STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL

NORTHEAST UTILITIES SERVICE COMPANY APPLICATION TO THE CONNECTICUT SITING COUNCIL FOR A CERTIFICATE OF **ENVIRONMENTAL COMPATIBILITY** AND PUBLIC NEED ("CERTIFICATE") FOR THE CONSTRUCTION OF A **NEW 345-KV ELECTRIC TRANSMISSION** LINE FACILITY AND ASSOCIATED **FACILITIES BETWEEN SCOVILL ROCK SWITCHING STATION IN** MIDDLETOWN AND NORWALK SUBSTATION IN NORWALK, INCLUDING THE RECONSTRUCTION OF PORTIONS OF EXISTING 115-KV AND 345-KV **ELECTRIC TRANSMISSION LINES.** THE CONSTRUCTION OF 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

DOCKET NO. 272

JULY 19, 2004

THE TOWN OF WOODBRIDGE'S COMMENTS RE: UNDERGROUND ROUTE, PARTIALLY OVERHEAD ROUTE AND ALL OVERHEAD ROUTE

The Town of Woodbridge ("Woodbridge" or the "Town") submits the following comments in response to the request of the Connecticut Siting Council for parties to provide input on preferred underground routes, partial underground / overhead routes, and all overhead routes.

1. <u>East Shore route</u>

The Town fully supports compliance with P.A. 04-246, An Act Concerning Electric Transmission Line Siting Criteria. That Act creates a statutory presumption in favor of underground high-powered transmission lines.

The Town joins with 15 other municipalities (collectively the "Towns") in endorsing an "East Shore" route, which would serve the electrical needs of the region while minimizing environmental and health impacts, thereby meeting the goals of the new legislation as well as PUESA, <u>Conn. Gen. Stat.</u> §§ 16-50p, <u>et seq.</u>

The Town wishes to be clear on the definition of the East Shore route that it is studying. The Town of Woodbridge does <u>not</u> support an East Shore route that would include the construction of a second overhead 345-kV line along the 387 Line corridor. The East Shore route which the 16 municipalities are studying is as follows:

- -An underground 345-kV line between Norwalk Substation and East Devon Substation
- -A new 345-kV line between the East Devon Substation to the East Shore substation in New Haven. This line would consist of either: i) an all underground route of 13 miles between East Devon and East Shore, or ii) 7 miles underground from East Shore to a site near the West Haven / Orange border, and the remainder overhead between Orange and East Devon (for this configuration, the Towns are studying the burial of 8 miles of the new 345-kV line between Beseck and Oxbow Jct.).
- -Reconfiguration of the East Shore substation
- -Reconductoring the existing '387' Line from Wallingford to the East Shore substation. The applicants studied only reconductoring a portion of the 387 Line (the 10-mile segment between Scovill Rock Switching Station and Black Pond Junction). The Towns support examining

the reconductoring of the entire 387 Line, using Genessee conductors.

- -Construction of a new Beseck substation
- -A new 345-kV line overhead between the new Beseck substation and Oxbow Junction¹
- -A new 345-kV line overhead between the new Beseck substation and Black Pond Junction
- -A new 345-kV line overhead between Scovill Rock Switching Station and Chestnut Junction

The Town stresses that this East Shore route is a better alternative than other routes proposed in this docket because it provides the most comprehensive regional solution to our energy needs, while minimizing adverse impacts to the greatest number of communities, including hundreds of children in Woodbridge alone. The Town also notes that while the applicants' proposed overhead route traverses significant portions of the Regional Water Authority's watershed land, the East Shore alternative does not.

The Town will also look at additional regional solutions after the applicants report to the Council on August 16th with the results of their joint studies with ISO-New England.

2. <u>Woodbridge-only partial overhead, partial underground route</u>

The Town prefers an East Shore route, as described above, as a reasonable regional solution. However, in the event that the Council does not

The Towns also are studying whether this line is needed to assure an adequate level of system reliability

certify this route, the Town urges that the new line be sited partially underground in Woodbridge to avoid the B'Nai Jacob / Ezra Academy campus, the Jewish Community Center, as well as the sensitive wetlands identified at the hearings in this docket, particularly wetland no. 133. Land-Tech testified that this wetland is the most significant wetland in Woodbridge, and is the largest wetland along the right-of-way comprising approximately 8/10 mile. Tr. 6/3/04 at 227. The applicants' proposal includes a conductor pulling station in wetland no. 133, in a location adjacent to B'nai Jacob / Ezra Academy. Tr. 6/3/04 at 229. Both Land-Tech and the applicants' consultant, Louise Mango, agree that a pulling station should not be located in wetland no. 133. See Tr. 6/3/04 at 229 and Tr. 6/1/04 at 133-34, respectively. The Town's proposal would avoid this impact in addition to impacts to several vernal pools, an Eastern Box Turtle habitat and approximately 80 residential homes.

The Town provided the specific route that it proposes for a Woodbridge-only partially overhead, partially underground route in a letter from the undersigned to counsel for the applicants dated May 25, 2004. A copy of this letter, which has been entered into the record as a supplement to the Town's municipal consultation comments, is attached hereto as Exhibit A.

As described in the letter, the Town is examining the undergrounding of the 345-kV line from a point in Southern Woodbridge, running beneath public streets approximately 3.4 miles, until reaching property owned by CL&P near the intersection of Route 63 and Clark Road. This proposed underground route would traverse Northerly from Johnson Road, to Pease Road, then East on Route 114, across Route 63, North on Cedar Road or Route 63, until reaching

CL&P's property. At that juncture, the line would transition to an overhead line, continuing overhead Northerly along the existing right of way through the Town. During cross examination, the Regional Water Authority ("RWA") witness testified that they had reviewed the Town's proposed route, and confirmed that it avoids RWA land and its watershed. See Tr. 6/3/04 at 142.

Because CL&P owns more than 15 acres near the intersection of Route 63 and Clark Road, the Town believes that area may be a suitable location for a transition station. In Southern Woodbridge, there are two potential locations that may be suitable sites for a transition station. One location is property currently owned by Oak Lane Country Club. A second location consists of approximately 180 acres of property currently owned by the RWA in Southern Woodbridge. The Town has a letter of intent to acquire this property, which has been designated as Class III property. Class III property is excess land which is neither a part of the watershed, nor needed for water source protection.

In addition to burying a portion of the new 345-kV line, the Town also supports the undergrounding of the existing 115-kV line along this route. The applicants' recent EMF figures now show existing levels that are unacceptably high for the residents of Woodbridge, particularly in areas where children congregate for many hours a day, and often at times of peak load. The Town stresses that the risk to the health of the residents of Woodbridge, and particularly its children, far outweighs the relatively minimal effort involved in burying the existing 115-kV line -- as well as the new 345-kV line.

At the hearing in this docket on June 15, 2004, John Prete, Project

Director for United Illuminating, testified that from a construction perspective the

underground route that the Town proposes is feasible. Tr. 6/15/04 at 191. He also testified that the Town's roads could accommodate burying both the 345-kV and 115-kV lines along this route. Tr. 6/15/04 at 192.

Mr. Prete also testified that since the proposed underground route is only 3.4 miles, XLPE cables could be used. Tr. 6/15/04 at 191-92. This would reduce the amount of capacitance that would be caused by the new underground line. Other mitigation measures would likely have to be studied by the applicants as well.

The Town's transients and harmonics studies have been postponed in light of the ongoing discussions between the applicants and ISO-New England. The Town must be afforded the opportunity to complete these studies, as well as thermal load flow studies, analyze them, ask questions about them, if necessary, and then present evidence to the Council before the record in this docket is closed.

Although the Town prefers the regional solution of an East Shore route, if that route is not approved, it believes that the partially underground route set forth above is absolutely necessary to protect the hundreds of children who would otherwise be exposed to the dangers of electromagnetic fields caused by a new overhead 345-kV line at B'Nai Jacob / Ezra Academy and the Jewish Community Center. Burying the line along this route would also avoid the majority of the 80 homes that are otherwise directly impacted by the line under the applicants' proposed overhead route. Further, burying the new line will greatly lessen the significant environmental impacts to the Town that would otherwise be caused by the proposed overhead route, including impacts to acres

of wetlands (including wetland no. 133, described as the most sensitive wetland in Woodbridge), several vernal pools, and species of special concern (see Land-Tech's report -Woodbridge Exhibit 6)

3. All overhead route

The Town appreciates this opportunity to respond to the Council's request for the Town's preferred overhead configuration. The Town agrees that it is essential that the Council be provided with input from each municipality as to specific siting issues. However, the record has not yet been developed as to critical issues such as EMF mitigation techniques, and it is therefore impossible for the Town to express preferences with any certainty at this time. For these reasons and notwithstanding this submission, the Town explicitly reserves all of its legal and equitable rights in this proceeding, and suggests that all Towns be afforded the opportunity to supplement this response at a future date, when the record is better developed.

However, in an effort to provide as much assistance to the Council as possible, the Town has undertaken a thorough review of the applicants' proposed overhead route and offers the following comments and concerns. These comments are being offered without prejudice and without taking into consideration the environmental impacts that the overhead construction would have on Woodbridge's natural resources, including wetland 133, as described in more detail in Land-Tech's report. Of course, the Council must take environmental impacts into consideration in rendering a decision. These comments are also being offered without prejudice to any of Woodbridge's rights

pursuant to P.A. 04-246, or to the applicants' and Council's obligations under P.A. 04-246.

a. B'Nai Jacob / Ezra Academy

The B'Nai Jacob / Ezra Academy campus is located at 75 Rimmon Road. The Northern corner of Ezra Academy is 15 feet from the edge of the right of way, presenting a potentially intractable problem.

The Town urges compliance with P.A. 04-246, which mandates buffer zones to protect schools from the hazards of EMF. As explained in the Towns' Memorandum to the Siting Council dated July 19, 2004, the appropriate buffer zone for residential areas, as well as B'Nai Jacob / Ezra Academy and the Jewish Community Center, is 300 feet, if possible, as recommended by the Connecticut Department of Public Health. If that width of buffer is not possible, then in the least the buffer should be wide enough, and effective mitigation techniques should be adopted, to reduce EMF to ambient background levels.

To meet these standards, the overhead siting at B'Nai Jacob / Ezra Academy would have to involve a shifting of the right of way North, to create distance from the school. Although there is some room to shift away from the school and synagogue within the campus itself, the Town suggests that the right of way should be designed to meet the 300 foot buffer. There is no way to meet this buffer within the existing right of way or within the B'Nai Jacob / Ezra Academy property. If an overhead route were certified, the only way to maintain an adequate buffer would be to shift the right of way onto privately owned,

undeveloped land to the North of the B'Nai Jacob / Ezra Academy property. The feasibility of using undeveloped land should be explored.

However, this may still not resolve the problem because there are homes to the West and Northwest of the B'Nai Jacob / Ezra Academy property, thereby limiting the ability to shift the right of way in those directions. If an overhead line is sited here, the applicants will need to provide precise EMF calculations in each direction near the school and synagogue.

The record has not been developed on EMF mitigation techniques, and the Town is therefore hesitant to begin to offer suggestions on the measures that the Council should require, other than avoidance. For example, it is not yet clear whether split phase design reduces EMF to a greater extent if the current 115-kV lines remain overhead. If not, the Town certainly supports burying the 115-kV lines to reduce EMF -- a measure which the utilities have demonstrated can be easily achieved without sacrificing reliability.

With respect to B'Nai Jacob / Ezra Academy, the Town recommends exploring the potential for EMF mitigation with higher towers to maximize reduction of EMF levels, as well as other mitigation techniques that are proven to work.

b. Jewish Community Center of Greater New Haven

The Jewish Community Center of Greater New Haven, situated at 360 Amity Road in Woodbridge, also presents a potentially intractable problem. As the record demonstrates, the right of way runs through the middle of the Jewish Community Center campus. There are buildings on both sides of the right of

way. To the East of the right of way is a building housing a licensed child day care facility and playgrounds that are used by both the day care facility and licensed youth camp. To the West of the right of way are a camp building, a pool, baseball fields and nature fields which are used daily by the youth camp. Despite ongoing discussions between the applicants and the Center, there has not yet been a proposal that resolves the problem.

Under P.A. 04-246, the buffer zone must be at least as wide as the existing right of way. Therefore, a new 345-kV transmission line is <u>prohibited</u> from being sited within a right of way, where a structure such as the Jewish Community Center exists. Thus, there are two (2) possibilities if the line is to be certified: i) the line must be buried to avoid the Jewish Community Center, or ii) an alternative overhead route must be approved. The Town respectfully states that it has spent hours trying to locate an overhead alternative, but has been unable to do so without displacing dozens of residents from their homes.

c. Residences along the right of way

From the Southern part of Woodbridge, near Route 15, traversing North, there are approximately 80 homes that are in close proximity to the current right of way. Certain homes are directly on the edge of the right of way, including the following: 5 Center Road -- less than 5 feet from the edge of the right of way; 77 Pease Road -- less than 5 feet; 392 Amity Road -- approximately 20 feet; 21 Brookwood Road -- approximately 20 feet; 9, 13, and 17 Salem Road -- each approximately 30 feet, with access to the homes via driveways that run under the power lines.

To address all of the residences that are impacted, the Town urges compliance with the new legislation, which mandates buffer zones to protect residential areas from the hazards of EMF. As with the B'Nai Jacob / Ezra Academy campus and the Jewish Community Center, the appropriate buffer zone for residential areas, is 300 feet, if possible, as recommended by the Connecticut Department of Public Health. If that width of buffer is not possible, then in the least the buffer should be wide enough, and effective mitigation techniques should be adopted, to reduce EMF to ambient background levels.

To the extent that split phase design is proven by the applicants to be an acceptable measure to reduce EMF, the Town believes split phasing should be ordered wherever overhead lines are sited. With respect to the residential areas in Woodbridge, the Town recommends that the towers be no higher than 85 feet, as represented in the application (the Town recommends exploring the potential for EMF mitigation with higher towers at B'Nai Jacob / Ezra Academy and at the Jewish Community Center, where children congregate on a daily basis, to maximize reduction of EMF levels).

The Town also believes that the possibility of DC lines should be studied as a potential mechanism of reducing EMF levels, if an overhead line is approved.

d. Overhead line in Northern Woodbridge

The right of way north of Clark Road is much less of a concern in terms of impacting residences, children, or sensitive institutions. In fact, under the Town's partial overhead / partial underground proposal, the new 345-kV line would indeed be overhead in this section of Woodbridge. The majority of this property is owned by RWA. With respect to the specifics of preferred design in this area, the Town respectfully defers to RWA.

The Town again stresses that its proposed underground route would <u>not</u> entail the construction of an underground line within the RWA watershed.

Summary

In sum, the Town of Woodbridge clearly prefers an East Shore route as described in this memorandum, as the best regional solution. If an East Shore route is not certified, the Town strongly believes that the Council should order the burying of the new 345-kV line, as well as the existing 115-kV line, beneath public roads as detailed in the Town's partial overhead / partial underground proposal.

If the applicants are able to meet their burden of proving that it is not possible to bury the new line, the Town urges the establishment of meaningful buffer zones in accordance with P.A. 04-246, as well as EMF mitigation measures that are proven to work. At this juncture, the record is not yet developed on these mitigation measures, including split phase design, DC technology, and other techniques. Accordingly, the Town respectfully reserves

the right to supplement this Memorandum at a later stage, to provide the Council with assistance in its decision-making.

Respectfully submitted,

TOWN OF WOODBRIDGE

By:_____

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This is to certify that on this 19th day of July, 2004, a copy of the foregoing was mailed, postage prepaid, to:

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