DOCKET NO. 189 - An application by Lake Road Generating Company L.P. for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a proposed electric generating facility located off of Lake Road in Killingly, Connecticut.	}	Connecticut
	}	Siting
	}	Council
		December 7, 1998

Opinion

On July 1, 1998, Lake Road Generating Company, L.P. (Lake Road Generating) applied to the Connecticut Siting Council (Council) for a Certificate of Environmental Compatibility and Public Need (Certificate) for its proposed electric generating facility in Killingly, Connecticut.

Under Public Act 98-28, "An Act Concerning Electric Restructuring", the applicant has provided evidence that the proposed project would have a "public benefit" by improving reliability of the electric supply of the state and region; reducing dependence on large nuclear generators; improving air quality by forcing older more polluting facilities to retire; and providing flexibility to meet public demand. In addition, this project would provide economic benefits to the Town of Killingly and the State of Connecticut with all financial risks borne by the developer. The established dialogue between Lake Road Generating and the Town of Killingly, that continued through the Council's application process, has helped to refine this proposal and is a model for others to follow.

The applicant has provided documentation that the site would be appropriate for the proposed project, offering: ease of electrical and gas interconnection; visual buffering from nearby residents; location in an industrially-zoned parcel already surrounded by established commercial and industrial uses; and a lack of significant effects on wildlife, rare and endangered species, and historical sites.

The proposed site has many positive attributes, but we are concerned that large electric generation facilities would better serve the community if such facilities were located in or near large load centers or on existing "brownfield" sites. Such locations would minimize the need to build new transmission facilities and help to efficiently rehabilitate urban sites for reuse. Nonetheless, the proposed facility has been located based on market conditions, not simply intended to provide benefit only to the local community. It would be integrated with other electric suppliers providing capacity to the region, and must be assessed as a regional facility. Consequently, to protect the region's electric transmission grid, we will require completion of the ISO New England transmission impact study before approval of any interconnection with the grid. In addition, although this interconnection has not yet been fully engineered and all details are not yet clearly known, this interconnection is expected to significantly increase magnetic fields at the edge of the existing right-of-way. Such changes can not be authorized by this agency until the full extent of these changes can be assessed and are consistent with the Council's Best Management Practices for Electric and Magnetic Fields.

The proposed combined-cycle gas-fired turbine is a proven technology with an efficient design that uses less fuel and emits less emissions than existing fossil-fueled facilities. Alternative technologies and fuels that were considered were eliminated as not being cost effective or compatible for baseload operation, and would be restricted by site limitations, permitting schedules, and complicated construction. The primary fuel for the facility would be natural gas, which Lake Road Generating expects firm supplies. As a contingency to a natural gas supply interruption, the facility could operate for up to 30 days in a year on distillate fuel oil and still meet air emission standards. To ensure that the

facility can remain reliable during extended periods of natural gas curtailment, we shall order that the applicant reevaluate the distillate fuel oil storage and unloading capacity needed to operate the proposed facility continually on distillate fuel oil for up to 30 days.

Even though the use of natural gas is considered a clean burning fossil fuel, the facility would emit air pollutants including emissions of nitrogen oxides (NO_x), and sulfur dioxide (SO_2) during operation on distillate fuel oil. While the rate of these emissions are low, they are the precursors to the formation of ozone and acid rain. To minimize the effects of these and other pollutants, Lake Road Generating has acquired NO_x emissions at a minimum ratio of 1.2 to 1 from a former local source, Anchor Glass, to comply with requirements for non-attainment new source review. Credits to offset SO_2 emissions would be purchased from a commodity market. Further, the Department of Environmental Protection (DEP) would review modeling and calculations regarding prevention of significant deterioration of air quality, new source review, acid rain, and hazardous air pollutants prior to issuing a permit to construct and operate. With these provisions in place, we believe that the facility would operate without deterioration of local air quality, meet all national and State ambient air quality standards, and would provide a net air improvement to regional air resources.

The proposed facility requires the placement of an underground natural gas pipeline which is expected to be the subject of a future application or petition. The location of this pipeline is not known at this time and cannot be approved until all siting and environmental assessments have been completed.

We commend the applicant's choice to use dry-cooling for the proposed facility. This choice maximizes the conservation of water resources and reduces atmospheric drift associated with evaporative cooling. While increased noise, larger site footprint, and the incremental loss of total electric output are some of the disadvantages to dry-cooling, these disadvantages are outweighed by the conservation of water resources and reduction of atmospheric drift, and would not impact the economic viability of the proposed project.

Noise mitigation measures proposed for the facility include use of acoustic enclosures, silencer and filter systems, and specially designed fans. Lake Road Generating would also restrict intensive construction activities between the hours of 7:00 a.m. and 10:00 p.m. Moreover, to reduce potential impacts to abutting landowners of the proposed facility, Lake Road Generating has entered into purchase-option agreements with several of the nearest landowners. Nonetheless, the modeled noise levels (L_{90}) of the proposed facility when added to the existing ambient noise levels (L_{90}) appear to incrementally exceed DEP noise regulations at residential homes located on Old Trolley Road and Tracy Road. To correct this apparent violation, we shall order the applicant to perform a post construction noise survey and develop an effective mitigation plan. With these provisions, we are confident that the facility can achieve compliance with State noise regulations and will operate without creating a community nuisance.

The view of the proposed facility's buildings would mostly be obscured by vegetation. However, the tops of the three 165-foot tall exhaust stacks would be visible from I-395, the Killingly Industrial Park, Tracy Road, Lake Road, and the south shores of Alexander Lake. Although the tops of these stacks would be visible from certain locations, the development of theses stacks would be consistent with the industrial zoning of the site; consistent with existing land uses, including a water tank which exists adjacent to the proposed facility and rises above the tree canopy; not lighted per Federal Aviation Administration criteria; and not visually significant from the most sensitive receptor, Alexander Lake, of

which such visual effect would be diminished by distance. Nonetheless, to reduce the visual effect associated with the development of these stacks we will require their heights to be modeled at the lowest height necessary for air emission dispersion and possibly reconfigured into one enclosure to be reevaluated through a Development and Management Plan (D&M Plan).

The nearest disturbance to wetlands and an intermittent watercourse would be from a proposed private access road 25 feet from the intermittent watercourse. Although these wetlands and watercourse are relatively small and isolated, the functions that they provide are valuable and require protection to control stormwater runoff, filter surface water, recharge groundwater, and provide refuge for wildlife. In concurrence with the Town of Killingly Inland Wetlands and Watercourse Commission, we shall order the applicant to protect the inland wetlands and watercourse areas on site by placing erosion and sediment controls and construction fencing around these areas prior to construction. Lake Road Generating is still finalizing the details of the stormwater management plan in consultation with the Town, and we expect that a final plan be submitted with a D&M Plan for this project.

We are concerned that the proposed site with numerous chemicals, lubricants, and liquid fuels would be located within an aquifer protection zone. However, the applicant has designed the facility and ancillary equipment to have secondary containment areas capable of holding 110 percent of liquid capacity; impermeable barriers; leak detection monitoring systems; corrosion protection; training and written operating procedures for staff; and routine inspections. To ensure that these provisions function as proposed, the Council will require the applicant to develop a Spill Prevention Control and Countermeasure Plan consistent with federal and State requirements.

Based on its record in this proceeding, the Council finds that the effects associated with the construction, operation, and maintenance of this proposed electric generating facility including effects on the natural environment; ecological integrity and balance; forests and parks; scenic, historic, and recreational values; air and water purity; fish and wildlife; and public health and safety are not disproportionate either alone or cumulatively with other effects when compared to benefit, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application. Accordingly, the Council will issue a Certificate for this facility.

To ensure that the proposed facility is developed as proposed, the Council will require a detailed D&M Plan with elements designed to protect resources on site and mitigate impacts off site. The D&M Plan will include a plan to protect inland wetlands, a finalized stormwater management plan, a Spill Prevention and Countermeasure Plan, a pre-construction blasting survey, and landscaping incorporating the use of existing forested areas as a buffer for visual and acoustical mitigation. The Council will also require architectural treatment of all buildings and structures to minimize visual impacts of the facility on the surrounding community. In addition, the Council will require an Operations Plan with baseline testing, monitoring, and protocol to address water use under power augmentation, water discharges, air and water vapor emissions, odors, plant lighting, traffic control, and site management. The project shall not commence construction until the Council has considered and approved the D&M Plan. The project shall not commence operations until the Council has considered and approved the Operations Plan for this project.