

<p><b>DOCKET NO. 433</b> – The United Illuminating Company application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a 115/13.8 kilovolt substation located at 14 Old Stratford Road, Shelton, Connecticut.</p>	<p>} } } }</p>	<p>Connecticut  Siting  Council  March 7, 2013</p>
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**Opinion**

On October 3, 2012, The United Illuminating Company (UI) applied to the Connecticut Siting Council (Council) for a Certificate of Environmental Compatibility and Public Need (Certificate) for the construction, maintenance, and operation of a new electric substation located at 14 Old Stratford Road in Shelton, Connecticut. The purpose of the proposed facility is to improve reliability and add capacity to UI’s electric power distribution system in the Greater Shelton Area (GSA).

UI’s GSA includes the municipalities of Shelton, Trumbull, Ansonia, Derby and portions of Stamford, and Orange. UI provides service to the GSA from four substations, known as the Trap Falls, Indian Well, Ansonia, and Trumbull substations. The four substations have the capability to supply 250 megavolt-amperes (MVA) to the GSA.

UI’s most recent study for the period of 2012 – 2021 indicated a load growth of 37 MVA by 2021, reaching a total load of 247 MVA by 2021 within the GSA. UI is forecasting a capacity need in the GSA by the 2015 summer peak, when UI expects area load to reach 93 percent of available capacity at these substations, especially at the Indian Wells Substation, where projected peak demand would be 122 percent of its firm rating. In addition to studying load growth, UI examined the voltage stability rating of its existing substations and determined a voltage collapse could occur at the Indian Well Substation under 95 percent load conditions, causing an extended outage.

UI examined various alternatives to meet projected needs, including load transfers, use of distributed generation, replacement of existing transformers with larger transformers at existing substations, and expansion of existing substations. After reviewing the record, the Council finds that these alternatives are not feasible and thus a new substation is necessary to improve electrical reliability and to meet projected load growth within the GSA.

The proposed substation would be located on a six-acre parcel owned by UI. The parcel is bound by Old Stratford Road to the south, Pootatuck Place to the west, the Far Mill River to the north, and Route 8 to the east. Commercial properties exist in the surrounding area, including a gas station, hotel, and office buildings generally west and south of the site. An active farm, a conservation parcel, a town pump station, and a few residences are generally located north and northwest of the site.

The parcel was previously developed with several industrial buildings that have since been demolished. Groundwater underlying the site was contaminated by past industrial activities and is presently being treated through an on-site remediation system. A Connecticut Light and Power Company (CL&P) transmission right-of-way with 115-kV lines and associated towers traverses the western portion of the parcel. Given the site’s past industrial use and its current status as a brownfield, its location adjacent to developed commercial properties, and the presence of a wooded buffer to the few residences in the area, the Council finds the proposed site suitable for a substation.

The substation would occupy an approximate two-acre portion of the parcel, adjacent to the CL&P lines. It would contain two 50 MVA transformers and associated equipment and control enclosures. Enough space would exist to support an expansion to accommodate a third transformer if the need arises. The substation would be surfaced with gravel and surrounded by an eight-foot tall chain link fence topped with barbed wire. Access to the substation would be from Pootatuck Place. Separate access to an existing on-site groundwater remediation building would be maintained.

The substation would be connected to CL&P's no. 1560 transmission circuit. The interconnection would require the installation of two line terminal structures, approximately 65 feet in height, within the substation, and two monopoles 70 feet and 95 feet in height within CL&P's right-of-way. Visually, the new structures would be consistent with the existing transmission structures within the right-of-way. Underground distribution feeders would be installed within existing roadways.

The City of Shelton considers the Route 8 interchange area as an important gateway into Shelton. Although some of the substation equipment is large and impossible to screen from certain vantage points, UI is committed to establishing a landscape plan in consultation with the City that presents a positive image. As part of the landscape plan, UI would investigate redesigning the southeast corner of the substation in order to maintain existing native vegetation or to accommodate new plantings, and would also examine the placement of plantings along Pootatuck Place. Any landscape improvements agreed to by UI and the City will be submitted to the Council in the Development and Management Plan.

Development of the substation would require filling a small wetland on the east side of the site that formed from poorly drained soils perched on top of buried asphalt. A US Army Corps of Engineers (USACE) permit would be required to fill this wetland. To compensate and to respond to the City of Shelton's goal of maintaining recreational access to the Far Mill River, UI would establish a conservation area along the river. UI would set aside a small parking area off Pootatuck Place for river access and remove portions of an old chain link fence along the riverbank. Details of the proposed conservation easement would be included within the USACE permit application.

The site is not within any known habitat of state or federal endangered, threatened or special concern species. Development of the site would not affect any archaeological or historic resources.

During construction, UI would remove approximately one foot of organic soil and underlying asphalt at the site, as well as old drainage features within the substation footprint. Approximately 15,000 cubic yards of fill would be imported to grade the site. After grading, most of the substation would be located within the FEMA-designated 500-year flood zone. To address flooding concerns, the Council will order UI to design and install critical substation components one foot above the FEMA 500-year flood level.

There are no federal or State of Connecticut health-based standards for exposure to magnetic fields. The International Commission on Non-Ionizing Radiation Protection, an independent health organization, has issued a magnetic field exposure guideline of 2000 milliGauss (mG) for the public. The existing transmission lines traversing the site are the main source of magnetic fields in the area, with levels ranging from 10 to 27 mG. Once the substation is constructed, magnetic fields around the power lines would be similar. Magnetic fields from substation equipment at the substation fence line would range from 13 to 45 mG, and would decrease significantly with distance from the substation.

Based on the record in this proceeding, the Council finds that the effects associated with the construction, operation, and maintenance of an electric substation at 14 Old Stratford Road in Shelton, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the state concerning such effects, and not sufficient reason to deny this application. Therefore, the Council will issue a Certificate for the construction, operation, and maintenance of an electric substation at 14 Old Stratford Road, Shelton, Connecticut.