

NTE Connecticut, LLC application for a	:	
Certificate of Environmental Compatibility	:	
and Public Need for the construction,	:	Docket No. 470
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,	:	April 24, 2017
Killingly, Connecticut	:	

**PROPOSED FINDINGS OF FACTS OF  
NOT ANOTHER POWER PLANT AND WYNDHAM LAND TRUST**

Pursuant to the Council’s invitation to the parties and intervenors to submit briefs and findings of fact by April 24, 2017, Not Another Power Plant and Wyndham Land Trust hereby submit these proposed findings of facts regarding the application filed by NTE Connecticut, LLC (“NTE”) on August 17, 2016. NTE applied to the Connecticut Siting Council (the “Council”) for a Certificate of Environmental Compatibility and Public Need (“Certificate”) pursuant to General Statutes §16-50k (the “Application” or “App.”) regarding a proposed electric generating facility and associated switchyard located in Killingly, Connecticut (the “KEC Facility”).

1. In order to issue a Certificate, the Council must find that a public need exists for the KEC Facility. “[A] public need exists when a facility is necessary for the reliability of the electric power supply of the state.” General Statutes § 16-50p(c)(3); see also § 16-50p(h).

2. The KEC Facility would cause numerous adverse environmental impacts, including the destruction of wetland areas, impacts to wildlife, the removal of substantial amounts of trees, and grading and removal of soils. (See, e.g., Hearing Transcript (“Trans.”), 206:25-246:6.).

3. As Robert Fagan testified, the reliability of the electric power supply is composed of two components – resource adequacy and transmission security. (Robert Fagan Pre-Filed Testimony (“Fagan Test.”), 11:5-6.)

4. In New England, ISO determines reliability using a probabilistic-based model of the electric power system that determines the level of capacity needed to keep the lights on. (Id. at 18:13-14.)

5. The ISO modeling of the electric power system is updated regularly. (Id. at 18:14-15.)

6. ISO annually computes an installed capacity requirement (“ICR”), which accounts for resource characteristics such as outage rates and the peak load forecasts. (Id. at 12:1-3.)

7. Net ICR (“NICR”) is the ICR value less credits for Hydro-Quebec interconnections. (Id. at 12:3-4.)

8. Resource capacity in excess of the minimum ICR or NICR levels can be said to be surplus to, or in excess of, reliability requirements. (Id. at 12:7-8.)

9. ICR and NICR both already incorporate reserve margins – 5,433 MW and 4,474 MW for the 2020/2021 electric capacity obligation time period, in which ICR and NICR total 35,034 MW and 34,075 MW, respectively. (Id. at 13, Table 1.)

10. The most recent ISO Forward Capacity Market (“FCA”) occurred on February 6, 2017 (“FCA 11”) and capacity obligations (ICR and NICR) were identified for the time period beginning June 1, 2020 and continuing through May 30, 2021. (ISO-NEW ENGLAND, INC., Press Release Auction Acquires Power System Resources Needed for 2020-2021 at a Lower Price, February 9, 2017, available at [https://www.iso-ne.com/static-assets/documents/2017/02/20170209\\_FCA11\\_initial\\_pr.pdf](https://www.iso-ne.com/static-assets/documents/2017/02/20170209_FCA11_initial_pr.pdf) (“ISO Release”).)

11. At FCA 11, resources totaling 40,463 MW, including 34,505 MW of existing capacity and 150 new resources totaling 5,958 MW, competed to provide the NICR target of 34,075 MW. (ISO Release at 1.)

12. FCA 11 concluded with commitments of 35,835 MW to be available from June 2020 to May 2021; in other words, FCA 11 concluded with 1,760 MW of surplus capacity. (Id.)

13. Capacity commitments for FCA 11 did not include the KEC Facility. (Hearing Transcript (“Trans.”), 1154:21-25.)

14. Instead, prior to the sixth and final round of bidding for FCA 11, NTE withdrew from the auction and as a result the KEC Facility did not clear FCA 11. (Id. at 1154:21-1155:8.)

15. The KEC Facility does not have a firm obligation to provide electric capacity. (Id. at 1186:5-10.)

16. NTE originally devoted minimal attention in the Application to need, doing no more than stating succinctly that “capacity resources that clear the FCA are, by definition, needed for reliability.” (App., § 3.2.)

17. During the hearing, the Council’s siting analyst, Michael Perrone, noted that the Application ties need solely to FCA 11. (Trans., 184:3-6.)

18. Similarly, Council member Senator James Murphy noted, “this application to me, one of the important things for us to make a determination is on need, and I think this whole thing does a pretty poor job of that. Basically, as I peruse through the volumes of material, there’s not very much on that. And it seems to me that the applicant is resting upon the presumption that in the forward capacity auction coming up in February they’re going to make the cut and that, per se, means they are needed.” (Id. at 256:14-23.)

19. While testifying on November 3, 2016, NTE witness Michael Bradley added other attributes that he decided constituted need. (Trans., 184:11-185:13.)

20. At a later hearing, Bradley confirmed that these attributes of need for the KEC Facility are: (a) NTE’s projection that it would clear FCA 11 (which it did not do); (b) its status as a dual-

fuel facility, which allegedly would promote winter reliability; (c) its quick ramp rate, which would allegedly facilitate integration of renewables; and (d) its impact on emission reductions. (Trans., 472:22-25; 473:1-10.)

21. Fagan testified that clearing an FCA is not an indication of need. (Fagan Test., 15:1-4.)

22. The FCA is simply the process by which capacity is secured. (Id.)

23. Need is actually determined by considering the ICR and NICR established by ISO in relation to available resources. (Id.)

24. Fagan provides a clear and succinct analysis of the ICR and NICR values, both historic and projected. (Fagan Test., 20, Table 3.)

25. ISO data shows that for the three FCAs occurring prior to FCA 11, the amount of capacity that cleared each auction exceeded the NICR by 574 MW, 1,274 MW, and 1,812 MW, respectively. (Fagan Test., 20, Table 3.)

26. Over the same time period, the amount of new demand-side and import resources has increased progressively. (Id.)

27. ISO data shows that actual net peak loads and actual net annual electricity consumption has declined in both Connecticut and New England over the past decade, and future net peak loads are currently projected to be flat or declining in New England. (Fagan Test., 32:10-13.)

28. In recent years, each successive annual update to ISO's 10-year-forward load forecast shows a lower peak load forecast for any given future year relative to the earlier vintage forecast. (Id. at 32:13-15.)

29. The two dominating factors behind the flattening of the net peak load forecast are Connecticut and New England's increasing investment in energy efficient resources and the

region's investment in behind-the-meter solar photovoltaic resources. (Id. at 35:1-4; see also id. at 37, Tables 5 and 6, and id. at 38, Figures 4 and 5.)

30. In its final biennial report reviewing Connecticut's forecasts of loads and resources, the Council noted the importance that energy efficient resources play in reducing the need for new generation. (Id. at 35:7-12 (quoting the Council as stating that "energy efficiency and related programs are an extremely important part of Connecticut's electric energy strategy").)

31. In its 2014 Integrated Resource Plan ("IRP Report"), the Connecticut Department of Energy and Environmental Protection ("DEEP") stated: "For more than a decade, the New England region has enjoyed a surplus of electric generating capacity needed to meet reliability objectives. The 2014 IRP projects that Connecticut will continue to have plenty of capacity through 2024 and beyond, due to ample in-state generation, low demand growth, and new transmission built to reduce congestion." (IRP Report, iii; Adm. Notice No. 69.)

32. The Council stated in Docket No. F-2014/2015, "even taking into account the most conservative prediction, ISO-NE 90/10 forecast, and conservatively neglecting the effects of non-ISO-NE-dispatched DG, the electric generation supply during 2015-2024 will be adequate to meet demand." (Connecticut Siting Council Review of the Ten-Year Forecast of Connecticut Electric Loads and Resources, Docket No. F-2014/2015 at 50 ("Ten-Year Forecast".))

33. With respect to both the IRP Report and the Ten-Year Forecast, Council Chairman Robert Stein stated in this hearing that "both of these seem to, not imply, but seem to state rather clearly that our energy generating resources will be more than adequate." (Trans., 410:12-15.)

34. Bradley agreed stated, “As you mentioned, the Connecticut IRP and other documents do say Connecticut has sufficient capacity.” (Trans., 282: 3-5.)

35. Council member Robert Silvestri noted that Connecticut is currently a net exporter of electric energy and has sufficient capacity to meet its own energy needs for far into the future. (Id. at 305:11-12.)

36. Steadily increasing renewable energy supplies and increasing levels of energy efficiency, required by existing energy policies and greenhouse gas emission limitations in all New England states and New York will provide both energy and capacity, and will eventually lead to increasing retirements of the remaining fossil units in New England. (Fagan Test., 6:6-11.)

37. Massachusetts’ energy storage policy includes a recommendation to have 600 MW of system storage installed by 2025. (Id. at 6 n. 8.)

38. Massachusetts has specific timeframes in place to secure 1,600 MW of offshore wind resources by the end of the 2020 decade. (Id. at 27: 18-20.)

39. Any new fossil fuel generating facilities, even natural gas facilities, will hinder the attempts by Connecticut and other New England states to reduce greenhouse gas emissions by targeted levels over the next few decades. (Id. at 6:15-7:1.)

40. ISO and some of the New England states are concerned about the New England region being over-reliant upon natural gas. (Trans., 186:9-13.)

41. The air permit for the KEC Facility will severely limit the use of ultra-low sulfur diesel fuel (“ULSD”) and the Applicant noted that it expects to utilize ULSD sparingly – perhaps no more than a very few hours per year. (Trans., 372:1-4.)

42. The Council and DEEP have determined that a need for additional capacity in Connecticut will not exist at least through 2024. (IRP Report, iii; Ten-Year Forecast, 50.)

43. NTE relies on a questionable exhibit in an attempt to show that by 2020 2,000 MW of capacity in Connecticut and 6,000 MW of capacity in New England will no longer be available. (Trans., 261:4-23.)

44. As the Council aptly pointed out, this exhibit misrepresents the state of electric capacity in Connecticut and in New England. (Id.)

45. While emphasizing potential “at risk” facilities, NTE chose to ignore the offsetting balance of new capacity that has already been approved by the Council and which will come on-line within the near future. (Id.)

46. The reality is that despite its modeling and projections of the loss of thousands of MW of capacity, all of the so-called “at-risk” facilities targeted by NTE for retirement cleared FCA 11 and have enforceable obligations to provide capacity for the June 2020 to May 2021 time period. (Trans., 1187:19-23.)

47. NTE, in stark contrast, decided at the conclusion of the fifth round of FCA 11 that it could not accept the risk of locking into an enforceable capacity obligation at such a low capacity price. (Id. at 1192:17-23.)

48. NTE’s experts testified that their modeling showed a clearing price at FCA 11 of \$6.19/kw-mo, based on: (a) existing and new capacity supply; and (b) demand, which was based on proprietary PA models and demand curves as of June 2016. (App., Ex. B, 13.)

49. 1,760 MW of extra capacity was actually cleared in FCA 11. (ISO Release, 1.)

50. If NTE had received a capacity commitment, all it would have accomplished is the displacement of an existing source. (Trans., 1170:17-24.)

51. Bradley alleged that the KEC Facility's status as a dual-fuel facility would promote winter reliability in Connecticut. (Trans., 473:1-6.)

52. Fagan explained, however, that reliability requirements – the need for capacity – are driven by summer loads because they are much greater than winter loads. (Fagan Test., 17:2-3.)

53. For example, net summer peak load in 2016 in New England, forecast to be 26,704 MW and actually reaching just 25,466 in August, was much greater than projected winter peak loads which are on the order of 21,000 to 22,000 MW. (Id. at 17:3-5.)

54. ISO must be assured of fuel supplies for generators in the winter, but there is more than adequate electrical generation capacity to meet the winter demands. (Id. at 17:5-7.)

55. The New England region has sufficient dual-fuel capabilities, plentiful reserve capacity, and extensively developed policies in place to ensure winter reliability without the additional generating capacity of the proposed KEC Facility, in both the near term and in the longer-term. (Id. at 49:19-50:3.)

56. Additionally, if the KEC Facility needed to actually use that dual-fuel capability and run on ULSD, it would only have a two-day supply on-hand. (Trans., 188:3-7.)

57. After that, it would require approximately 48 tanker trucks per day to continue to operate. (Id. at 189:6-13.)

58. The source of fuel for those trucks has not been determined, which was a matter of concern to the Council. (Id. at 332:10-24.)

59. Bradley also alleged that the quick ramp rate, which would allegedly facilitate integration of renewables, showed that the KEC Facility was needed. (Id. at 473:2-6.)



60. To the contrary, the New England region has sufficient, existing supply and demand-side dispatchable resources and schedulable import resources to balance varying net load patterns that will arise in part because of the presence of renewable resources. (Fagan Test., 10:3-6.)

61. Future additional import, storage, and demand-side resources can complement this sizable resource base which includes over 12,000 MW of existing combined cycle gas plants. (Id. at 10:7-9.)

62. Bradley's claim that the KEC Facility would result in greenhouse gas reductions is incorrect, based on flawed modeling and faulty input assumptions. (Fagan Test. (unredacted), 57:5-59:13.)

63. NTE does not provide any information regarding greenhouse gas emissions over the life of the KEC Facility beyond 2024, when Connecticut's greenhouse gas emission reduction targets will continue to increase. (Fagan Test., 59:19-60:1.)

64. In order to operate, the KEC Facility needs a maximum of 3.9 million cubic feet per hour of natural gas at a minimum pressure of 550 pounds per square inch gauge ("psig") when operating at 100% capacity and approximately 650 psig at the Site Boundary. (Id. at § 2.5; see also Trans., 561:3-7 (NTE agreeing that the KEC Facility cannot operate without a source of natural gas).)

65. NTE plans to connect its proposed facility to the Algonquin Gas Transmission ("AGT") main line located 2.8 miles away in Pomfret, Connecticut. (App., § 8.1.1.)

66. The natural gas pipeline path that NTE has chosen will utilize an existing Eversource right-of-way. (Id.)

67. Within this 2.8-mile long and 50-foot wide right-of-way, Eversource must remove, replace or upgrade the existing pipeline so that a much larger pipeline of “at least 14 inches with a pressure of 700 psig” can be installed. (Id. at § 8.1.)

68. The pipeline is currently in the range of 4-6 inches in diameter. (Trans., 202:18-23.)

69. The pipeline traverses many protected and regulated natural resources:

From the [point of interconnection] with the AGT pipeline, the existing pipeline heads southeast beneath a wetland area for approximately 2,000 feet, then continues southeast for approximately 600 feet abutting an open field before crossing Holmes Road and the Airline North State Park Trail. The pipeline continues southeast for approximately 3,000 feet through forested and protected open space, then heads south, paralleling Durkee Brook for approximately 3,000 feet. The pipeline continues southeast for approximately 2,500 feet, passing west of Bruce’s Pond and crossing River Road. The pipeline continues in a southeasterly direction, crossing the Quinebaug River into the Town of Killingly. South of the Quinebaug River, the pipeline continues approximately 2,000 feet through forested lands until it enters the southern edge of Lake Road. . . . The approximate length of the existing pipeline is 2.8 miles.”

(App., § 8.1.1.) Figure 8-1 of the Application provides a general map of the pipeline.

70. The new pipeline must cross, go through, or abut open space and protected land held by the Wyndham Land Trust; the Bafflin Sanctuary owned by the Connecticut Audubon Society; the Airline North State Park Trail; a large undeveloped parcel owned by the Pomfret Rod and Gun Club; and the Quinebaug River. (Id. at § 8.1.8.)

71. “The existing pipeline traverses several wetland areas.” (Id. at § 8.1.5.)

72. In order to construct the necessary pipeline “some clearing may be necessary to accommodate the replacement lateral and to provide sufficient workspace for construction.” (Id.)

73. Dr. Klemens asked, “you can’t provide information on amount of wetland potential impact, amount of wetland digging, how you’re going to protect the wetlands, how you’re going

to protect the wood turtles, you're saying we have to wait for another day to get that plan?"

(Trans., 233:9-14.)

74. The Council raised concerns about the wood turtles, wetlands, wetland restoration and the control of invasive species during the hearing. (Trans., 234:16-19.)

75. Killingly is an Environmental Justice Community, as that term is defined in the Environmental Justice Statute. (App., 6.)

76. The last general public meeting that NTE participated in prior to filing the application was held on July 11, 2016. (Trans., 544:12-24.)

77. The reports included in the Application as Exhibits D, E, F, M, and N were all dated August 2016. (Trans., 544:25-548:3.)

78. In response to the Council's question regarding how the August reports differed from the information that had been provided to the public at the so-called informal public meeting in July, NTE's witness Lynn Gresock explained: "Many of those reports had not yet been published at that point, and we're relying on the fieldwork and analysis that was ongoing up until the time the application was submitted." (Trans., 548:23-549:2.)

79. Gresock later elaborated that because technical work or field activities were still ongoing, "it wasn't yet time to have a public report." (Trans., 549:24-550:4.)

80. The Application included a Visual Impact Assessment (the "VIA"). (App., Ex. K.)

81. The VIA focused primarily on the ability to view the 150-foot stack at the KEC Facility from ten locations. (App., Ex. K, 18-20.)

82. The VIA identified eight "key aesthetic resources" within a 5-mile radius of the KEC stack that "may be especially sensitive to changes in view."

83. One of the key resources is the 32-acre Dunn Preserve that is directly adjacent to the

KEC Facility, forming the southwest border. The Dunn Preserve is owned by the Wyndham Land Trust (the “Trust”) and was acquired by the Trust in 1992 with the mission to conserve the natural resources of the Dunn Preserve and to provide recreational and educational opportunities to the public. (See Pre-filed Testimony of Benjamin Williams.)

84. While the VIA primarily considers the visual impact of the proposed KEC stack, the revised site plans reveal that the one million gallon diesel fuel tank, fuel gas metering and heating equipment, and water storage tanks will be located as close as 60 feet to the border with the Dunn Preserve. (See NTE’s response to the Wetlands Orders (“NTE Resp.”), Ex. 2.)

85. The VIA misrepresents the vegetation screening for an observer located on the “Dunn Preserve KOP” in Exhibit 9. (Trans., 877:10-25.)

86. As the revised site plan shows (NTE Resp., Ex. 2), vegetation will extend from the “Observer” position on Figure 9 for no more than 60 feet and not the 200 feet shown on Figure 9.

87. The properties surrounding the proposed KEC Facility are situated within Class A noise zones. (Trans., 839:13-16.)

88. The KEC Facility is located in a residential zone and will remain located in such zone even after construction has been completed. (Trans., 844:13-20.)

89. In order to determine noise impacts from future operations, NTE calculated  $L_{eq}$  (dBA) values at five discrete locations around the NTE property boundaries. (Trans., 848:4-8.)

90. The Killingly Plan of Development does not include the Switchyard portion of the KEC Facility within the area identified for potential industrial use. (Trans., 550: 22-25, 551: 1-11.)

91. Three of the sampling points are located several feet off of the property boundary and in a Residential or Class A noise zone. (Id. at 9-15.)

92. NTE admitted that it did not conduct background noise level measurements at the five

sampling locations for compliance purposes, and therefore did not record an L<sub>90</sub> value. Instead, NTE reports only an average. (Trans., 854:2-856:14.)

93. The measured sound pressure levels have a margin of error of +/- 2 dB. (Trans., 850:15-21.)

94. For purposes of modeling, NTE used manufacturer's specifications of sound power to determine sound pressure levels that will be emitted from 35 discrete pieces of equipment that will be operated on the NTE site. (App., Ex. L, 21.)

95. NTE estimated that the sound pressure reading is about 10-15 dB lower than the sound power value, when measured at a distance of approximately three feet from the emitting source. (Trans., 858:5-12.)

96. NTE notes that sound pressure readings in the range of 80 or more decibels are considered to have a "significant" subjective impression. (App., Ex. L, 5; Trans. 860:13-19.)

97. A lawnmower and jet ski are examples of such emitters. (App., Ex. L, 5.)

98. The 35 discrete pieces of equipment that NTE will employ at this site have sound power values ranging from 73-118 dBA. (App., Ex. L, Table 8.)

99. NTE noted that these values include sound abatement measures. (Trans., 859:14-21.)

100. NTE's modeling reveals that the projected sound level created by the KEC Facility will range from only 39-50 dBA at the property line. (Update, Table 4.)

101. The current ambient noise ranges from 32-47 dBA. (App., Ex. L, 14.)

102. Noise levels projected for ST-2, ST-4, and the long term monitoring location, exceed the nighttime residential standard of 45 dB under the Killingly ordinance. (See Update, Table 4.)

**NOT ANOTHER POWER PLANT  
WYNDHAM LAND TRUST**

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## CERTIFICATION

HEREBY CERTIFY that a copy of the foregoing document was electronically mailed to the following service list on April 24, 2017:

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