?

20 THE WITNESS (Eves): Yes, as far as I
21 understand it's ongoing.

22 MR. PERRONE: And that filing with FERC,
23 appendix A has all the plants that cleared the
24 auction. For KEC is it correct to say that your
25 CSO is for 632 megawatts?

1 THE WITNESS (Eves): I believe, Mike, it's
2 631 megawatts. It might be 631-point something.

3 MR. PERRONE: And in the first set of
4 interrogatories there was a table of megawatts for
5 the plant. And my question was, why is the power
6 output considerably lower for the CTG under ULSD
7 conditions? And that would be response to council
8 interrogatory eight.

9 THE WITNESS (Rega): I do. I do have that.

10 Yes, generally speaking, you know, I'm
11 certainly not a combustion engineer, but -- but
12 those, that is the performance that is available
13 from Mitsubishi. I think it's fairly typical
14 between different technologies that they do -- or
15 that they are able to produce less output under
16 ULSD than they are for a gas-fired operation.

17 I -- I can't tell you the reasons for
18 that, but -- but that is the -- the performance
19 that comes from the manufacturer.

20 MR. PERRONE: Because at the bottom of the
21 table we have net output. For ULSD it's in the
22 400-megawatt range. My question is, if you have a
23 forced outage of gas during the summer, let's say,
24 during summertime you had to switch to ULSD would
25 your power output still be high enough to meet

1 your commitment to ISO?

2 THE WITNESS (Eves): No. If -- if we were --
3 if we were called on for 631 megawatts and we
4 could only produce 400 we would be at risk for the
5 other 231. We would either need to cover that in
6 the market or pay a penalty.

7 MR. PERRONE: On page 8 of the Synapse report
8 there's a footnote at the bottom, number 6, which
9 mentions the Burrillville unit in Rhode Island
10 where a CSO was terminated by ISO.

11 Hypothetically, if your project is
12 approved by the Council but for whatever reason
13 the CSO is subsequently terminated by ISO, would
14 you still construct the facility?

15 THE WITNESS (Eves): The answer would be no.

16 MR. PERRONE: Also on the auction topic, I
17 understand the clearing price was \$3.80. Would
18 that price stand for the full seven years?

19 THE WITNESS (Eves): Yes.

20 MR. PERRONE: And in the Docket 470 findings
21 of fact, being that KEC didn't clear the auction
22 the first time there was discussion about annual
23 reconfiguration auctions. Would those not be
24 applicable here?

25 THE WITNESS (Eves): Those would not be

1 applicable here, because the complete output of
2 our facility cleared the auction.

3 MR. PERRONE: Mr. Hibbard, on page 32 of your
4 prefiled you were asked if clearing the FCM is the
5 only indicator that a resource is a necessary and
6 economic contributor to the state and the region's
7 needs, and your answer to that was no.

8 In your opinion would securing a CSO be
9 sufficient but not necessary to demonstrate
10 necessity for reliability?

11 THE WITNESS (Hibbard): Yes, that's exactly
12 right.

13 MR. PERRONE: It's also correct to say that
14 KEC would not be a quick-start resource?

15 THE WITNESS (Hibbard): To the extent
16 quick-start resource is an ISO definition related
17 to the provision of 30-minute reserves, I think
18 the answer is no.

19 MR. PERRONE: Page 9 of the Synapse report,
20 approximately line 13, it states that the firm gas
21 contract does not necessarily increase the amount
22 of gas that would otherwise be available to the
23 region. Is that correct?

24 THE WITNESS (Hibbard): In my opinion it's
25 not correct. And remember the context for this

1 discussion is, how does it affect the ability of
2 the region to meet the winter supply reliability
3 need?

4 So on those winter days when gas to the
5 region is constrained the firm natural gas
6 transportation contract in my view would be
7 leading to the additional gas being delivered into
8 New England above and beyond what it otherwise
9 would.

10 MR. PERRONE: Also continuing on that topic
11 it mentions that the firm gas contract would not
12 lower the winter gas price. Is that also correct?

13 THE WITNESS (Hibbard): You know, it's hard
14 to say without running some sort of a model. It's
15 not -- I think it would be difficult to -- to
16 imagine exactly what the impact would be. I think
17 to the extent there's additional gas coming into
18 New England that otherwise would not come in, it
19 could have a suppressing impact on prices.

20 MR. PERRONE: And the last one on that topic
21 also mentions that the firm gas contract does not
22 guarantee that KEC would always operate on gas
23 during the most extreme winter periods.

24 Is that correct?

25 THE WITNESS (Hibbard): No, I don't think

1 that's correct. I think that pursuant to the --
2 the commitments KEC has made it will only operate
3 on oil under some sort of contingency or system
4 failure conditions, but that otherwise 365 days
5 per year it can operate on gas.

6 MR. PERRONE: And lastly, I had asked before
7 just to finish up on that spitting reserves topic.
8 In the RSP on page 54, ISO says synchronized,
9 i.e., spinning operating reserves are online
10 resources that can increase output.

11 So under ISO does it have to be
12 synchronized to be considered a spinning reserve?

13 THE WITNESS (Hibbard): There are multiple
14 types of reserves. And I -- I recall at the first
15 hearing that we had there was a brief discussion
16 about this.

17 To the extent KEC is online and
18 operating and connected to the grid it can provide
19 spinning reserves. That's an economic decision
20 made by ISO on an hour-by-hour basis throughout
21 the day. So if it wants KEC to provide spinning
22 reserves it would back down the economic output of
23 the unit to provide those reserves.

24 MR. PERRONE: Page 9 of the Synapse report.
25 For those periods of time when oil-fired

1 generation in New England is less expensive to
2 operate than gas-fired generation this plant could
3 elect not to operate while other oil-fired
4 resources do. Could you respond to that, and how
5 often would that be expected to happen?

6 THE WITNESS (Hibbard): I haven't done an
7 analysis to figure out how often this would be
8 expected to happen under hypothetical winter
9 conditions.

10 I don't think KEC would elect to not
11 operate. KEC would be putting in everyday for
12 every hour and offer it to provide energy to the
13 market. And it would be up to the decisions in
14 the actual supply curve that ISO is relying on to
15 dispatch units that would determine whether or not
16 it would operate.

17 I should say, Mr. Perrone, that what --
18 one thing we talked about, I believe at the last
19 hearing as well, is that in the last severe winter
20 period ISO was literally backing off the operation
21 of oil units to the extent gas-fired generation
22 was available. They were posturing these units
23 down to preserve oil as -- as a fuel.

24 So that even under -- under severe
25 winter conditions when the firm transportation

1 contract really matters, I would expect this unit
2 would be operating.

3 MR. PERRONE: And on the air emissions topic,
4 would KEC comply with RGGI requirements?

5 THE WITNESS (Gresock): Yes.

6 MR. PERRONE: R-G-G-I, for the transcript.

7 And Mr. Hibbard, Exhibit 3 of your
8 prefile which has the graph which shows the
9 emissions, page 9 of the Synapse report notes that
10 this graph notably excludes 1900 megawatts of new
11 combined cycle generation, and will be in
12 operation before KEC, and excludes remaining
13 existing and planned non-fossil resources.

14 Could you respond to that?

15 THE WITNESS (Hibbard): It has all the fossil
16 resources that we're operating in 2017. And
17 recall, the purpose of that chart was to show that
18 in terms of carbon emissions per unit of output
19 KEC was as low as anything operating in 2017.

20 So that whenever any of those other
21 units were -- would otherwise be dispatched, KEC
22 by its dispatch would provide carbon dioxide
23 reduction benefits.

24 I believe the resources that are
25 referred to in the Fagan/Glick testimony came on

1 in 2018 or later.

2 MR. PERRONE: Yes.

3 THE WITNESS (Hibbard): So that would be
4 reason they are not -- they're not in the chart.

5 The point of that chart was not to
6 show a full supply curve, carbon emission curve
7 for the entire region. It was just to make that
8 point, that any time there's a fossil unit
9 operating on the margin the operation of KEC would
10 tend to lower emissions, and fossil units are on
11 the margin most of the time in the region.

12 MR. PERRONE: But would KEC be competing with
13 some of the newer combined cycle plants?

14 THE WITNESS (Hibbard): I actual -- not for a
15 very long period of time. I think ultimately
16 when -- when fossil units are on the margin it
17 would be very, very few hours of the year that it
18 would be either KEC or one of the two or three
19 brand-new units that -- where there would be
20 competition, very, very few hours of the year for
21 many years.

22 MR. PERRONE: Turning to finding of fact
23 number three, this was a finding about NTE's
24 experience and it discusses the Ohio and North
25 Carolina plants, and at the time they were slated

1 to begin operation in 2018. What's the current
2 status of those two?

3 THE WITNESS (Eves): They're both
4 operational. They both came online on schedule.

5 MR. LYNCH: Mr. Chairman?

6 THE HEARING OFFICER: Yes, Mr. Lynch?

7 MR. LYNCH: Going back to the competing with
8 other power powerplants, what would be the
9 scenario where you would be competing with them?

10 THE WITNESS (Hibbard): What Mr. Fagan
11 referred to this morning is really the -- the
12 exact right scenario. If you postulate going out
13 15 or 20 years, and there are so many additional
14 lower variable cost resources on the system.

15 So at -- at 10,000 megawatts or
16 15,000 megawatts of wind, solar, hydro, then the
17 most efficient combined cycle units would be
18 competing on the margin in some number of hours of
19 the year, but I think it's really kind of far
20 fetched to imagine that's going to happen any time
21 soon.

22 MR. LYNCH: Thank you. I apologize. I
23 wasn't here this morning, so I didn't get to hear
24 that.

25 THE HEARING OFFICER: Thank you, Mr. Lynch.

1 Mr. Perrone?

2 MR. PERRONE: I know there was some
3 discussion earlier on reserve requirements and how
4 reserves take into account outages. As far as
5 outages go, would those be just a mechanical
6 outage where something breaks down the plant? Or
7 does it also include, let's say, a natural gas
8 plant with interruptible gas that has an outage?

9 THE WITNESS (Hibbard): No. I believe the
10 discussion this morning was that reserve margins
11 do not take into it. The discussion this morning
12 was fairly confusing on this point.

13 I think it's important that the
14 councilmembers be clear. Reserve margins play
15 absolutely no role in determining what's the
16 quantity of resources needed to meet reliability
17 standards. There's a process in place for that.
18 It's the process that leads to the development of
19 install capability responsibility.

20 So what reserve -- when you do a
21 reserve margin calculation you're only showing
22 resources on the system in the year against load
23 on the system in the year. You're not trying to
24 account for outages, maintenance outages, or
25 forced outages, or anything like that.

1 When ISO determines what do we need to
2 procure to keep the lights on, in the year in
3 question, it goes through a fairly complicated
4 process that does take into account the outage
5 rates of existing units, the expected outage --
6 outage rates of potential new units. It looks at
7 all of the underlying demand factors, how much
8 efficiency is on the system. How much renewables
9 will be on the system.

10 It looks at what units are going to
11 retire and what units that may come on that would
12 be new. All of these things factor into a very
13 complicated reliability model. It's not a simple
14 spreadsheet calculation. It's the General
15 Electric MARS model, and I realize this is a long
16 way of answering the question, but I promise I'll
17 get back to it.

18 And so that process is heavily vetted.
19 As I think some of you know, this is a process
20 that ISO goes through every single year and has to
21 go through pursuant to federal reliability
22 standards. The states get involved, all the
23 stakeholders get involved.

24 And FERC ultimately has to approve what
25 is that quantity we need to procure to keep the

1 lights on in the year we're looking at in
2 question. And that's the net ICR. That's the
3 ICR, and then your net comes from netting out
4 Hydro-Quebec resources that exist on the system.

5 So that's the number that matters for
6 reliability purposes. That not only takes into
7 account the outage rates of units, it takes into
8 account how the system operates, how it's
9 configured on given days.

10 It looks at a stressed summer condition.
11 Winter is not an issue in that calculation. It's
12 looking at peak load in the summer in a stressed
13 system where units are out on average relative to
14 their past performance, and there could major
15 contingencies, the loss of one or two generating
16 units, the loss of a transmission unit.

17 All of these system -- all of this
18 system data feeds into a Monte Carlo model that
19 goes through thousands and thousands of
20 representations of the system. And that's what
21 pops out the net ICR number, because it takes into
22 account that we're not planning just to meet load
23 and reserves. We're planning to meet load and
24 reserves within an ample margin of safety, and
25 that's the one in ten that you've heard.

1 That they, they go through this
2 probabilistic model and determine what's the
3 number we need to make sure there's no rolling
4 blackouts more than once in ten years.

5 So that's the federal reliability
6 standard in the process ISO uses to identify that
7 number. That takes into account all of the
8 outages that can happen whether they're forced,
9 whether they're D-rates, whether
10 they're maintenance outages. And it takes into
11 account other things that can happen on the
12 system.

13 And that's the reason when you look at
14 this simple -- simplistic comparison of written --
15 resources on the system in load you get high
16 reserve margin numbers, but reserve margins have
17 absolutely no role in determining what that
18 quantity should be.

19 And so I think it's important to realize
20 that the forward capacity auction that Killingly
21 cleared is exactly the process that's set up to
22 get resources equal to the number that comes out
23 of that, that complete reliability assessment
24 process that goes into it.

25 And that factors in everything on the

1 system that we've talked about. And that auction
2 is what ultimately selects the resources to meet
3 that reliability need.

4 So I -- I apologize for going on so
5 long, but I think this whole discussion of reserve
6 margins is totally irrelevant to the question of
7 need. It's an artifact of that whole process.
8 It's a number you calculate comparing two other
9 numbers, but it's not part of the reliability
10 planning process.

11 MR. PERRONE: I understand you said outages
12 are buried into the NICR calculations. Do those
13 outages include ones that are fuel related, like
14 in the case of interruptible gas?

15 THE WITNESS (Hibbard): Yes, it includes --
16 it's based -- every unit is put into that modeling
17 process based upon historical performance, and
18 data that are submitted to the North American
19 Electric Reliability Council, the generator -- I
20 forget. The gas data, the generator availability
21 data, system data.

22 So it reflects historical performance of
23 every type of unit of every size. So that what
24 feeds into that model is an historical
25 representation of outages of any sort, whether

1 it's, you know, some -- the unit goes offline
2 because something breaks in the boiler or they
3 don't have fuel and they can't operate. Or for
4 whatever reason the -- the data that goes into
5 that modeling process includes outages, outages or
6 D-rates for any reason whatsoever.

7 MR. PERRONE: And lastly on that topic, in
8 the case of an auction where more resources clear
9 than NICR, those extra, or shall we say, surplus
10 resources, how would those fit into the mix?
11 Would those still be necessary for reliability?

12 THE WITNESS (Hibbard): Yeah, that -- they're
13 not surplus resources. They're what the -- so the
14 process I was just describing leads to the number
15 net ICR. What has been approved by FERC and what
16 the regions, the wholesale regions do is they
17 recognize that if we procure a little bit more
18 than net ICR it still has reliability value.

19 If -- if the cost of procuring resources
20 near there is too high, we want to procure a
21 little bit less. It's a sloping demand curve like
22 the demand curve for any other project whatsoever.
23 So ISO and FERC don't view this as a deficit if
24 you're below NICR or surplus if you're above.
25 NICR is used to define a specific range in which

1 you select the most economic group of resources to
2 meet that reliability need.

3 So it's not -- I wouldn't call it a
4 surplus at all. It's part of the design of the --
5 of the demand curve and the auction process to
6 procure the most efficient set of resources to
7 meet reliability requirements.

8 MR. PERRONE: So it's viewed as a package
9 even if it's greater than NICR?

10 THE WITNESS (Hibbard): Or less, but again
11 that's -- it's a really small range around net
12 ICR.

13 I think in the -- when -- when RTOs have
14 gone to FERC to make the case that the most
15 efficient way to run the auction process is not to
16 just use a single number, but to use a sloping
17 demand curve, what they've ended up with is -- are
18 designs that have a relatively limited range
19 around net ICR. It's not like it can go from zero
20 to 40,000.

21 MR. PERRONE: Lastly, I know there is
22 discussion about meeting with the Town and
23 potential modification to your responses to the
24 regulate and restrict. Do you have the date of
25 the town meeting or meetings?

1 THE WITNESS (Eves): Yes. It was actually
2 last Wednesday.

3 MR. PERRONE: Okay.

4 MR. BALDWIN: The 24th.

5 THE WITNESS (Eves): The 24th. April 24th.

6 MR. PERRONE: And I know you provided a
7 number of updates. Do you have any additional
8 updates to the regulate and restrict that you
9 believe have not come up?

10 THE WITNESS (Eves): No, I think we've
11 covered all ten of the ones that still were open.

12 MR. PERRONE: Okay. One last air emissions
13 topic. It was in the previous set of findings of
14 fact. At the time the status of Kleen powerplant
15 was uncertain. What's the current status of that
16 right now?

17 THE WITNESS (Gresock): Yeah. I mean, it's
18 still uncertain. It's been vacated by the court
19 at this point.

20 MR. PERRONE: And lastly, given the
21 substantial amount of public comments and feedback
22 that have been received in this docket, what if
23 any final design features of the project were
24 intended to take into account the concerns of
25 neighbors, be it noise design or any other

1 features?

2 THE WITNESS (Gresock): I mean, I think the
3 project throughout has incorporated as carefully
4 and thoughtfully as it can design measures that
5 are intended to be protective of -- of the local
6 community and the environment.

7 I mean, for example in this recent
8 reconfiguration of the project making a very
9 deliberate decision to keep the development
10 footprint within the bounds of what was previously
11 proposed and, in fact you know, increasing some of
12 the distances between the developed footprint and
13 the wetlands, continuing to maintain and to
14 consider strategies for maintaining the sound
15 levels.

16 I don't think there's anything specific
17 that we would identify, although as Tim has said,
18 by meeting with the Town and talking about some
19 of -- some of the specific measures and whether
20 there are elements to the design into which
21 feed -- feedback can be provided.

22 So, for example, if sound walls do
23 continue to be a component of the mitigation there
24 are a lot of strategies in terms of color, in
25 terms of material, you know, in terms of design

1 for those features that are the kinds of things
2 that we certainly could -- could make adjustments
3 to reflect.

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

5 THE HEARING OFFICER: Thank you, Mr. Perrone.

6 We'll continue with questions from our
7 councilmembers, beginning with Mr. Harder.

8 MR. HARDER: No further questions.

9 THE HEARING OFFICER: Thank you.

10 Mr. Levesque?

11 MR. LEVESQUE: No further questions.

12 THE HEARING OFFICER: Thank you.

13 Mr. Hannon?

14 MR. HANNON: Thank you. I do have, sort of,
15 two lines of questions. One, I know where it's
16 going; the other one, I have no clue.

17 The first one is, I believe since the
18 application originally came in -- what? Back like
19 three years ago. I think the original discussion
20 was a gas line of 12 to 14 inches. I think that
21 may have been true up to the beginning of this,
22 but now they're talking about 16 inches. So I'm
23 not sure if there's a set number there, but has
24 anybody done an analysis of what would be needed
25 pipe size-wise just for this plant?

1 Because if I remember correctly that
2 going to the 16-inch pipe was also going be
3 providing more gas to the Town. So I'm just
4 curious as to what size pipe would be necessary
5 for this project versus extra capacity for the
6 Town?

7 THE WITNESS (Eves): The first answer to your
8 question, no, that has not been evaluated as
9 you've asked. We've talked some about the
10 engineering agreements that we have signed and the
11 amendments that we've signed with Yankee Gas.

12 It's been under those engineering
13 agreements that Yankee has done the preliminary
14 design of that pipe to look at, how much do they
15 need? How big of a pipe do they need to provide
16 our gas, plus the other customers, plus some
17 margin?

18 We originally had a smaller sized pipe
19 until they got into the design of that and said
20 that it showed us a pressure drop across that pipe
21 that was pretty substantial, at which point Yankee
22 decided to put a 16-inch line in.

23 MR. HANNON: Okay. So it's more related to
24 pressure than capacity?

25 THE WITNESS (Eves): Yes.

1 MR. HANNON: Okay. Thank you.

2 The second line -- and bear with me on
3 this because I'm not sure where I'm going to go.
4 You have a commitment for a firm gas contract.
5 Correct?

6 THE WITNESS (Eves): Yes.

7 MR. HANNON: So from that perspective I would
8 assume that you believe that under normal
9 operating circumstances you will be able to run on
10 natural gas?

11 THE WITNESS (Eves): Correct.

12 MR. HANNON: Okay. If you had to run on oil,
13 if my memory serves me correctly, you need
14 about 400 -- yeah, about 400,000 gallons of water
15 versus the hundred thousand on natural gas.
16 Correct? So it's about a four to one ratio?

17 THE WITNESS (Eves): Per day, yes.

18 MR. HANNON: Okay. And then with oil I'm
19 hearing that your production would go from about
20 the -- what? Six thirty-one and change down in
21 the four-hundreds?

22 THE WITNESS (Eves): That's correct.

23 MR. HANNON: Okay. So when something like
24 this occurs, and not just you, but say other
25 powerplants have to switch off of natural gas to

1 go to oil, I think also typically what you would
2 end up seeing is higher pollutants when running on
3 oil. Is that correct? Or it may not be all of
4 them, but I think a number of them, the pollutants
5 are higher?

6 THE WITNESS (Gresock): Yeah, some of the
7 emissions are higher, yeah.

8 MR. HANNON: Okay. So if you're running on
9 oil, you have more water that's required. You
10 have higher pollutants. I don't know if the water
11 prices are factored into the price of operating
12 rather than just looking up what the price of oil
13 is versus natural gas.

14 So I'm wondering is that something that
15 ISO New England even looks, or are they just
16 looking at price and isn't doesn't matter about
17 utilization of other resources? Or the increase
18 in pollutants, running natural gas versus oil?

19 THE WITNESS (Gresock): So I'll let someone
20 else answer about the ISO, but I will say that
21 these kinds of considerations are very important,
22 too, for example, the air permit that was issued
23 for the project.

24 For example, the most recent one that
25 was issued on December 10th of 2018, not only

1 restricts the firing of ULSD to the 720 hours
2 maximum, but has a specific condition that cites
3 seven specific circumstances that are the only
4 conditions under which ULSD firing is -- is
5 required. And -- and there, you know, there
6 they're pretty stringent. They're things like ISO
7 New England declaring an energy emergency as
8 defined under its rules. Audits, you know, ISO
9 New England required audits of capacity.

10 There -- there they're really intended
11 to be conditions that limit this to times when
12 it's necessary while acknowledging that this is an
13 important part of reliability.

14 THE WITNESS (Hibbard): Yeah, and the short
15 answer to the question about ISO is, no. They
16 don't consider environmental impacts. They're
17 looking strictly at capacity and prices.

18 MR. HANNON: Okay. So if more plants had to
19 run because if they're running on oil, I'm
20 assuming they would be like your plant where it
21 would be lower energy produced if they're running
22 on oil, versus gas?

23 THE WITNESS (Eves): If it's a combine -- if
24 it's a combustion turbine-based plant, that would
25 be --

1 MR. HANNON: Right. Not an oil-based plant?

2 THE WITNESS (Eves): That's right.

3 MR. HANNON: Okay. I'm just trying to get a
4 better handle for whether or not some of these
5 other factors actually play into ISO's decision as
6 to whether or not this plant should run.

7 Because for example if this project gets
8 approved and you're able to run on natural gas
9 because you have a firm contract, other plants
10 can't because they know that their gas is cut so
11 they have to run on oil.

12 Their production numbers are dropped.
13 Some of their costs may go up. Use of natural
14 resources goes up. Pollution goes up. So I'm
15 just trying to see if that plays, you know?

16 THE WITNESS (Hibbard): So this may be a bit
17 of a wonky air -- answer, so bear with me for a
18 minute. I can think of a couple ways in which it
19 does play in, and it's actually a good question
20 related to the capacity market and the energy
21 market.

22 Under those circumstances the cost of
23 running on oil would -- you would incur additional
24 costs associated with your emissions. Or you
25 would have to purchase additional emission

1 offsets, or you would actually start working
2 through the permit limitations you might have on
3 the quantity of oil you can burn.

4 So there is a cost that would factor
5 into what offer would you make to operate the next
6 day on oil in the market. A gas-fired facility
7 with a firm contract wouldn't have those
8 additional costs. So it does have cost
9 implications that could affect which unit
10 operates. That's one answer.

11 The other answer is the capacity
12 limitation, and when you have a capacity supply
13 obligation you are at risk to the extent you can't
14 meet that obligation through this performance
15 incentive program, part of the forward capacity
16 market.

17 So if I owned a unit and I think that
18 during some winter conditions I'm not going to be
19 able to operate because I won't be able to get
20 gas. I'll actually increase my capacity offer
21 because that's a risk that I'll take a penalty
22 under those situations.

23 In KEC's case they would not need to add
24 that risk premium to their offer, because they
25 know with the combination of both oil backup and

1 having a firm transportation contract, they're not
2 at much risk to not operating when there's a
3 reserve shortage on the system.

4 So it has -- these are not major
5 components of those two markets, but it does --
6 those conditions and what happens with one
7 resource over another does play out into some
8 extent in the ISO markets.

9 THE WITNESS (Gresock): And I do -- and I do
10 think it's important to remember that that maximum
11 use, that that maximum emission case is the case
12 that will have been evaluated through the permit
13 processes and been demonstrated to be protective
14 and meet all of the standards.

15 And similarly -- and Connecticut Water
16 will have looked at our maximum demand and will
17 have done whatever analyses they need to do to --
18 to demonstrate that they have that available to
19 us, even though that is not the typical, the
20 typical use.

21 MR. HANNON: Thank you.

22 THE HEARING OFFICER: Thank you, Mr. Hannon.

23 Mr. Lynch?

24 MR. LYNCH: Just a couple things for
25 clarification, and if you had gone over it this

1 morning when I wasn't here let me know and I'll
2 read it in the transcript.

3 The first one has to do with the
4 Connecticut Water Company's connection to their
5 two water sources, and I read the Department of
6 Health and your answer, you replied -- and I'm
7 totally confused.

8 Now I'm thinking that this pipeline
9 between the two sources will be constructed at the
10 same time the powerplant is being built. Am I
11 correct?

12 THE WITNESS (Eves): That's correct.

13 MR. LYNCH: Can you just elaborate a little
14 bit more on how that works?

15 THE WITNESS (Eves): Sure. So we have two
16 construction contracts with Connecticut Water.
17 One is to do a short connection right at the
18 facility to come from the -- and I don't know the
19 length of that, but that's -- they -- from when we
20 financially close we will give Connecticut Water
21 Company and everybody else doing work on this
22 project the notice to proceed.

23 So from the day we give them notice to
24 proceed they have committed to putting that local
25 connection in within 90 days.

1 MR. LYNCH: That's to the powerplant.

2 Correct?

3 THE WITNESS (Eves): That's the short
4 connection to the powerplant. Under the
5 construction contract for the connecting of the
6 Plainfield and Crystal systems, they've got 16
7 months from notice to proceed to finish that
8 pipeline.

9 We've got -- we are going to need their
10 water to, you know, the connection be able to take
11 the full quantity of water in mid 2021. So we
12 have -- their schedule is 16 months to have that
13 connection done to be ready to serve us the full
14 quantity. We have a few months margin on that
15 until we actually need that water for the startup
16 activities Chris was talking about earlier.

17 MR. LYNCH: And the new condition, that's not
18 dedicated solely to the powerplant. Is it?

19 THE WITNESS (Eves): Oh, no. That's going to
20 bring tremendous reliability to Connecticut Water
21 Company.

22 MR. LYNCH: That's what I thought, but I
23 wanted clarification.

24 My next -- again, it's a clarification.
25 I heard as I came in that post operation you will

1 deal with surrounding medical problems such as
2 asthma and whatever --

3 THE WITNESS (Rega): There was a question --
4 I'm sorry.

5 MR. LYNCH: That's not my question. My
6 question is, how do you determine what is
7 post-operation medical and preoperational medical
8 problems?

9 THE WITNESS (Eves): Through our community
10 environmental benefit agreement we've set up a
11 series of payments upfront in annual payments.
12 The town, as required by the environmental justice
13 statute, sat down and went through to determine
14 how they wanted to spend that money.

15 So we will be giving the Town an annual
16 amount of money. The Town will take that money
17 and put it to various uses, including the asthma
18 and respiratory illness research and funding from
19 paid medical expenses. So that will be a program
20 that we'll fund. That will be administered by the
21 Town.

22 MR. LYNCH: So you're just funding it and
23 that the Town can use it for after construction?
24 Or preconstruction of your plant?

25 THE WITNESS (Eves): I would have to look

1 when those payments start. I don't know if they
2 start on commercial operation, or on construction,
3 but as soon as we start making those annual
4 payments the town can use that money --

5 MR. LYNCH: They can use it any way they
6 want, the Town. Thank you.

7 Thank you, Mr, Chairman.

8 THE HEARING OFFICER: Thank you, Mr. Lynch.

9 I have a few follow-up questions, and
10 one curiosity question that I want to pose.

11 Mr. Eves, a followup is on your
12 discussion with Mr. Perrone when you had a
13 scenario you might be running at 400 megawatts.
14 ISO needed you at more. You mentioned you would
15 either have to pay a penalty or cover.

16 The penalty part, I would assume that's
17 a monetary payment to ISO for not being able to
18 cover based on number of megawatts that you're
19 short?

20 THE WITNESS (Eves): Correct.

21 THE HEARING OFFICER: Okay. How would you
22 cover the difference?

23 THE WITNESS (Eves): I mean, the -- the
24 answer is we would go out to the market and see
25 what we could precure. I mean, it seems like

1 there's typically power available in the market,
2 although I would imagine at times that we would be
3 looking at covering it would be very expensive
4 power.

5 But we would -- we would go out to the
6 market and at our, you know, at our expense buy
7 that, but whatever power is -- was available to
8 meet that shortfall.

9 THE HEARING OFFICER: So based on what you
10 find that's available out there, are you able to
11 pick and choose who would provide that extra
12 power?

13 THE WITNESS (Hibbard): I think it would be a
14 market transaction. In other words, anyone that's
15 offering to sell surplus power would be someone
16 that KEC could enter into an agreement with.

17 THE HEARING OFFICER: Okay. All right.
18 Thank you.

19 I want to go back now to the hearing
20 that we had on April 4th, and there was discussion
21 regarding property value agreements and trying to
22 secure the property values in a certain amount.

23 If I recall correctly, the radius that
24 you were looking at was 2,500 feet, and there were
25 X amount of people within that radius that you had

1 agreements with, but there were a few outliers.
2 Did you have any further discussion with the
3 outliers?

4 THE WITNESS (Eves): Yes. Actually it's --
5 it's been an interesting process, but at the very
6 end of March we sent out the letters to the -- to
7 the folks within that 2500-foot radius. And I'd
8 say maybe a little bit more than half of them
9 responded to us.

10 And as -- as of today we've got -- I
11 think we've got six agreements signed, and we've
12 got eight more agreements that are pending on the
13 property value guarantees.

14 THE HEARING OFFICER: And discussions are
15 still going on?

16 THE WITNESS (Eves): I'm sorry?

17 THE HEARING OFFICER: The discussions are
18 still going on?

19 THE WITNESS (Eves): And the discussions are
20 still going on. And it's -- I mean, not exactly
21 knowing how this process was going to work, we
22 sent out a, you know, relatively -- we sent out
23 the same letter to everybody.

24 And then we have been going out to
25 people's homes and sitting and talking with them

1 about what we're doing and what we're proposing.
2 And everybody has a slightly different perspective
3 and concern.

4 So what we've actually ended up doing
5 was tailoring each property value guarantee for
6 the -- for the person on the other side of the
7 table. So there, they're all slightly different
8 because everybody has a little bit different
9 concern, but that process is proceeding and I
10 think when we're done we'll -- probably hit --
11 maybe 75 percent of the folks we contacted will
12 have -- have agreements, and the others just
13 choose not to contact us.

14 THE HEARING OFFICER: Thank you.

15 One curiosity question I have, are you
16 aware of any new natural gas transmission lines
17 that might be coming into New England?

18 THE WITNESS (Eves): I am not.

19 THE WITNESS (Hibbard): I'm not aware of any
20 new interstate transmission lines that are -- that
21 are currently expected to be developed any time
22 soon. There are some more local natural gas
23 infrastructure projects, but not interstate
24 transmission.

25 THE HEARING OFFICER: Thank you.

1 And the last curiosity question I have,
2 there's a number of FT4 jet engines particularly
3 within the Connecticut region. Do you foresee KEC
4 displacing these FT4s?

5 THE WITNESS (Eves): I would say it goes back
6 to the whole discussion on economic dispatch. And
7 I think the FT4s are probably a higher cost unit.
8 So in times that there's not a high peak demand I
9 think KEC would probably displace those units.

10 THE HEARING OFFICER: I don't have any
11 further questions.

12 Mr. Lynch has a followup.

13 MR. LYNCH: Just on the development of new
14 transmission lines. I thought I read a couple
15 weeks back that Governor Cuomo was looking to try
16 to propose to get something into New York State
17 for their problems?

18 THE WITNESS (Hibbard): Governor Cuomo has a
19 lot of proposals out there, to say the least.
20 He's very focused on energy. I wouldn't be
21 surprised -- I don't personally know of a piece of
22 his proposal that's specifically related to
23 increasing pipelines coming into New York. That's
24 possible, but I'm -- I'm not personally aware of
25 it.

1 MR. LYNCH: Thank you.

2 THE HEARING OFFICER: Any other
3 councilmembers or staff?

4 MR. PERRONE: Just one, one final
5 clarification. On the megawatt table, I
6 understand natural gas under ISO conditions is
7 647. So this number of 650 that we've been using,
8 can we call that the nameplate number, or the
9 nominal number?

10 THE WITNESS (Eves): We typically refer
11 to that -- we typically refer to that as nominal.

12 MR. PERRONE: Thank you. I'm all set.

13 THE HEARING OFFICER: Thank you, Mr. Perrone.

14 THE WITNESS (Rega): Mr. Perron, if I could
15 just add to my answer earlier? You were asking
16 about the difference between ULSD, and it doesn't
17 change Mr. Eves' answer at all in terms of
18 replacement power.

19 But one of the reasons that we're less,
20 that I thought about afterwards on -- on ULSD is
21 we don't have duct firing under that condition,
22 which is natural gas only fuel for duct firing.
23 And that, that's approximately a hundred
24 megawatts. The rest of it is within the
25 combustion turbine because of the capabilities of

1 the combustion turbine.

2 MR. PERRONE: Thank you.

3 THE HEARING OFFICER: Attorney Baldwin?

4 MR. BALDWIN: Thank you, Mr. Chairman.

5 I have a list of redirect questions, and
6 I think you touched on every one of them with the
7 exception of two. And there were two items that I
8 think councilmembers had asked about at the last
9 time. I just want to make sure we get those
10 responses on the record, pseudo-homework
11 assignments.

12 First, Mr. Rega, this is on the SF-6
13 issue and the reduction technologies that the
14 Chairman asked about. Had you developed that or
15 received any additional information about those
16 technologies as it relates to KEC?

17 THE WITNESS (Rega): We have. We did a
18 little bit more research into the SF6 free
19 technology for the breakers. And -- and it would
20 appear now that there are some breakers that are
21 commercially available, but those are the low,
22 lower voltage level, sort of the 115, 145 kV
23 level.

24 Where we're interconnecting into the
25 Eversource system here is at 345. Those, those

1 breakers are not available in non-SF6.

2 MR. BALDWIN: And my last question relates to
3 ammonia delivery and storage question that was
4 asked last time. We addressed the hydrogen issue
5 in response to council interrogatory 47, but did
6 you have any information recording when operating
7 on natural gas the number of ammonia truck that
8 would be required to replenish the supply for a
9 week?

10 THE WITNESS (Rega): Yes, when operating on
11 natural gas we estimate approximately two
12 deliveries per week of aqueous ammonia.

13 MR. BALDWIN: And when operating on ULSD?

14 THE WITNESS (Rega): When operating on ULSD
15 less than one delivery per day.

16 MR. BALDWIN: That's all Mr. Chairman.

17 THE HEARING OFFICER: Thank you for the
18 followup.

19 Okay. Before closing the evidentiary
20 record of this matter the Connecticut Siting
21 Council announces that briefs and proposed
22 findings of fact may be filed with the Council by
23 any party or intervener no later than May 30,
24 2019.

25 The submission of briefs or proposed

1 findings of fact are not required by this Council.
2 Rather, we leave it to the choice of the parties
3 and the intervenors.

4 Anyone who has not become a party or
5 intervener, but who desires to make his or her
6 views known to Council may file written statements
7 with Council no later than May 30, 2019.

8 The Council will issue draft findings of
9 fact and thereafter parties and intervenors may
10 identify errors or inconsistencies between the
11 Council's draft findings of fact and the record.
12 However, no new information, no new evidence, no
13 argument and no reply briefs without permission
14 will be considered by the Council.

15 Copies of the transcript of this hearing
16 will be filed at the Killingly, Putnam and Pomfret
17 Town Clerks' offices.

18 I hereby declare this hearing adjourned,
19 and thank you all for your participation, and
20 drive safely.

21 Thank you.

22
23 (Whereupon the above proceedings were
24 concluded at 2:37 p.m.)
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CERTIFICATE

I hereby certify that the foregoing 146 pages are a complete and accurate computer-aided transcription of my original verbatim notes taken of the Regular Hearing in Re: DOCKET NO. 470B, MOTION TO REOPEN AN APPLICATION FROM NTE CONNECTICUT, LLC, FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE, AND OPERATION OF A 550-MEGAWATT DUAL-FUEL COMBINED CYCLE ELECTRIC GENERATING FACILITY AND ASSOCIATED ELECTRICAL INTERCONNECTION SWITCHYARD LOCATED AT 180 AND 189 LAKE ROAD, KILLINGLY, CONNECTICUT, which was held before ROBERT SILVESTRI, The Hearing Officer, at Connecticut Siting Council, 10 Franklin Square, New Britain, Connecticut, Thursday, May 2, 2019.



Robert G. Dixon, CVR-M 857
Notary Public
BCT Reporting Service
55 Whiting Street, Suite 1A
Plainville, CT 06062
My Commission Expires: 6/30/2020

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