



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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VIA ELECTRONIC MAIL

April 2, 2019

TO: Parties and Intervenors

FROM: Melanie Bachman, Executive Director *MB*

RE: **DOCKET NO. 470B** – 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. Reopening of this application based on changed conditions pursuant to Connecticut General Statutes §4-181a(b).

Comments have been received from the Connecticut Department of Energy and Environmental Protection, dated April 1, 2019. A copy of the comments is attached for your review.

MB/MP/lm

c: Council Members

April 1, 2019

Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

RE: Killingly Energy Center
NTE Connecticut, LLC
Killingly, Connecticut
Docket No. 470-B

Dear Members of the Connecticut Siting Council:

Staff of this department have reviewed the submittals made in the above-referenced proceeding, which is a reopening of the Docket 470 application of 2016. Modifications to the proposed natural gas-fired powerplant since the initial application include the incorporation of a newer technology turbine-generator which increases the output of the facility from the previous rating of 550 MW to approximately 650 MW within substantially the same footprint on the host site at 189 Lake Road in Killingly.

Consistent with the 2016 Docket 470 proposal, the Killingly Energy Center facility would have dual-fuel capability, with ultra-low sulfur diesel (ULSD) for a back-up fuel. A switchyard to connect the generating facility with the 345-kV Eversource transmission line constructed under Docket 424, the Interstate Reliability Project, would be constructed across Lake Road from the generating facility.

DEEP asks that the Council take administrative notice of DEEP's Docket 470 comments of November 7, 2016 in its evaluation of the current proposal. No additional site visit has been conducted other than the field review of October 19, 2016 but we assume that the description of the site from that visit remains relevant.

DEEP notes and concurs with the cited system benefits that the Killingly Energy Center would bring to the electricity supply capacity and security in Connecticut and the New England region. These benefits flow from the dual-fuel capacity of the Killingly Energy Center (KEC) and from its firm gas supply contract. Particularly at times of peak natural gas demand during extreme cold weather, these two features of the KEC will provide substantial enhancement of the reliability of the electric supply system to the state and the region and will diminish the likelihood of older, less efficient and higher emitting generation assets being called into service and of price spikes as those types of assets are dispatched.

Air Permit Issues

DEEP issued a New Source Review Permit to NTE for the Killingly Energy Center on December 10, 2018. DEEP affirms the claims made on page 25 of Mr. Paul Hibbard's testimony that the KEC will operate at a CO2 emissions level as low as any natural gas plant in the northeast. The Mitsubishi turbine's particulate matter emissions rates are also significantly cleaner than those of the previously proposed Siemens turbine and are well below those of the CPV Towantic plant. The KEC as currently proposed will have one of the lowest PM emissions rates nationally.

One emissions rate in Table 4 of Exhibit 3 that is puzzling is the rate shown for lead emissions, which that table shows to be five times higher for the Mitsubishi turbine than for the Siemens turbine, at 18 pounds per year for the Mitsubishi turbine vs. 3.6 pounds per year for the Siemens turbine. Given that the lead emissions rate would be chiefly a function of the lead content of the fuel consumed, which would be the same for either the Siemens or Mitsubishi turbines, the 18% increase in turbine rating for the Mitsubishi should not yield a fivefold increase in lead emissions.

Diversions Permit

A Diversions Permit was issued to Connecticut Water Company on March 15, 2018 for the diversion of up to 540,000 gpd between Connecticut Water's Plainfield and Crystal Divisions. Authorization for this diversion runs through January 17, 2027. The Docket 470-B submittals note that NTE has committed to fund the construction of the two connections necessary to convey water from the Plainfield system to the KEC. The 540,000 gpd volume is in excess to the water needs stated in the Docket 470 application of up to 400,000 gpd when the powerplant is firing ultra low sulfur diesel fuel.

Natural Diversity Data Base Review

By letter of March 11, 2019 from the DEEP Natural Diversity Data Base Program to Lynn Gresock of Tetra Tech, DEEP has concurred with NTE's proposed bat and turtle avoidance measures and with the Upland Lepidoptera Habitat Plan proposed for a site just north of Lake Road. Reference to the lepidoptera habitat enhancement is contained on page 14 of Exhibit 3 of the Docket 470-B submittal.

Stormwater Permits

The Killingly Energy Center will require approval from DEEP for its stormwater discharges. As this project falls under the Locally Exempt classification, its stormwater permits would be issued by DEEP. To date, no registration has been received under either the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities or the General Permit for the Discharge of Stormwater Associated with Industrial Activities. For projects where one to twenty acres of land will be disturbed by construction activity, the registration must be submitted at least 60 days prior to the commencement of construction activities. For projects disturbing in excess of twenty acres, the registration must be received at least 90 days in advance of the commencement of construction activities. Thus, it is not unexpected that the stormwater general permit registrations would not have been submitted as of this time. More detail on these permits is available at deep.stormwater@ct.gov.

Wastewater Discharge Permit

The wastewater from the Killingly Energy Center will likely require an Individual Permit to discharge to the Killingly wastewater treatment plant. The permit would be issued by DEEP but would incorporate Killingly's local limits for discharges to its treatment plant. The original application notes (p. 51) that discharges from equipment drains and floor drains will be directed to an oil/water separator prior to discharge from the plant. The applicant may contact Michelle Gore of the DEEP Water Protection and Land Reuse Bureau at (860) 424-4160 in regard to the discharge permit requirements.

Wetland Mitigation Plan, Water Quality Certification

As noted in our 2016 comments, the switchyard construction will directly impact 0.287 acres of Wetland D which is immediately adjacent to the Eversource transmission line right-of-way. That application did not contain specific details as to the location of the wetlands replication area proposed for mitigation or of the areas slated for invasive species control efforts. Conceptually, the creation of 0.39 acres of inland wetland in the immediate vicinity of the impacted wetland, the removal of invasive species including Asiatic bittersweet, Japanese barberry, multiflora rose and glossy buckthorn elsewhere on the Killingly Energy Center property, and a five-year monitoring period for the invasive species removal effort is an appropriate mitigation plan for the switchyard's wetland impacts. Assuming that review of the mitigation plan will be an element of the project's Development and Management Plan should the project receive the Council's approval, DEEP would be willing to offer its assistance in the review of the mitigation plan.

Because the wetland impact of the project is less than 0.5 acres, the Corps of Engineers will likely find it eligible for a Pre-Construction Notification rather than requiring an individual permit. If that proves to be the case, the project would qualify under DEEP's Section 401 Water Quality Certification General Permit.

Noise Impacts

Noise generated by the KEC is likely to be the foremost impact from the facility as experienced by residents in the proximal area. As noted in DEEP's 2016 comments for Docket 470, a visit to the nearby Lake Road Generating Facility confirmed that the air-cooled condensers are indeed the major noise emitter for this type of facility. The property value guarantee agreement mentioned on page 23 of Exhibit 3 for property owners within 2,500' of the plant is, at least for Connecticut, a novel mechanism to address noise and other impacts which may affect property values. The Council may wish to investigate the specifics of such an agreement in more detail.

For noise generated during facility construction, the last two noise mitigation measures on page 17 of Appendix D to Exhibit 3, the Sound Survey and Analysis Report, would be particularly worthwhile measures. The first of these stipulates that, prior to the start of construction, a procedure for addressing noise complaints from residents be established. This, of course, assumes that the residents will be informed of this procedure such as, for instance, by providing residents with a phone number to call with any noise complaints or questions. The second measure, communicating with the community in advance to give residents a heads-up concerning any scheduled events, such as steam blows, which may be expected to generate significant noise levels, would address one of the major issues that neighbors of the CPV Towantic powerplant complained

about in the latter phases of its construction. Communications with neighbors is always a beneficial strategy.

Fuel Supply Questions

The DEEP Bureau of Energy and Technology Policy would like the Council to flesh out the specifics of the firm natural gas contract for KEC, specifically how far upstream does the commitment for a firm supply of gas extend? Is this commitment only firm for the local distribution company, in this case Eversource, or is it also binding upon Algonquin and its suppliers? Also, what conditions could conceivably result in a curtailment of the natural gas supply to KEC despite the firm supply contract?

Regarding the supply of the ultra low sulfur diesel fuel, what measures would be feasible and available to extend the length of time that the facility can operate on ULSD beyond the 45.7 hours of supply that is stored on site? How much can this operating time be extended via deliveries of additional supply during the 45.7 hours when the on-site supply is being used? Is the delivery of ULSD covered by any contract to ensure continuous delivery? What factors determined the proposed size of the on-site fuel oil storage tanks? What are the constraints on incorporating more on-site storage?

Thank you for the opportunity to review this application and to submit these comments to the Council. Should you, other Council members or Council staff have any questions, please feel free to contact me at (860) 424-4110 or at frederick.riese@ct.gov.

Respectfully yours,



Frederick L. Riese
Senior Environmental Analyst

cc: Commissioner Katie Dykes