



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

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Petition Numbers 129, 130, 131, 132, 133, 134, 135, 136  
Field Review  
Northeast Utilities  
August 14, 1985

Chairperson Gloria Dibble Pond, Owen Clark, and Robert Erling of the Siting Council met Gerald Thompson and Henry Lis of Northeast Utilities (NU) for a field review of petitions 129, 130, 131, 132, 133, 134, 135 and 136. These petitions were submitted together by NU to describe that company's plans for the next five years along the Southington to Devon right-of-way (ROW). Implementation of these plans would enable NU to delay major reconstruction along this ROW as long as possible. The transmission lines in these petitions are nearing their current-carrying capacities and in some cases will exceed present temperature-limited ratings by the summer of 1986. Within the next five years, they may well become overloaded under certain conditions. The work described in the petitions is intended to avoid the potential overloading problems.

Petition 129 concerns the replacement of four wood pole H-frames with four structures some 10' to 15' taller on portions of the Southington-Hanover 115 kV line. In addition, three structures would be converted from suspension to strain, having their crossarms raised in the process. Some minor ROW work including brush clearing, access road improvement, and ROW rehabilitation would take place on this line as well as on all other lines mentioned in petitions in this report.

In Petition No. 130, NU proposes to convert one (originally two) structure from suspension to strain and resag conductors between one pair of structures (originally two) on portions of the Southington-Wallingford Jct. 115 kV line.

Regarding Petition No. 131, NU proposes to convert 20 structures from suspension to strain, raise crossarms on two structures, and replace three wood pole H-frame structures with somewhat taller structures on the Southington-Glen Lake Jct. 115 kV line.

On the Cook Hill Jct. - Devon 115 kV line, Petition No. 132 proposes to convert three structures from suspension to strain.

In Petition No. 133, NU would replace one wood pole H-frame structure and guy two others instead of replacing them. One wood pole H-frame structure would be added on this, the Hanover-Devon 115 kV line, four structures converted from suspension to strain, and crossarms would be raised on seven structures.

Petition No. 134 concerns work on the Southington-Schwab Jct. 115 kV line. Here NU would perform some temporary circuit reconnection work at Schwab Jct. involving two temporary wood pole structures. NU would remove two temporary wood poles and four existing wood poles, replacing them with three permanent wood pole structures similar to the existing poles. In addition, one existing three-pole wood structure at Southington substation would be removed. About 6.3 miles of 4/0 copper conductor would be removed and reconducted with either 556.5 kcmil ACSR or 633.3 kcmil TW ACSR conductor.

Petition No. 135 proposes replacing supporting structures and conductors on the Southington substation to Cook Hill Jct. 115 kV line, a distance of 10.8 miles. Existing 50' wood pole H-frame structures would be replaced with similar 70' structures. The three 4/0 copper conductors, which are 1/2 inch in diameter, would be replaced with three 1272 kcmil ACSR conductors measuring 1 1/3 inches in diameter. The two existing 5/16 inch diameter shield wires would be replaced with two shield wires measuring 3/8 to 5/8 inches. A temporary wood pole structure installed at Lucchini Jct. would be removed.

Modifications to the Hanover substation in Meriden are proposed in Petition No. 136. NU would remove two 115 kV circuit breakers, thus reducing maintenance costs and increasing reliability. These two circuit breakers are old and have a history of operating problems. The configuration of the Hanover substation would change from a loop supply substation to a double tap supply, thus allowing the two circuit breakers to be removed at a much lower cost than it would cost to replace them. Noise levels would be expected to decrease as a result of this removal.

None of the above-mentioned petitions would require new ROW's. Existing access to ROW's would be used as much as possible. New access roads would avoid wet areas as much as possible, and erosion control measures would be utilized where erosion is a potential problem. It did not appear that sites requiring structure replacement, and therefore heavy equipment access, had wetlands on the access routes.

The modifications proposed in Petition numbers 129, 130, 131, 132, and 133 would raise the elevations of the conductors on these lines, to allow higher temperature operations of the lines, thereby expanding the life of the lines. Work on operating circuits in petitions 129, and 133 in 1986 will satisfy contingency criteria only until 1990. At that time, circuit sections between Southington and Cook Hill Jct. must be reconstructed as mentioned above in Petition No. 135. This would provide needed capacity along the Southington-Cook Hill Jct. ROW into the mid-1990's.

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