

DOCKET NO. 26

AN APPLICATION SUBMITTED BY : CONNECTICUT SITING
NORTHEAST UTILITIES SERVICE :
COMPANY, AS AGENT FOR THE : COUNCIL
CONNECTICUT LIGHT AND POWER
COMPANY, FOR A CERTIFICATE OF
ENVIRONMENTAL COMPATIBILITY AND
PUBLIC NEED WITH RESPECT TO THE
RECONSTRUCTION OF AN OVERHEAD
115 kV ELECTRIC TRANSMISSION LINE
BETWEEN PLUMTREE SUBSTATION IN
BETHEL AND RIDGEFIELD JUNCTION
IN REDDING. : October 8, 1982

O P I N I O N

I. GENERAL

This application is for a certificate of environmental compatibility and public need for the reconstruction of an existing 115 kV overhead electric transmission line along an existing right-of-way between applicant's Plumtree Substation in Bethel and Ridgefield Junction in Ridgefield.

A public hearing on the application was held at the J.C. Andrews Municipal Center on June 14 and 15, 1982. Members of the Council made an inspection of the project area on June 9, 1982.

The applicant presented testimony and exhibits to support its claims that the transmission line reconstruction is necessary and will not cause adverse environmental effects sufficient to deny the application. Several persons, including adjoining landowners, municipal representatives and officials, and state agencies were made parties or supplied written comments in the proceeding.

II. NEED

The Council's record in this proceeding clearly substantiates a need for reconstructing the subject circuit which outweighs the potential adverse effects, discussed below. Perhaps the most important

components of this need are the age and unreliability of the existing facility, particularly in conjunction with the projected increase in demand on the circuit. This demand was documented and analyzed before the Council, which explicitly considered the proposal's conformity with the utility's long-range plans for the expansion of the grid.

For several years, in fact since the Docket No. 5 proceeding before the Council, Northeast Utilities (NU) has predicted the need for and planned to develop a 345 kV loop through southwest Connecticut. This area of the state is a net importer of electricity, and the subject line has been and will continue to be a critical component of the transmission system required to supply the area. It became clear in this proceeding, however, that the plans for 345 kV transmission were based on load projections that have become unlikely, and that 345 kV supply to southwest Connecticut would not be required until the late 1990's at the earliest. Thus the incorporation of 345 kV capability into the reconstruction, either with a component structure which could support the 115 kV circuit and a 345 kV circuit, or with a 345 kV circuit originally energized at 115 kV, could not be economically justified. Additionally, the latter possibility would require a major investment in a 345/115 kV substation, which also cannot be justified at this time.

Notwithstanding our concurrence with this economic argument, the Council continues to be concerned with the adequacy and reliability of supply to the southwest Connecticut area, even with the proposed reconstruction. Even with reduced growth rates in consumption, the recent utility forecasts identify possible statewide capacity shortages in the 1990's. The impact of such a situation on an area already deficient in generating capacity has not been addressed directly in this

proceeding, but should be given explicit attention by the utility. The Council encourages NU to continue research on improved methods of assuring adequate and reliable service to southwest Connecticut at reasonable cost and with minimal environmental effect. This encouragement is offered with the acknowledgment of the applicant's investigation into alternative routes for the proposed line and into the possibility of undergrounding. Both options are rejected here by the Council for their far greater cost and, in the case of the latter, minimal environmental improvement. Alternative overland routes would likely have the same or greater adverse environmental effects.

The Council concludes that a need exists for a 115 kV circuit between Plumtree Substation and Ridgefield Junction, and that a need does not exist for a 345 kV circuit on that route now, nor is it likely to develop before the late 1990's.

We then turn to an examination of the adequacy of the existing circuit to meet projected loads and find it lacking. In several possible overlapping outage situations the line loading on the existing circuit would exceed the required emergency ratings, and thus fail to meet applicable reliability standards. The costs of such a situation, both to the company and to the general economy of the affected region, were calculated by the applicant and would appear, in and of themselves, to warrant the reconstruction.

A peripheral consideration is the possibility of converting existing generators in the southwest Connecticut area to burn coal. The improved reliability of the rebuilt line will be required during outages for conversions, should they occur. Conversely, if coal conversions do not take place, importation of economically dispatched generation will increase load on and require improved reliability of the subject line.

In any event, the age of the line and its dilapidated condition are ample evidence that reconstruction is required to assure reliability.

Moreover, radio and television interference caused by the existing line will be reduced or eliminated.

III. ENVIRONMENTAL

NU petitioned the Council in early 1981 for a ruling that the modification (rebuilding) of the Plumtree Substation to Ridgefield Junction transmission line would not have substantial adverse environmental effect and therefore no certificate of environmental compatibility and public need would be required for the project. The Council ruled to the contrary, which resulted in the application that is the subject of this opinion.

In ruling on that petition, the Council expressed its particular concern for impacts on the wetlands traversed by the line, and proceeded in its review of the application to identify more specifically the potential impacts. A record was established to allow careful appraisal by the Council of exact construction plans and the impacts on wetlands, private property, and open space. Thus, although the record confirms and identifies the potential adverse environmental effects, the Council will certify the proposed rebuild since those effects are amenable to mitigation and are not sufficient to outweigh the demonstrated need for the facility modification.

The right-of-way under consideration extends along a relatively undeveloped 9.3 mile corridor through the towns of Bethel, Redding, and Ridgefield. Many public and private open space areas border or are near the facility, and wetland soils are found on one and one half miles of

the right-of-way. From 1.1 to 1.7 acres of wetlands may be lost to the construction project and, in light of the concern expressed by one of the affected municipalities, the Council cannot consider that insignificant. Access road stream crossings, including one of the Saugatuck River, also have the potential for severe impact, and the Council will analyze the specific construction plans and monitor construction carefully.

(It should be noted that the Saugatuck River Crossing was not identified in the original petition to the Council.)

The Council recognizes that the applicant intends to minimize the disruption of wetlands and it is apparent that the applicant prepared the proposal carefully and with regard for the Council's concerns and municipal concerns. However, the Council was troubled by the incomplete identification of wetland impacts in the original petition and in the application. Subsequent investigation satisfactorily identified the extent of the likely environmental impact, although substantial detail awaits the preparation of a development and management (D&M) plan, which the Council will order as a condition to its certificate. The applicant has expressed its willingness to consult with the interested parties prior to submittal of its D&M plan and the Council is satisfied that this procedure and the Council's staff review will help to minimize wetland impacts.

Local residents expressed concerns about the various environmental nuances on the 9.3 miles of right-of-way and will be afforded an opportunity to participate in preparation of the development and management plan which will be required by the Council's decision and order.

The Council has considered the environmental issues germane to this siting decision and finds that all other potential environmental impacts

are minor compared to the wetlands concerns and compared to other projects in the Council's experience. 0.06 miles of new right-of-way are required through a technicality and easement changes will be required near the Johnson School in Bethel. The Council in its Decision and Order will authorize those easement acquisitions. Little or no clearing and no right-of-way widening will be required. New H-frame structures will be only slightly taller and should, in fact, present a clearer, less cluttered appearance than the oft altered and juryrigged structures now in place.

One specific area of concern to the Council which received detailed consideration was the exact structure alignment around the Johnson School in Bethel. The applicant's initial proposal for that section of line, detailed in Council finding number 111, is unacceptable to the Council for its excessive environmental impact. An alternative developed during the Council review, detailed in finding number 112, would minimize the impacts, but its acceptability to the town officials is unknown. A variation of that alternative detailed in finding number 113, was proposed by the applicant in its post-hearing submittals, and was deemed by the applicant to be more acceptable to the town. This has not been officially confirmed, but the Council will certificate that option with the understanding that any further adjustments the applicant wishes to make within that option to accommodate the town can be addressed in the detailed engineering of the D&M plan.

IV CONCLUSION

As required by section 16-50p of the General Statutes, the Council finds that the line will be constructed in accordance with the Federal

Power Commission Guidelines for the protection of natural, historic, scenic, and recreational values in the design and location of rights-of-way and transmission facilities, that the line will not pose an undue hazard to persons or property along the area traversed by the line, and that the entire facility should be placed overhead.

The Council finds that the proposed project may have substantial adverse environmental effect and has identified the nature of the likely effect. The Council also finds that there is a public need for the reconstruction of the subject line which outweighs the potential effects. To assure minimal adverse effect, the Council will order a D&M plan which will specifically, but not exclusively, address the municipal and private concerns for wetlands impacts and structure alignment as discussed above.

Therefore, the Council will order that a certificate of environmental compatibility and public need be granted for the proposed modification to the existing facility.