



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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Petition No. 245
Barbour Hill Substation-Windsor Locks Junction-Enfield
Substation Modifications to 115kV Transmission Line
February 26, 1990

Northeast Utilities Service Company (NU) is requesting a determination that no Certificate of Environmental Compatibility is required for modifications to an existing 115-kV transmission line located in East Windsor, Connecticut.

On February 22, 1990, Harry E. Covey and Robert Pulito, members of the Siting Council and Thomas E. Fanning, Jr., staff member of the Council, met Michael Carlson and Steve Tolley of NU at the site of the proposed project.

The proposed project consists of the conversion of existing structures 6087, 6184, 6186, 6191, and 6197 from a suspension to strain insulator configuration. This entails adding a horizontal cross-arm to structures, adding diagonal reinforcements, and moving insulators from a down-vertical position to a horizontal configuration.

Existing three pole structures 6091 and 6191 would be changed to two, single circuit, double wood-pole H-frame structures. The height would be respectively increased from about 56 feet and 65 feet to 83 feet and 88 feet. The width of the structures would be increased from 46 to 51 feet.

In addition, some brush clearing and rehabilitation along the right-of-way would be required to permit access to the structures at some locations.

The rebuilding of the structures and strain configuration conversions would be required to increase conductor clearances created when the line operates at a higher temperature rating of 285 degrees fahrenheit. Present normal operating temperature is 150 degrees fahrenheit. The normal summer operating amperage would increase from 575 amps to 895 amps. Normal winter amperage would increase to 1120 amps. Without the proposed modifications, the higher operating temperature created by the increased line loads would lower conductor mid-span sags below minimum safety limits along some sections

of the line. Present mid-span conductor sag, observed along a section of the line, was estimated by NU at 20-21 feet above ground, at the limits allowed by safety standards. The higher loads would allow a greater transfer of power along the line from Barbour Hill Substation to Enfield Substation to meet growing demand for electricity in the area.

Construction would commence during the spring of 1990 and be completed in June 1990.

NU contends that pursuant to Section 16-50(a) of the Connecticut General Statutes, construction of the proposed project would not result in a substantial adverse environmental effect on the environment or ecology, nor would it damage existing scenic, historic, or recreational values.

TEF/cp

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