DOCKET NO. 141 - A joint application of the Connecticut Light and Power Company and the United Illuminating Company for a Certificate of Environmental Compatibility and Public Need for the construction of a 115kV electric transmission line and related telecommunications equipment between the United Illuminating Company's Pequonnock Substation in Bridgeport and the Connecticut Light and Power Company's Ely Avenue Junction in Norwalk, Connecticut.

Connecticut

Siting

Council

September 18, 1991

OPINION

The Northeast Utilities Service Company, acting as an agent for the Connecticut Light and Power Company (CL&P), and the United Illuminating Company (UI) applied to the Connecticut Siting Council (Council) for a Certificate of Environmental Compatibility and Public Need (Certificate) to construct, operate, and maintain a new overhead 115kV electric transmission line and related telecommunications equipment between UI's Pequonnock Substation in Bridgeport, Connecticut, and CL&P's Ely Avenue Junction in Norwalk, Connecticut, on January 25, 1991. A public hearing on the application was held in Westport, Connecticut, on April 29, 1991. Members of the Council made an inspection of the proposed line, substations, and line junction on April 29, 1991.

Under Section 16-50p of the Connecticut General Statutes (CGS), the Council in deciding this application must consider and balance the public need for the transmission line and related telecommunications system with the probable environmental effects created by the construction of these facilities. The Council may not grant a Certificate unless it finds no undue health effects and that the adverse environmental effects or conflicts with State environmental policies are not sufficient to deny the application. The Findings of Fact which accompany this Opinion contain the Council's findings regarding the need for these facilities, adverse effects, and consistency with relevant State policies.

The proposed line is needed to relieve forecasted overloads on the 115kV transmission system delivering electric energy into the growing southwest area of Connecticut. Existing circuits extending in a generally east-to-west direction from northern Bridgeport through Weston to Norwalk are approaching the limits of their load carrying capability and could overload under certain overlapping outage situations, particularly during summer peak periods.

To prevent the onset of simultaneous, forced overlapping outages of circuits with subsequent widespread power failures, CL&P has

been upgrading the 115kV transmission system in southwestern Connecticut since 1985, by reconstructing the east-west transmission circuits from northern Bridgeport to Norwalk. Although the possibility of these circuits exceeding their load-carrying capacity is now relatively low this could happen by mid-1994.

Based on the utility forecasts of loads which includes implementation of a comprehensive Conservation and Load Management program, the choices available which could relieve the anticipated 1994 loads on these east-west circuits include construction of a new line within an existing right-of-way (ROW), rebuilding the existing transmission lines with higher load-carrying conductors and substation reinforcements, construction of a transmission line within a new ROW to serve the area, and increasing generation within the southwestern Connecticut area.

Constructing a new line in a new ROW would clearly have significant environmental effects because of the need to acquire new ROW and new access routes to serve the line. Rebuilding sections of existing overhead circuits from Bridgeport to Norwalk would not bring an additional new supply line into the area; would only forestall the need to build the proposed line by approximately two years; and would increase the possibility of overlapping outages when the existing circuits would require cessation of service during the reconstruction, thereby threatening the reliability of the transmission system in the southwest area. No new generation capacity could be constructed prior to the end of the decade because the incurred costs would by far exceed the costs to improve the transmission system.

Construction of the proposed line on the north side of the existing railroad ROW would increase transmission capacity, improve the reliability of the power supply in southwest Connecticut by preventing line overloads, avoid the use of uneconomic generation, particularly from outside the region, and avoid the environmental effects associated with the development of a new ROW. In addition, the proposed construction along an existing ROW is consistent with federal guidelines for the route selection and development of a new transmission line and with State energy policy for the provision of reliable electricity.

We are concerned with the effects on wetland areas, construction of new accessways, and potential erosion and sedimentation into natural habitats as a result of construction activities. However, by mandating a strict and properly implemented Development and Management (D&M) Plan, the proposed transmission line could be constructed without significant long-term effects on the natural environment.

We are sympathetic with the concerns of residential property owners whose homes are located near the railroad ROW. However, the addition of a transmission line on the north side of the existing ROW would not significantly increase the environmental

effects of the existing south side line which has been operating for many years. In addition, there is insufficient evidence at this time to conclude that the proposed transmission line or the electric and magnetic fields that would emanate from the line would be detrimental to human health. Nonetheless, the potential risks of residing close to a source of electric and magnetic fields can be reduced. Consequently, we shall order the use of compact spacing and reverse phasing placement of the new conductors to reduce the magnetic fields produced by the operation of the line to levels below standards adopted by the State of New York pursuant to the State of New York Interim Policy on Magnetic Fields of Major Electric Transmission Facilities. We shall also order the line to operate at levels so as not to exceed the State of New York standard for electric fields of 1.6 kV/m at the edge of the ROW.

The record shows these conditions to be reasonable and prudent. However, this shall not be construed to be the establishment of a standard for any other facility existing or proposed. While the Council has not adopted any standard yet, in the future, if Connecticut adopts standards more stringent than the State of New York standards, the line shall be brought into compliance with such standards as soon as practical.

The Council has compared the costs, reliability, and environmental compatibility of the proposed project with several alternatives involving overhead and underground transmission lines. A proposed high pressure fluid filled (HPFF) underground alternative through city and town streets would affect traffic, would be difficult to repair, might cause environmental damage by invasion of wetlands and habitats from effects associated with blasting and soil erosion, and would be excessively costly when compared to the cost of the proposed line. An optional, solid dielectric underground 115kV line would require larger trenches and unspecified locations for termination facilities which would increase damage to the environment, has no proven reliability over long distances at high loads, would produce higher magnetic fields directly over the cables, and would prove the most costly of the considered systems. Consequently, we find the proposed overhead facility to be located adjacent to similar overhead electric facilities to be prudent and well justified.

The Council's decision on this application is partially constrained by the uncertain status of the South Norwalk Railroad Station Redevelopment Project and the final configuration of four structures to be placed in this Redevelopment area. The Council will consider the final configuration and placement of these structures in a D&M Plan, after the final design for placement of the line within the Redevelopment area has been reviewed by the City of Norwalk's developer, Starrett Housing Corporation. Any legal questions regarding the rights of the landowners and easement holders must be resolved mutually or through the Court, prior to the submittal of the D&M Plan to the Council.

For the reasons stated in this Opinion, the Council concludes that a Certificate of Environmental Compatibility and Public

Need should be issued, based upon the need for increased reliability of the electric transmission system and the absence of undue health hazards and significant environmental impacts sufficient to deny the application. The Council hereby directs that such Certificate be issued subject to the terms, limitations, and conditions of the Decision and Order which accompanies this Opinion.

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