STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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VIA ELECTRONIC MAIL

September 23, 2016

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

RE: **DOCKET NO. 470** – NTE Connecticut, LLC application 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.

Dear Attorney Baldwin:

The Connecticut Siting Council (Council) requests your responses to the enclosed questions no later than October 7, 2016. To help expedite the Council's review, please file individual responses as soon as they are available.

Please forward an original and 15 copies to this office, as well as send a copy via electronic mail. In accordance with the State Solid Waste Management Plan and in accordance with Section 16-50j-12 of the Regulations of Connecticut State Agencies the Council is requesting that all filings be submitted on recyclable paper, primarily regular weight white office paper. Please avoid using heavy stock paper, colored paper, and metal or plastic binders and separators. Fewer copies of bulk material may be provided as appropriate.

Copies of your responses shall be provided to all parties and intervenors listed on the service list, which can be found on the Council's pending proceedings website.

Yours very truly,

Melanie Bachman
Acting Executive Director

MB/MP

c: Parties and Intervenors
Council Members

Docket No. 470
Pre-Hearing Questions for NTE
September 23, 2016
Set One

Site Question

1. Referencing page 22 of Volume I of the Application (Volume I), clarify which address (i.e. 180 or 189 Lake Road) is associated with the 63-acre parcel and which address is associated with the 10-acre parcel.

Notice and Municipal/Public Outreach Questions

2. Of the letters sent to abutting property owners, how many certified mail receipts were received? If any receipts were not returned, which owners did not receive their notice? Were any additional attempts made to contact those property owners? For example, was a second notice provided by First Class Mail?

3. NTE Connecticut, LLC (NTE or Applicant) notes that public information meetings were held on March 22, May 4, and July 11, 2016. Where were these three meetings held?

4. On page 6 of Volume I, NTE notes that community outreach effort included "informational meetings with the Killingly Town Council, Economic Development Commission, Planning & Zoning Commission, Inland Wetlands & Watercourses Commission, business owners, neighborhood residents, and other interested stakeholders." Approximately when were the informational meetings with municipal officials held?

Alternatives Questions

5. Identify the address locations of Site 1 and Site 2 as noted on pages 176 and 177 in Volume I.

6. Referencing the Alternative Technologies section on page 179 of Volume I, is it correct to say that one megawatt (MW) of solar photovoltaic electric generation is not equivalent to one MW of conventional natural gas-fueled generation in terms of electric energy production because of the different capacity factors involved?

Construction Questions

7. Quantify the amounts of cut and fill that would be required to develop the proposed facility.

8. Would the unpaved areas of the power plant footprint be crushed stone?

9. Would the security fence around the power plant be chain link? How tall would the security fence be? For chain link fences, is it correct to say that two-inch mesh is a standard or typical size? Has NTE considered either a smaller than two-inch mesh as an anti-climbing measure or two-inch mesh with anti-climb mesh material (or privacy slats) installed? If approved, could the final fence design be included in the Development and Management Plan (D&M Plan)?

10. Provide the total length of the 30-foot wide power plant access drive, including its "loop" around the power plant. Would the driveway be asphalt or gravel? If approved, could the final driveway design be included in the D&M Plan?

11. Generally, which factors are considered when determining a power plant's stack location on a subject property, e.g. visibility, aviation issues, air emissions dispersion, etc.?

Power Plant Operations Questions

12. Would the proposed combined-cycle facility have black start capability?

13. Would the proposed facility be baseload, intermediate, or peaking?

14. When would duct firing (if applicable) be operated, e.g. under peak load conditions?

15. Could the plant operate as simple cycle (i.e. without the steam turbine) under certain conditions, or is this an unlikely mode of operation? Provide the efficiency of the plant for simple cycle operation (if applicable) and for the proposed combined cycle operation.

16. Section 2.4 on Page 39 of Volume I provides the MW data for the plant. Is all of this data based on summer output? If yes, provide the corresponding MW data based on winter output. Also estimate the parasitic load in MW when firing ULSD.

17. What are the approximate cold and hot start-up times for the plant if dispatched?

18. Could the plant provide spinning reserves? What is the approximate ramp rate of the plant in MW/minute if the plant had to ramp up or ramp down in response to ISO New England, Inc. (ISO-NE) dispatch?

19. Reference pages 14 and 15 of Volume I of the Application. Explain how "rotational inertia-based generation" (such as the proposed plant) could "...respond quickly to mitigate the effects of sudden and dramatic peaks or outages inherent in inverter-based generation relying on variable weather conditions to produce power."

20. What is the status of the ISO-NE System Impact Study noted on page 16 of Volume I?

21. If approved, could a decommission plan be provided in the D&M Plan, including plant infrastructure removal plans and site restoration plans?

Electric Energy and Markets Questions

22. Would the proposed facility also provide ancillary services in ISO-NE's markets? If so, which ones?

23. On page 10 of Volume I, NTE discussed the ISO-NE Forward Capacity Auction (FCA) process. With FCA #11 expected to be held in February 2017, is it correct to say that, if NTE's proposed plant is a winning bidder and the plant is approved by the Council, the plant would have to be operational on or before June 2020?

Fuel Questions

24. Would the Access Northeast Pipeline Project, Algonquin Incremental Market Project, or another natural gas transmission upgrade project in the area be required to supply sufficient natural gas for the proposed power plant? Or, would the existing natural gas transmission system, as it stands currently, be adequate to meet the firm natural gas commitment for the plant, if the plant is approved?

25. How was the amount of proposed on-site ULSD storage determined?

26. If approved, could the final design of the natural gas compressor(s) portion of the facility be included in the D&M Plan?

27. On page 19 of Volume I, NTE notes that its "firm gas" contract is for seven years, starting in 2020. If the plant is approved, what are NTE's plans for natural gas service after 2027? Would NTE re-evaluate natural gas availability at that time and look at possibilities such as extending the contract and/or installing more ULSD storage in the event of a switch to an interruptible gas arrangement?

28. What is the maximum ULSD consumption rate of the plant in gallons per hour (assuming full/maximum load conditions)?

29. Are there any ISO-NE Winter Reliability Studies relative to dual fuel and fuel storage that would be applicable to the proposed project? If yes, provide a copy of such studies, assuming such studies are public and not subject to Critical Energy Infrastructure Information restrictions.

30. Page 41 of Volume I notes that the ULSD can be stored for two or three years. Is that based on a full tank? Would the storage life be less on a partially full tank because of air pockets with moisture that could potentially enter the fuel?

31. When the maximum storage life of the ULSD has been reached or exceeded, what would NTE do with the stored ULSD? Can the ULSD be reused or recycled at the end of its useful life? Or would the ULSD have to be removed and properly disposed by a contractor or sold to a waste oil vendor?

Visibility Questions

32. How would the proposed project impact The Last Green Valley National Heritage Area?

33. Describe the visibility of the proposed power plant from the Airline North State Park Trail.

34. Are there any National, State, or locally designated scenic roads within a five-mile radius of the center of the plant's stack? If yes, describe the visibility of the power plant stack from such locations.

35. Would the proposed 150-foot stack be cylindrical or tapered? What color would the stack be? Is it a neutral color intended to blend in the sky?

36. Would exhaust plumes from the 150-foot stack be visible under certain circumstances such as cold weather below 40 degrees F or very humid conditions? Roughly how tall could a visible plume rise on a calm day (i.e. negligible wind)?

37. Is it correct to say that the auxiliary boiler stack would be associated with a small combustion source and would typically operate for a short time during startup and thus would emit a negligible visible exhaust plume?

38. Approximately how many residences are located within 1,000 feet of the center of the proposed power plant site? Provide the address and direction from the Facility to the nearest property boundary of the nearest residence.

39. Approximately how many residences are located within 1,000 feet of the center of the switchyard site to be located east of Lake Road? Provide the address and direction from the switchyeard to the nearest property boundary of the nearest residence.

40. Where is the highest ground elevation measured above mean sea level (amsl) within a five-mile radius of the plant stack located? How does the height at the top of the stack amsl compare with the highest ground elevation within a five-mile radius?

Noise Question

41. Would the air cooled condenser (ACC) fans be staged according to demand so that the minimum required number of fans would be on at a given time (and more would turn on as needed) to minimize noise and power consumption (i.e. parasitic loads)?

42. As noted on page 38 of Volume I, the backup generator would have periodic readiness testing. Approximately how often would readiness testing occur and for how long, e.g. 20 minutes per week? Could readiness testing be scheduled during daytime hours instead of nighttime hours?

Water Resources Questions

43. Is the proposed project located within a DEEP-designated aquifer protection area?

44. On page 106 of Volume I, NTE notes that, "Groundwater at the KEC Site is classified as Class GA (DEEP Water Quality Classifications Map). Class GA-designated uses include existing and private and potential public or private supplies of water; DEEP presumes that groundwater in such areas is suitable for drinking and other domestic uses without treatment..." How would the proposed project impact Class GA groundwater resources?

45. Is the project located outside of a 100-year and 500-year flood zone? Provide a Federal Emergency Management Agency (FEMA) Flood Map for the proposed power plant site. If the project is in FEMA Zone X, indicate whether it is "unshaded Zone X" or "shaded Zone X."

46. Is it correct to say that the ACC would be a closed system that would not rely on evaporative cooling in order to save water? As such, is it also correct to say that the ACC would not emit a plume like an exhaust stack or wet cooling tower?

47. Did NTE consider using an air conditioning system with a compressor (i.e. chiller system) as opposed to evaporative cooling of the incoming air to the turbine to further reduce water consumption? What are the pros and cons of evaporative cooling versus a chiller system to cool incoming turbine air? For example, would the chiller system reduce water consumption, but increase cost and parasitic power plant loads?

48. What is the status of the "Eastern Regional Distribution Improvements" to the water supply system as noted on Figure 2-10 in Volume I, and how would such improvements affect water supply for the proposed power plant?

Air Emissions Questions

49. Provide a $PM_{2.5}$ dispersion map (under worst-case conditions), similar to Exhibit 13q of Docket No. 192B. See Figure 6 of Docket No. 192B Findings of Fact.

50. Is the proposed stack height the minimum stack height required to meet air pollutant emissions standards? Explain.

Wildlife Questions

51. Where is the nearest Important Bird Area (relative to the center of the Facility) as indicated by the National Audubon Society?

52. Where is the nearest northern long-eared bat (NLEB) hibernaculum located? Provide the distance and direction from the center of the proposed Facility?

53. Is the project located in or near a Critical Habitat Area (CHA)? If yes, how would the project impact the CHA?

54. Would the proposed 150-foot stack itself adversely affect birds such as allowing collisions or landing on a hot (temperature-wise) surface?

55. Provide a Turtle Protection Plan for the eastern box turtle, a State-designated Species of Special Concern. Would such plan also be protective of the wood turtle, a State-designated Species of Special Concern? If approved, could the final turtle protection measures be included in the D&M Plan?

56. Reference Volume II of the Application (Volume II), NTE submitted a Natural Diversity Database (NDDB) Map of the Town of Killingly. Identify the project location on the NDDB map.

57. Has NTE received any follow-up correspondence from DEEP regarding Natural Diversity Database species?

58. Regarding the vernal pools noted on page 79 of Volume I, provide a vernal pool analysis per the *Best Development Practices: Conserving Pool-Breeding Amphibians in Residential and Commercial Developments in the Northeastern United States* by Klemens and Calhoun and include the existing and proposed percent development areas for the 100-foot Vernal Pool Envelopes and the 100-foot to 750-foot Critical Terrestrial Habitat areas. A useful example of how to correctly analyze a habitat that has various components is that for Council Docket 455 (Tab 14 of that application) which clearly shows the correct treatment of wooded, open and grassed areas, versus developed areas. Only the developed areas are considered to be lost habitat.

Other Environmental Questions

59. To date, has NTE received a response from the State Historic Preservation Office (SHPO) and/or the Tribal Historic Preservation Offices (THPO) regarding the proposed project? If yes, provide a copy of such response(s).

60. How would the proposed project impact the burial ground known as Sorrow Cemetary identified in the redacted version of the Option Agreement submitted on August 25, 2016.

Power Plant Safety Questions

61. Would both generator step-up transformers have containment measures in the event of any leaks of dielectric fluid? Would the dielectric fluid contain polychlorinated biphenyls (PCBs)? If approved, could the final transformer fluid containment plans be included in the D&M Plan?

62. What safety measures would be employed relative to the use and storage of hydrogen?

63. Would the backup generator have containment measures to protect against fuel, oil, or coolant leakage? For example, would it have a double-walled fuel tank and a recessed floor under the engine compartment? If approved, could the final plans for containment measures for the backup generator be included in the D&M Plan?

64. What percentage of the full amount of ULSD could the lined containment area (noted on page 60 of Volume I) contain (e.g. 110 percent)?

65. Is correct to say that combustion of natural gas (as well as ULSD) produces a significant amount of harmless water vapor in the exhaust plumes? Would this steam from the exhaust be expected to condense and/or freeze on the ground on adjacent properties resulting in wet and/or icy conditions near the plant?

66. NTE provided a FAA "No Hazard" letter for the 150-foot stack dated July 18, 2016. Does NTE need FAA letters for any other structures at the power plant site, such as the turbine building or auxiliary boiler stack (if applicable), or is one "No Hazard" letter for the stack sufficient?

67. In the FAA "No Hazard" letter, FAA states that, "Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary bases, we recommend it be installed and maintained in accordance with FAA Advisory circular 70/7460-1 L." Is NTE anticipating no lighting/marking, or is NTE considering lighting/marking on a voluntary basis? Would no marking/lighting reduce the visual impact of the stack on surrounding areas? If marking/lighting is considered, could the final lighting design be included in the D&M Plan if approved?

68. Provide an exhaust plume analysis using the MITRE software and include any inputs/assumptions and any outputs/computer printouts and associated conclusions regarding aviation safety in the vicinity of stack plumes similar to Late Filed Exhibit No. 1 in Council Petition No. 1218.

69. If the project is approved, would NTE perform the following power plant safety-related items noted below?

    a) Comply with all conditions of the "Electric Generator Decision and Order" dated March 17, 2011 in Council Docket No. NT-2010. This would include, but not be limited to, filing an emergency response/safety plan (produced in consultation with state and local public safety officials) with the Council in the D&M Plan;

b) Retain a special inspector to assist the municipal fire marshal in reviewing the construction plans and conducting inspections pursuant to Connecticut General Statutes (CGS) §16-50ii; and

c) Remit a fee to the Code Training Fund to be used in the training of local fire marshals on complex issues of electric generating construction in accordance with CGS §29-251c.