



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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Petition No. 297 - Staff Report
Northeast Utilities Service Company
Insulation Configuration Modification
Woodbridge, Orange, and Milford, Connecticut
February 25, 1993

NU submitted a petition to the Council for a declaratory ruling that the proposed changes to insulation configurations at six pole locations along circuit no. 1685 between Devon Substation and Pease Junction in the Towns of Woodbridge, Orange, and Milford, Connecticut, would not require a Certificate of Environmental Compatibility and Public Need.

On February 10, 1993, Gloria Dibble Pond of the Connecticut Siting Council (Council) and Fred Cunliffe of the Council Staff met Richard Madej of Northeast Utilities (NU) for a field review of this Petition. The proposed project consists of converting six single circuit, two-pole, wood H-frame structures from suspension (vertical) insulation configuration to strain (horizontal) insulation configuration. The proposed conversion would raise the conductor height approximately five feet at the structure and approximately two to four feet at the span.

Presently, circuit no. 1685 rating is based on a maximum operating temperature of 145 degrees (F); however, survey information of this line has revealed inadequate span clearance to ground or distribution lines that could result in clearance violations if circuit no. 1685 were to operate at 145 degrees (F) today. NU intends to correct this deficiency by raising the conductor at six pole locations to meet clearance requirements for line sag. Also, this increase in conductor height would allow circuit no. 1685 to operate at maximum line temperature of 155 degrees (F). The existing and proposed ratings (in amperes) for circuit no. 1685 are as follows:

	Existing		Proposed	
	Summer	Winter	Summer	Winter
Normal	625	835	720	960
Short-term Emergency	625	835	720	960
Long-term Emergency	625	835	720	960

Average current flow for circuit no. 1685 in 1992 was 112 amperes and normal line flows occasionally reached 300 amperes. If circuit no. 1685 were to become a radial supply to Pease Junction (United Illuminating's June Street Substation) then the peak load under this contingency would be 190 amperes which would be well below both existing and proposed line ratings.

Although the increased line capacity could allow higher magnetic field exposure levels at the edge of the right-of-way, the increased exposure would be near fully offset by the increase in conductor height. In addition, recognizing an average load of 112 amperes, occasionally reaching 300 amperes, it is likely that the maximum loading capacity of 720 amperes during the summer and 960 amperes during the winter would not be utilized for any length of time in the near-term future.

Access to the proposed pole locations would be directly off existing roadways and right-of-ways. Some clearing of the right-of-ways would be necessary, as well as, rehabilitation where needed. Construction is anticipated to begin April 12, 1993, and finish April 30, 1993.

NU contends that the proposed activities would not result in a substantial effect on the environment or ecology, nor would it damage existing scenic, historical, or recreational values.

Fred Cunliffe
Siting Analyst

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