

Interrogatory CSC-I-1

The United Illuminating Company
Docket No. 490

Witness: Samantha Marone
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Q-CSC-I-1: Of the letters sent to abutting property owners, how many certified mail receipts were received? If any receipts were not returned, which owners did not receive their notice? Were any additional attempts made to contact those property owners?

A-CSC-I-1: UI received certified mail receipts or confirmation of UPS delivery from all property owners except CL&P and Worldwide Properties LLC. UI has had numerous conversations with CL&P concerning the project. Worldwide Properties was resent notification via Priority Mail.

See Attachment CSC-I-1-Attachment A – Abutter Notification Receipts.

Interrogatory CSC-I-2

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Q-CSC-I-2: How many residences are located within a 1,000-foot radius of the center of the proposed replacement substation?

A-CSC-I-2: There are approximately 89 residences identified within 1,000 feet of the center of the proposed replacement substation.

See DO490-CSC-I-2-Attachment A - Residences_1000FT.

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Q-CSC-I-3: Are any state or locally-designated scenic roads located in the vicinity of the proposed project? If yes, provide the distance(s), and describe the visibility from such scenic roads.

A-CSC-I-3: The Merritt Parkway (CT Route 15), a national scenic byway, is located approximately 0.4 miles north of the proposed project. No views of the proposed project are anticipated from the Merritt Parkway. No other state or locally designated scenic roads are located within the vicinity of the proposed project.

Interrogatory CSC-I-4

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Q-CSC-I-4: Please provide an analysis of the existing loading for the two 60 megavolt-ampere (MVA) transformers at The United Illuminating Company's (UI) existing Old Town Substation. What is the MVA capacity of the existing Old Town Substation?

A-CSC-I-4: The weather-normalized 90/10 loading of the existing Old Town Substation was 64.82 MVA during the 2019 peak load period.

The MVA capacity of the existing Old Town Substation is 85 MVA.

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Q-CSC-I-5: What are the approximate age(s) of the two existing transformers at Old Town Substation? What condition are they in? Please provide any analyses that have been performed on the two transformers to determine the condition and remaining life.

A-CSC-I-5: The approximate ages of the transformers are:

A Transformer – 1967 (53 years old)

B Transformer – 1967 (53 years old)

UI routinely performs a condition assessment on major substation equipment, in 2018 both transformers were rated as being in “fair” condition due to marginal oil quality analysis and issues related to the load tap changing equipment.

The remaining life of the transformers is extremely hard to determine, the units could potentially fail without any key indicator. The units are both 50+ years old and are considered to be approaching the end of their expected useful life.

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Q-CSC-I-6: How would the costs of the proposed project be allocated? What costs would be regionalized, and what costs would be localized? Explain.

A-CSC-I-6: In general, distribution costs are localized and most transmission costs (in UI territory) are regionalized which means that ISO-NE determines if the transmission project provides a regional reliability benefit and is in accordance with good utility practices. The process that ISO-NE uses to make this regional cost recovery determination is referred to as the Transmission Cost Allocation (TCA) process and includes input from all New England stakeholders.

The current total estimated project cost is \$39.1M based on the amount of engineering completed to date. UI will update this estimate in the Project's Development and Management Plan. UI estimates that \$23.4M of the project costs will be regionalized across all New England ratepayers based on load share which is approximately 75% New England (\$17.5M) and 25% Connecticut (\$5.9M). The remaining \$15.6M of project costs are related to distribution and non-PTF transmission costs which are typically paid for by UI customers.

Interrogatory CSC-I-7

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Q-CSC-I-7: Would the proposed replacement substation be designed to meet Leadership in Energy and Environmental Design (LEED) certification criteria?

A-CSC-I-7: While the Company does embrace Leadership in Energy and Environmental Design (LEED) concepts and to the degree possible will incorporate these types of philosophies/practices when progressing through the detail design process the substation will not meet LEED certification criteria.

Interrogatory CSC-I-8

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Q-CSC-I-8: Referencing page ES-2 of the Application, UI notes that two 45/60/75 MVA power transformers would be installed within the proposed replacement substation. What is the MVA capacity of the proposed replacement substation? Given such capacity, has UI forecasted the distribution loads (i.e. ten-year forecast of projected MVA distribution loads) for the proposed replacement substation? If yes, provide such forecast.

A-CSC-I-8: The substation will be constructed with two transformers with a top nameplate rating of 75 MVA. The MVA capacity of the new substation is correlated to the emergency loadability of the transformers and will be determined based on a thermal analysis of the as-built transformers. The MVA capacity is expected to be substantially higher than the nameplate rating of 75 MVA.

Based on the 2019 90/10 Ten Year Load Forecast for this substation, the load is projected to be approximately 66 MVA by 2030.

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Q-CSC-I-9: When is it anticipated that the third transformer would be needed? Please provide loading data and growth estimates.

A-CSC-I-9: The need for a third transformer is not projected within Old Town Substation's current ten-year load forecast. However, it is prudent engineering practice to make accommodations for future expansion.

The weather-normalized loading of the existing Old Town Substation was 64.82 MVA during the 2019 peak load period. Based on the 2019 90/10 Ten Year Load Forecast for this substation, the load is projected to be approximately 66 MVA by 2030.

Interrogatory CSC-I-10

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Q-CSC-I-10: When would the proposed replacement substation be expanded to a two-bay breaker and one-half arrangement?

A-CSC-I-10: The need for a breaker and one-half expansion is not projected within UI's current ten-year planning horizon. However, it is prudent engineering practice to make accommodations for future expansion.

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Q-CSC-I-11: Would additional distribution feeders be connected to the substation? If so, indicate how many and estimate the loads.

A-CSC-I-11: The new substation will be designed with 18 outgoing feeder positions, 11 will be used initial while the remaining 7 are considered spare to accommodate any future needs.

Currently, there are no plans to install additional circuits from this substation, however this will be re-evaluated in the near future. Existing feeders may be reconfigured, and/or new feeders constructed based on the area needs since Old Town Substation has ties to other substations in the Bridgeport Area.

Interrogatory CSC-I-12

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Q-CSC-I-12: Referencing page ES-3 of the Application, nine new steel monopoles would be installed. Would the proposed monopoles be galvanized steel or have a different finish? Explain.

A-CSC-I-12: The five new steel monopoles within the substation boundaries will be tubular galvanized steel. This is UI's standard monopole configuration and coating requirement. The four remaining steel monopoles within the Eversource ROW will be tubular galvanized steel.

Interrogatory CSC-I-13

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Q-CSC-I-13: Referencing page 3-3 of the Application, UI notes, that, "...[C]onsiderable grading and filling work is expected to be required." Quantify the amounts of cut and fill that would be required to develop the proposed facility.

A-CSC-I-13: Based on UI's preliminary designs, it is premature to define the exact amount of cut and fill to be required as detailed engineering is not complete. Based on a conceptual design layout it is anticipated that a cut of approximately 9300 cubic yards and a fill of approximately 8800 cubic yards would be required to properly grade the site for construction.

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Q-CSC-I-14: Referencing page ES-3 of the Application, when is it anticipated that the 1714 Line would be interconnected to the substation?

A-CSC-I-14: The need for interconnecting the 1714 line is not projected within UI's current ten-year planning horizon. However, it is prudent engineering practice to make accommodations for future expansion.

Interrogatory CSC-I-15

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Q-CSC-I-15: Please provide additional information relating to the proposed locations of the emergency transformer connections.

A-CSC-I-15: The substation is being designed with drive thru access for the emergency transformers (mobile transformer). The connections to the high voltage side of the mobile transformer are located between the 115-kV circuit breakers and the transformer disconnect switches. The connections for the low voltage side of the mobile transformer are typically located on a steel structure behind the transformers.

See DO490-CSC-I-15-Attachment A - Location of Mobile Transformer.

Interrogatory CSC-I-16

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Q-CSC-I-16: Is any notice to the Federal Aviation Administration (FAA) required for any proposed structures within the replacement substation and/or any proposed transmission structures? If yes, what is the status of such FAA review? Would additional notice to FAA be required for temporary structures such as cranes? Explain.

A-CSC-I-16: Notification to the Federal Aviation Administration ("FAA") is not required for the proposed substation since all structures will be below 200 feet above ground level. Also, the UI contractor will check the need for submitting a notification for construction equipment such as cranes to be used during construction of the proposed substation. If required, the contractor will submit the notification.

Eversource checked the filing requirements for the four proposed permanent transmission structures outside the replacement substation using the FAA Notice Criteria Tool. No notice is required to the FAA for these structures. Also, the Eversource contractor will check the need for submitting a notification for construction equipment such as cranes to be used to construct these four structures. If required, the contractor will submit the notification.

See DO490-CSC-I-16-Attachment A - Old Town FAA Filing Determination.

Interrogatory CSC-I-17

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Q-CSC-I-17: Would the proposed replacement substation be expected to cause any interference with radio, wireless telecommunications, or cable or satellite television?

A-CSC-I-17: No. The corona noise generated by the 115-kV system is too weak and too low of a frequency to interfere with communications in the VHF (Very High Frequency) and UHF (Ultra High Frequency) bands in radio, wireless, telecommunications, or cable or satellite television.

Interrogatory CSC-I-18

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Q-CSC-I-18: Did UI have to apply to the ISO New England (ISO-NE) Reliability Committee for a “no significant adverse effect on the transmission system” determination letter for the proposed replacement substation, if applicable? If yes, please provide a copy of such ISO-NE determination if available.

A-CSC-I-18: UI submitted a Level I Proposed Plan Application (I.3.9 of the ISO Tariff) for this project to notify regional stakeholders of the need for this project and to demonstrate that there would be no resulting “significant adverse effect”. The Reliability Committee voted to recommend approval of the project and UI received an affirmative determination letter from ISO-NE on 9 September 2014.

See DO490-CSC-I-18-Attachment A - PPA UI-14-T03 Determination Letter.

Interrogatory CSC-I-19

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Q-CSC-I-19: Is the proposed site within a Coastal Boundary? If yes, please provide a map.

A-CSC-I-19: No, the proposed site is not within a Coastal Boundary.

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Q-CSC-I-20: Does the proposed site contain any Connecticut Prime Farmland and/or Important Agricultural Soils? If so, what acreage of prime farmland and important soils would the facility and associated equipment be located on? What are the total respective acreages of prime farmland and important soils on the subject property?

A-CSC-I-20: No Connecticut Prime Farmland soils are identified on the proposed project site.

Interrogatory CSC-I-21

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Q-CSC-I-21: Would any tree clearing occur within core forest? If so, how many acres? Under Connecticut General Statutes §16-50k, "Core forest" means unfragmented forest land that is three hundred feet or greater from the boundary between forest land and nonforest land, as determined by the Commissioner of Energy and Environmental Protection." How would tree clearing affect core forest?

A-CSC-I-21: Based on the extent of activity proposed, no clearing within Core Forest is proposed.

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Q-CSC-I-22: Please submit photographic site documentation with notations linked to the site plans or a detailed aerial image that identify locations of site-specific and representative site features. The submission should include photographs of the site from public road(s) or publicly accessible area(s) as well as Site-specific locations depicting site features including, but not necessarily limited to, the following locations as applicable:

For each photo, please indicate the photo viewpoint direction and stake or flag the locations of site-specific and representative site features. Site-specific and representative site features include, but are not limited to, as applicable:

1. wetlands, watercourses and vernal pools;
2. forest/forest edge areas;
3. agricultural soil areas;
4. sloping terrain;
5. proposed stormwater control features;
6. nearest residences;
7. Site access and interior access road(s);
8. electrical interconnection(s);
9. clearing limits/property lines;
10. mitigation areas; and
11. any other noteworthy features relative to the Project.

A photolog graphic must accompany the submission, using a site plan or a detailed aerial image, depicting each numbered photograph for reference. For each photo, indicate the photo location number and viewpoint direction, and clearly identify the locations of site-specific and representative site features shown (e.g., physical staking/flagging or other means of marking the subject area).

A-CSC-I-22: See CSC-I-22-Attachment-A - Photographic Site Documentation.