



**APPLICATION AND REPORT
TO THE CONNECTICUT SITING COUNCIL
PROPOSING AN AMENDMENT TO THE
CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY
AND PUBLIC NEED**

ISSUED TO

**THE CONNECTICUT LIGHT AND POWER COMPANY
AND
THE UNITED ILLUMINATING COMPANY**

IN DOCKET NO. 272

JULY, 2006

The Connecticut Light and Power Company
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A. Summary

Pursuant to Conn. Gen. Stats. § 16-50(d), The Connecticut Light and Power Company ("CL&P") and The United Illuminating Company ("UI") (collectively, "the Companies") apply for an amendment to the Certificate of Environmental Compatibility and Public Need ("Certificate") issued to them on April 7, 2005 by the Connecticut Siting Council ("Council") in its Docket No. 272.

The Companies propose a modification of the underground route through Norwalk that would replace two crossings of the Norwalk River with upland construction. This modification would reduce the environmental impacts of the line and enable the Companies to comply with federal regulatory requirements and thus to obtain essential environmental permits. By reducing route length and complexity of construction, the proposed modification would also reduce the construction time within the City of Norwalk and the cost of the line.

The Certificate was issued to the Companies for the construction of a new 345-kV electric transmission line and associated facilities between Scovill Rock Switching Station in Middletown and Norwalk Substation in Norwalk, Connecticut including the reconstruction of portions of existing 115-kV and 345-kV electric transmission lines, the construction of the Beseck Switching Station in Wallingford, East Devon Substation in Milford, and Singer Substation in Bridgeport, modifications at Scovill Rock Switching Station and Norwalk Substation and the reconfiguration of certain interconnections (the "Project"). The Council issued the Certificate subject to the terms and conditions set forth in the Council's Decision and Order of April 7, 2005 ("D&O"), which in turn required that the approved facilities shall be constructed "substantially as specified in the Council's record", subject to certain conditions (D&O, p.1). Such conditions included: "construction of an alternate Norwalk River crossing that would begin approximately 1,000 feet south of the original location to mitigate impacts to the Riverside Cemetery Association." (D&O, p. 2, ¶ 9b).

The route through Norwalk reflected in the Council's record that was approved by Council in the D&O and the Certificate, and the change to that route that the Companies now propose, are depicted in the maps included in this Application as Figures F-1 and F-2.

The proposed route modification, and the portion of the approved route that it would replace, are described in detail as follows:

Description of the Proposed Route Modification

Approved Route

The portion of the approved route to be replaced extends through the Norwalk Center urban core and would cross the Norwalk River twice. As illustrated in Figure F-1 and F-2 (*Appendix*, pp. A-1, A-2), the approved route extends along and adjacent to Cross Street (U.S. Route 1), and first crosses the Norwalk River from there. In this area, the approved route is within the state coastal boundary. The approved route continues to follow U.S. Route 1 (which becomes Belden Avenue), crossing under U.S. Route 7. At the intersection with Riverside Avenue (State Route 809), the route turns north-northwest. The route follows Riverside Avenue to a point opposite Riverside Cemetery, where it diverges to the north and traverses diagonally back across the Norwalk River and extends across New Canaan Avenue (State Route 123). The route extends north, paralleling CL&P property and a southbound exit ramp from U.S. Route 7 before entering the Norwalk Substation.

Route Modification

The route modification is also illustrated in Figures F-1 and F-2. It would deviate from the approved route at the intersection of State Route 123 (Main Street) and U.S. Route 1 (Cross Street). At this intersection, the route modification would diverge to the north-northwest, traversing along or adjacent to State Route 123. Just north of Catherine Street, the route would turn to the west, traversing between two commercial buildings on private property and then underneath the Metro-North Railroad's Norwalk-Danbury Line. The route would continue to the west, crossing CL&P's Norwalk Service Center property and then north along Grand Street to New Canaan Avenue (State Route 123). At this intersection, the route would turn west, continuing along New Canaan Avenue, which passes under U.S. Route 7. After passing under U.S. Route 7, the route turns north, paralleling CL&P property and a southbound exit ramp from U.S. Route 7 before entering the Norwalk Substation.

The route modification, which would extend for approximately 5,800 feet, would replace approximately 7,200 feet of the approved route.

B. Report Supporting the Application

1. History of the Relevant Portion of the Approved Route and the Development of the Proposed Modification Eliminating Two River Crossings

Origin of the Approved Route

As originally conceived by the Companies and their consultants, the route through Norwalk would have included installing the transmission cables essentially along the modified route now proposed. (Docket No. 272, *Companies' Ex. 85*, Response to Data Request CSC-02, Q-CSC-056; *Companies' Ex. 1*, Application, Vol. 1, Sheet 2 of 2 of the "Route Analysis Map" in the map pocket at back of volume). However, during initial discussions with Norwalk officials (primarily the then mayor), Norwalk requested that the cables be installed instead along a route that would cross the Norwalk River at Belden Avenue, travel north along Riverside Avenue, and then cross the Norwalk River again at New Canaan Ave. The Norwalk officials asserted that although the route they preferred was longer and involved two river crossings, it would have less impact on residents and businesses than the route initially presented by the Companies (which was essentially the modified route now proposed). Docket No. 272, *Companies' Ex. 85*, Response to Data Request CSC-02, Q-CSC-056); 02/01/05 Tr., at 279, 280 (Testimony of Bartosewicz). The Companies included the route then preferred by Norwalk in their Application. *Companies Ex. 1*, Application, Vol. 9, Map Segment 65. Thereafter, in order to reduce impacts on the Riverside Cemetery Association, the Companies' requested, and the Council approved, a change in the northerly crossing to begin approximately 1,000 feet south of the original location and cross the river diagonally. (Docket No. 272, D&O, p. 2, ¶ 9b; Opinion, p. 3; Findings of Fact, p. 28, ¶ 18; *Companies' Ex. 54*, Supplemental Testimony of Zaklukiewicz Regarding Norwalk River Crossing, April 19, 2004).

The Docket No. 272 Record Concerning Methodology for Crossing the Norwalk River

The Companies' initial application proposed to install the transmission line beneath the Norwalk River at both crossing locations using either horizontal directional drilling ("HDD") or jacking and boring, subject to "site-specific studies of subsurface conditions." (Docket No. 272 Application, Vol. 1, p. J-19, Table J-2; p.M-7, Table M-1). In the course of the proceeding, subsurface testing indicated that these techniques were not feasible for the northerly crossing, and the Companies then proposed instead to use an "open cut" for that crossing.¹

¹ Before determining that an open cut was the only viable alternative, the Companies also examined a variety of other routing and construction options in this area, including a self-

Docket No. 272, *Companies' Ex. 171*, Update to Waterbody Crossings in Segments 3 and 4, Revised table J-2, December 22, 2003; 9/29/04 Tr. at 8-13 (Testimony of Bartosewicz); 02/01/05 Tr. at 11, 12 (Testimony of Bartosewicz). In addition, the Companies proposed a change in the methodology for the southern crossing, by which the cables would be attached to a highway bridge. *Companies' Ex. 171*, Update to Waterbody Crossings in Segments 3 and 4, Revised Table J-2, December 22, 2003). Meanwhile, the Connecticut Department of Transportation ("CDOT") suggested a route variation in Norwalk that would have eliminated the two crossings of the Norwalk River. Docket No. 272, *CDOT Ex. 9*, Comments on Preferred Overhead/Underground Routing, July 19, 2004; 9/29/04 Tr., at 8-13 (Testimony of Bartosewicz). In their proposed Finding of Facts, the Companies noted:

These proposed watercourse crossing methods will be reflected in the Companies' permit applications to the ACOE and [the Connecticut Department of Environmental Protection ("DEP")] and will be subject to their review and approval. If these planned crossing techniques are not approved by the environmental regulators, then the Companies may have to revisit the possibility of the CDOT route variation in this segment of Norwalk in order to avoid the crossings... Docket No. 272, *Companies' Proposed Finding of Facts*, March 2, 2005, p. 103, ¶ 376.

The D&O directed the Companies to consult with the DEP concerning proposed HDD and jacking and boring operations, and other methods for fording streams (Docket. No. 272, D&O, p. 4, ¶ 15); and to include in the Development and Management Plan ("D&M Plan") "provisions for crossing...water courses for both overhead and underground routes." Docket No. 217, D&O, p. 2, ¶ 14e.

Post-Certification Developments Concerning Crossing Methodologies for the Norwalk River

Southerly Crossing

CDOT has advised the Companies that the co-location of the 345-kV cables on any bridge is not acceptable for engineering and safety design reasons. Specifically, CDOT will not allow the co-location of the 345-kV cables on any state highway bridges, and will deny any road permit applications involving the use of this cable installation method. Accordingly, the Companies plan to avoid a jack and bore of the southerly crossing by attaching the cables to a highway bridge could not be realized. The Companies then considered the use of a self-supporting bridge for the cable system, which would have been installed south of

supporting structure over the river, alignment within the U.S. Route 7 ROW, and crossing of the river north of State Route 123. All of these options were found to be fatally flawed due to environmental, electric reliability, or constructability issues.

the U.S. Route 1 Bridge, within a portion of the City's planned Norwalk Center redevelopment area and within the state coastal boundary. However, in the course of the review of the Project's ACOE permit application, in late 2005 – early 2006, the City of Norwalk expressed concern about the location of the proposed self-supporting structure within the Norwalk Center urban redevelopment area.

Northerly Crossing

The open cut for the northerly crossing would result in impacts to approximately two acres of riparian wetlands. See, Wetlands Map Segment 242-Wet, *Appendix*, p. A-3. These impacts could not be avoided given the geotechnical factors at the river crossing along the Project route. Moreover, in the course of the review of the Project's ACOE permit application, CDOT's Environmental Planning staff commented that the wetland that would be impacted by the northern open cut river crossing is a CDOT wetland mitigation area (created along the river pursuant to an ACOE permit condition for the construction of U.S. Route 7). The Companies did not know that this wetland was a CDOT wetland mitigation area when they proposed the open cut.

Agency Positions

In order to obtain required approvals from the ACOE pursuant to section 404 of the Clean Water Act, and from the DEP pursuant to section 401 of that Act, the Companies must demonstrate that the proposed route, with respect to impacts on wetlands and watercourses, is the "least environmentally damaging practicable alternative." The ACOE has informed the Companies that, since the crossings of the Norwalk River and their wetlands impacts are avoidable by use of the alternate alignment now proposed, it is "not likely" to issue a permit for a route that includes the two river crossings. See, Letter to Jeffrey Borne from Susan Lee of ACOE, dated April 19, 2006, *Appendix*, p. A-4. The proposed modification, on the other hand, appears to be acceptable to ACOE.

The proposed modification has been presented in detail to representatives of the City of Norwalk, which has expressed no objection to it.

CDOT has also approved the proposed modification. See, correspondence from Sohrab Afrazi, d. 5/15/06, *Appendix*, p. A-6.

CL&P's construction consultant, Burns & McDonnell, has conducted field reviews of the modified route and has determined that the proposed modification is constructible.

Accordingly, the Companies have applied for approval of a modification of the route that will avoid both river crossings.

2. Analysis of the Proposed Route Modification

The proposed route modification does not traverse any water resources and does not traverse the state coastal boundary. Along the route modification, the Companies propose to align the cable duct banks principally within State Route 123 and to place the cable splice vaults outside of the travel portion of the road (e.g., within areas abutting parking areas) wherever practicable. The Companies will continue to consult with CDOT on final Project designs in this area.

In addition to the U.S. Route 7 underpass and associated on/off ramps, land along the route modification consists of commercial development (professional office, car dealerships, strip retail plaza, CL&P area service center) with scattered residential uses (primarily apartments or multi-family homes). Such land uses are comparable to those adjacent to other portions of the underground route in Norwalk. The area adjacent to the new portion of the route does not appear to be a "neighborhood," and thus not a "residential area," as the Council has defined that term in Docket 272.² Nor are there any other "statutory facilities"³ adjacent to the modified route.

The route modification does not traverse any water resources. There are no known cultural resources along the route modification. In any case, the Companies will follow established Project procedures for construction along the modification to verify that no significant cultural resources will be affected.

The following table compares the environmental effects of the Route Modification with the Approved Route:

² Docket 272, Opinion d. April 7, 2005, p. 14

³ In addition to "residential areas," these facilities consist of "private or public schools, licensed child day care facilities, licensed youth camps or public playgrounds." Conn. Gen. Stats. § 16-50p(a)(2)(D).

I. SUMMARY COMPARISON OF ROUTE MODIFICATION AND ORIGINAL ROUTE

Feature	Route Modification	Original Route
Total Length	5,800	7,200 feet
Principal Adjacent Land Uses	Urban commercial and residential development	Norwalk Center urban area; commercial and residential development, Norwalk River, Riverside Cemetery
Water Crossings	0	2 (Norwalk River)
Wetland Crossings	0	1 (Norwalk River CDOT wetland mitigation area)
Railroad Crossings	1	1
Water Resource Impacts Due to Construction (Wetlands and Water Crossings)	0	2 acres (Norwalk River north crossing)

3. Cost

The shorter route length and the avoidance of two river crossings will reduce the cost of the relevant section of the Project. These savings will be partially offset by the requirement for additional vaults and splices, easements over private property on the modified route, and additional design costs. The budget level estimate for this section of the approved route was \$23.3 million. The budget estimate for the proposed modification is \$ 18.7 million. Both estimates are based on unit costs, and are not site-specific estimates.

APPENDIX