



**UIL HOLDINGS CORPORATION**

157 Church Street, New Haven CT 06510-2100  
203-499-2000

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Via Hand Delivery and Electronic Mail

March 23, 2015

Robert Stein  
Chairman  
Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

Re: Petition No. 1120 – The United Illuminating Company Petition for a Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need is Required for the Proposed Modifications to the Hawthorne Substation at 180 Hawthorne Drive, Fairfield, Connecticut

Dear Chairman Stein:

Please find enclosed the original and fifteen (15) copies of The United Illuminating Company's ("UI") responses to the Town of Fairfield's Second Set of Interrogatories, dated March 11, 2015 in connection with the above-referenced Petition. Additionally, UI will electronically file all responses and attachments via [siting.council@ct.gov](mailto:siting.council@ct.gov).

Please do not hesitate to contact me at (203) 499-2422 if you have any questions regarding this filing.

Very truly yours,

A handwritten signature in blue ink, appearing to read 'Bruce L. McDermott', written over a light blue horizontal line.

Bruce L. McDermott  
Managing Counsel – Operations  
UIL Holdings Corporation  
As Agent for The United Illuminating Company

cc: Service List

Enclosures

Interrogatory TOF-II-1

The United Illuminating Company

Witness: Matthew Cloud

Ron Rossetti

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Q-TOF-II-1: Is United Illuminating Company ("UI") designing a lighting system which eliminates light trespass on adjoining properties?

A-TOF-II-1: The lighting system is not designed to minimize light dissipation outside the substation perimeter. UI designs a lighting system to properly illuminate the substation yard and perimeter for physical security and safety concerns. This illumination of critical equipment and the substation perimeter allows UI to detect any access by unauthorized persons. This serves to protect not only the critical equipment inside of the substation perimeter, but also the public by confining high voltage equipment to monitored locations under 24 hour surveillance.

Interrogatory TOF-II-2

The United Illuminating Company

Witness: Matthew Cloud  
Ron Rossetti

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Q-TOF-II-2: If the answer to question 1. Is in the affirmative, will UI conduct a before/after survey regarding light trespass?

A-TOF-II-2: See UI response to Town of Fairfield Interrogatory TOF-II-1.

### Interrogatory TOF-II-3

The United Illuminating Company

Witness: Matthew Cloud

Ron Rossetti

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Q-TOF-II-3: Please describe the engineering rationale for the height, location and number of lightning arrester poles.

A-TOF-II-3: UI utilizes modern, industry recommended design practices to protect critical equipment from severe damage due to direct lightning strikes that can produce widespread power outages. Lightning strikes will travel along the path of least resistance to the ground. By placing lightning masts throughout the substation that provide a very low resistance path to the ground, lightning tends to strike the masts rather than critical equipment. Critical substation equipment is then shielded from damaging electrical surges that are caused by lightning. UI's standard design criteria for lightning protection requires 100% protection of equipment within a substation from direct lightning strikes.

The locations of the masts are determined by consideration of several important factors including:

- Height of equipment requiring protection
- The average lightning activity in the area
- The electrical characteristics of the protected equipment
- The height of the lightning masts

The method utilized is referred to as the Rolling Sphere Method where the above criterion defines zones of protection surrounding lightning protection devices, such as lightning masts. Any equipment located in these zones of protection is shielded from lightning strikes. Utilizing this method, masts are positioned throughout the substation yard in optimal positions until 100% of equipment is in a protected zone.

Interrogatory TOF-II-4

The United Illuminating Company

Witness: Matthew Cloud

Ron Rossetti

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Q-TOF-II-4: Can additional trees, plantings or screening be provided for east and west side areas along driveway? Also, please state accurate number of trees to be removed as it appears a discrepancy between aerial photos and proposed site plan.

A-TOF-II-4: UI could only provide additional trees, plantings or screening upon obtaining necessary approvals from Eversource Energy (formally Connecticut Light & Power) for plantings inside of the Right of Way and from the required property abutters if the plantings would reside outside of UI's property. See UI's Petition No. 1120 Pg. 6 for trees to be removed.

Interrogatory TOF-II-5

The United Illuminating Company  
Petition 1120

Witness: Bohdan Katreczko  
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Q-TOF-II-5: Does the site disturbance plan provide detention or stormwater recharge? With approximately 5000 sf of impervious surface, Will UI provide detention and natural recharge as per Engineering Dept. standards and EPA/DEEP phase 2 requirements?

A-TOF-II-5: The Stormwater Pollution Control Plan is designed to minimize potential pollution caused by soil erosion and sedimentation during and after construction. It is also designed to minimize potential stormwater pollution caused by use of the site after construction is completed. UI evaluated the approximately 5,000 square feet of impervious surface within the proposed modification area and determined that based on the size of the property; the existing footprint of the substation assets; and the proposed construction, additional stormwater assets were not needed. Base materials that are proposed to be installed would continue to allow stormwater the ability to naturally percolate into the groundwater, thus reducing the potential for erosion from any sheet flow runoff. An existing catchbasin collects stormwater runoff from the northern portion of the site and the paved driveway. The remainder of the site drains by sheet flow runoff and/or infiltration.

Interrogatory TOF-II-6

The United Illuminating Company

Witness: Matthew Cloud

Ron Rossetti

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Q-TOF-II-6: What will be the surface of the proposed expansion? Will it be crushed stone, asphalt, concrete or earth materials? Please show materials on site plan.

A-TOF-II-6: The surface of the proposed expansion inside of the new substation fence line will be crushed stone approximately 6" deep. Outside of the fence line to the northeast of the property will be a paved asphalt surfacing. This asphalt surfacing will mate with a section of crushed stone in the northeast corner of the property to accommodate maneuvering of large vehicles into the fenced substation yard. A site plan drawing showing material types and locations can be found in the UI's response to Council Interrogatory No. 5 Attachment C.