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November 13, 2020

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Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
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Re: Docket 490 - The United Illuminating Company Application for a Certificate of Environmental Compatibility and Public Need for the Old Town Substation Rebuild Project

Dear Ms. Bachman:

Enclosed for filing with the Connecticut Siting Council ("Council") is The United Illuminating Company's Post-Hearing Brief in connection with the above-referenced docket.

I certify that a copy hereof has been furnished on this date via electronic mail and/or first class mail, postage prepaid, to all parties, intervenors and participants of record according to the Council's service list for this docket as of this date. A copy has also been filed with the Council as an electronic web filing and is complete.

Should the Council have any questions regarding this filing, please do not hesitate to contact me.

Very truly yours,



Bruce L. McDermott

Enclosure

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STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

The United Illuminating Company application for a) Docket No. 490
Certificate of Environmental Compatibility and Public)
Need for the Old Town Substation Rebuild Project)
that Entails Construction, Maintenance and)
Operation of a 115/13.8- kilovolt (kV) Air-insulated)
Replacement Substation Facility Located on the)
Existing Old Town Substation Parcel at)
280 Kaechele Place and Two Parcels Immediately)
North totaling Approximately 3 Acres that are)
Owned by The United Illuminating Company at)
312 and 330 Kaechele Place, Bridgeport,)
Connecticut, and Related Transmission Structure)
and Interconnection Improvements) November 13, 2020

POST-HEARING BRIEF OF
THE UNITED ILLUMINATING COMPANY

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(i.e., the existing Old Town Substation and the Eversource right-of-way) and will have a positive long-term effect on the reliability of the electric system. Additionally, the Project will have no substantial adverse environmental impact and is consistent with state policies concerning the natural environment and ecological balance, public health and safety, and scenic, historic, and recreational values.

The Existing Substation is more than 50 years old. UI conducted various studies to review current and future electric supply needs and to assess the physical condition of the Existing Substation equipment and infrastructure. UI determined that the Existing Substation does not conform to the Company and industry system performance standards for maintaining adequate, safe and reliable service and therefore must be replaced. After assessing the issues associated with the Existing Substation equipment and determining that the Existing Substation parcel is not large enough to accommodate the improvements required, UI determined that the best solution is to rebuild the substation, upgrading all facilities to conform to current Company and industry standards.

The Site represents the best opportunity to maintain the long-term viability and reliability of the electric system while balancing environmental, aesthetic and cost considerations. The proposed Site provides a number of benefits including the following: (i) the Site is owned by UI; (ii) the alignment of the Eversource right-of-way through the Site will not be affected (less costly connection); (iii) the close proximity to existing distribution interconnections; and (iv) because of the mix of commercial, residential and utility uses, the Project Site has no special visual characteristics. UI has

gone to great lengths to protect the surrounding community and environment in accordance with federal, state, and where practicable, local requirements and concerns.

For these reasons, the Project satisfies the criteria for the issuance of a Certificate of Environmental Compatibility and Public Need.

II. Overview of the Project

A. Site Description

The Project will be located on presently undeveloped UI-owned property adjacent to the existing substation at 312 and 330 Kaechele Place. Overall, the substation will occupy approximately 2.25 acres, including all of the existing 0.9-acre substation parcel and approximately 1.35 acres of the adjacent 3-acre parcel. The currently undeveloped parcel is bordered to the east by the Elton G. Rogers Park, to the north by the back yards of residences along Sequoia Road and the parking lot of a funeral home, to the south by the Existing Substation and undeveloped property and to the west by Kaechele Place. UI Exhibit 1 pages 1-7.

B. Need for the Project

The Project is necessary because the Existing Substation is more than 50 years old and most of the substation's equipment needs to be replaced now or in the near future in order to conform to industry and UI standards, as well as to ensure continued reliable electric service to the region. UI Exhibit 1 at 1-5 –1-6. Specifically, the Existing Substation has the following deficiencies in terms of reliability performance and physical condition: inadequate lightning protection; insufficient control enclosure space; bus number 3 enclosure problems; lack of mobile substation access and disconnect switch maintenance issues. October 15, 2020 Tr. at 32; UI Exhibit 1 at 1-6 – 1-7. Additionally, there is a concern with a single point of failure at the existing substation which needs to be

addressed. Specifically, two feeds that come into bus number 3 run through the same manhole. The concern is that if one of the cables catastrophically fails in that manhole it might take out the second cable which would de-energize the bus and drop the load off the bus. October 15, 2020 Tr. at 29. Rather than address each of the deficiencies with a piecemeal approach, a new substation was determined to be necessary. October 15, 2020 Tr. at 32. Fully rebuilding Old Town Substation has the additional benefit of allowing for increased flexibility for expansion and/or upgrades in response to possible future increases in system demand within the 50+ year lifespan of the new substation. For example, while UI does not yet forecast the impact of developments such as electric vehicle charging, the expansion capability afforded by a rebuild will allow UI to be more agile in facilitating the future proliferation of such emerging technologies.

The Project is listed as a “Transmission Reliability Projects Requiring CSC Approval” in the Company’s March 2020 forecast of electric loads and resources. Report to the Connecticut Siting Council on Loads and Transmission Resources, March 2, 2020, at page 22.

C. Alternative to Project Site

UI considered various alternatives, including the “no action” option but determined that the consequences of that alternative would pose unacceptable risks to the resiliency of the transmission system and the provision of reliable service to customers in the Greater Bridgeport area. UI Exhibit 1 at 9-1. UI also considered an in-kind replacement on the existing substation site and a rebuild alternative.

In the in-kind replacement alternative components and equipment would be replaced within the footprint of the existing substation site. However, the small size of the existing site coupled with reliability concerns for UI’s customers made this

alternative not feasible. Additionally, the cost of the in-kind replacement is estimated to be \$47 million compared to \$40 million for the proposed alternative. October 15, 2020 Tr. at 20, 30; UI Exhibit 1 at 2-5 and 9-3. The additional cost associated with the in-kind replacement relates to the inefficiencies of trying to build within an energized yard, the sequence of trying to construct and the additional time required for construction in the existing substation. October 15, 2020 Tr. at 31. While the estimated costs for the Project do include decommissioning costs of the existing substation it does not include the costs associated with the Eversource structures. *Id.* at 30, 66-67.

The rebuild alternative involves the development of a new upgraded air-insulated (“AIS”) 115/13.8kV substation either on UI property adjacent to the existing substation or on nearby properties located near the existing 115-kV transmission line. UI considered seven sites – including the site next to the existing substation – taking into consideration lot size, ownership, proximity to the transmission line, distribution line connections, land use, environmental resources, constructability and cost. UI Exhibit 1 at 9-1 – 9-2, 9-8. After considering those factors, all of the sites except the proposed site were dismissed from consideration since the proposed site represents the optimal solution for rebuilding the Old Town Substation and for enhancing the reliability of the electric system. UI Exhibit 1 at 9-2.

D. Surrounding Land Uses

The Project will be an extension of UI’s long-standing use of property on Kaechele Place for utility purposes and will incorporate the existing substation property while also being positioned to effectively interconnect with the existing Eversource right-of-way. The construction and subsequent operation of the substation will not impact residential, commercial, industrial, educational, governmental institutional or

recreational land uses. UI Exhibit 1 at 4-11. The acquisition of a 0.15-acre easement from the City will be necessary on the southeast side of the site in order to accommodate clearance requirements for the transmission line connections. While the easement will be through The Elton G. Rogers Park due to the location of the easement there will be no adverse impact to recreational use of the park. October 15, 2020 Tr. at 14-15; UI Exhibit 1 at 2-1.

Lands in the vicinity of the Project Site consist of a mix of commercial uses along Main Street, utility uses (including the existing Old Town Substation and the Eversource ROW that extends through the substation), undeveloped open space (the Park), and residential uses to the south along Kaechele Place and to the north along Sequoia Road. A variety of densely developed commercial uses are situated along Main Street (State Route 111), west of the Project Site. Such uses include medical offices (Yale New Haven Health, Commerce Park Dental), retail facilities (Michaels Craft Store, Stop & Shop, Petco, Marshalls), and professional offices.

E. The Project Satisfies the Criteria for Issuing a Certificate

Connecticut General Statutes Section 16-50k(a) provides that no person shall “commence the construction or supplying of a facility, or commence any modification of a facility, that may, as determined by the [Council], have a substantial adverse environmental effect in the state without having first obtained a certificate of environmental compatibility and public need.”

As thoroughly explained within the record, this Project will not have a substantial adverse environmental impact and complies with state policies concerning the natural environment and ecological balance, public health and safety, and scenic, historic and recreational values. The Project will have a localized effect on the visual characteristics of

the area and the environmental effects are expected to be minor and highly localized to the Project vicinity. UI Exhibit 1 at 5-1, 5-7. The Project will be consistent with the long-established utility uses on the Site and in the vicinity (i.e., the existing substation and the Eversource right-of-way) and will have a positive long-term effect on the reliability of the electric system. Therefore the Project satisfies the criteria for the issuance of a Certificate of Environmental Compatibility and Public Need.

UI conducted extensive municipal and community outreach and no individuals or community organizations expressed concern or opposition to the Project. October 15, 2020 Tr. at 14; July 9, 2020 Letter regarding Municipal Consultation Filing.

1. Noise

The Project will result in minimal and localized noise impacts. The predicted substation sound levels will comply with the regulatory limits specified by the City and the State. The presence of tones produced by the transformers at sites to the north of the Project and to the west at the closest residence on Kaechele Place is not considered excessive noise.

The applicable sound level limit at nearby residential receptors is 61dBA (daytime) and 51dBA (nighttime). The predicted sound level contribution from the Project at each of the residential measurement sites ranged from 29 to 44 dBA. The total sound level (predicted Project noise + ambient noise) is as high as 64dBA (daytime) and 58dBA (nighttime) at measurement site ST-4 on the west side of Main Street. In the case of location ST-4 background noise represented 100% of the Daytime Total Sound Level. UI Exhibit 1, Appendix F, at pages 3, 8-9.

The applicable State and City noise regulations provide the following for areas with high background noise, "In those individual cases where the background noise

levels caused by sources not subject to these Regulations exceed the standards contained herein, a source shall be considered to cause excessive noise if the noise emitted by such source exceeds the background noise levels by 5 dBA.”¹ In other words, while the total sound level exceeds the sound level limit there is no violation of applicable noise ordinance because the sound levels due to the Project are lower than the background sound level. UI Exhibit 1, Appendix F, at page 9. This is because the overall A-weighted levels² from the transformers at these locations are more than 5 dB below the noise zone standards – in other words the background noise is “overpowering the transformer noises by almost double.” October 15, 2020 Tr. at 38-9, 69; UI Exhibit 1 at 5-11.

During Project construction, temporary increases in sound levels on and in the vicinity of UI’s Site will occur as a result of activities such as the operation of construction equipment and vehicles. UI Exhibit 1 at 5-10. However, because the proposed Project facilities are located near the commercial areas along Main Street, the temporary increases in sound levels will be consistent with other uses in the vicinity. *Id.*

2. Water Resources

The proposed Site and the proposed transmission line interconnections in connection with the Site are not expected to directly affect inland water resources or water quality. UI Exhibit 1 at 5-3. There is one wetland, Wetland A, on the northern

¹ Regulations of Connecticut State Agencies Section 22a-69-3.6; City of Bridgeport Noise Ordinance Section 3a.

² An A-weighted sound level is defined as “Loudness that is measured with a sound level meter using the A-weighted response filter that is built into the meter circuitry. The A-weighting filter is commonly used to measure community noise, and it simulates the frequency response of the human ear”. IEEE Standards Dictionary (online), 2020. Measurements of the average sound-level magnitude over time from transmission lines and other infrastructure are most commonly reported as A-weighted decibels. IEEE Standard 656, 2018.

boundary of the Site (approximately 0.49 acres) but it is not anticipated there will be permanent fill in the wetland. October 15, 2020 Tr. at 50, 60, 72. However, if temporary work is required within the wetland (i.e., vegetation cutting, temporary construction matting) the Company will consult with the appropriate governmental entity and obtain the appropriate permits as necessary. UI Exhibit 1 at 5-3.

3. Public Health, Safety, and Security

The Project, and in particular, the electric and magnetic fields (“EMFs”) that the Project generates, will have no impact on public health and safety. UI Exhibit 1 at ES-5. The EMF levels in the vicinity of the proposed Project will not change significantly because the configuration of the new substation and the transmission lines will be like that of the existing substation and lines. *Id.* The EMF levels in the vicinity of the new substation are expected to be a small fraction of those recommended for the general public by international health-based standards. *Id.*

The perimeter of the substation will be enclosed by a 14-foot-high fence topped with an additional foot of barbed wire to discourage unauthorized entry and/or vandalism. UI Exhibit 1 at 3-9. Additional safety and security features of the Project will include the following: (1) the substation yard will be fenced, gated, and locked; (2) appropriate signs will be posted alerting the general public to the presence of high-voltage facilities; and (3) low-level lighting will be installed for safety and security purposes. *Id.* UI will install security cameras and motion detectors to provide complete visibility within the interior of the Project and perimeter fence. *Id.*; October 14, 2020 Tr. at 71.

4. Scenic, Historic, and Recreational Values

The Project will have no impact on scenic, historic and recreational values. The Connecticut State Historic Preservation Office concurred with the findings of the cultural resource reviews that additional archeological investigations of the project areas is not necessary and that no historic properties will be affected by the Project. UI Exhibit 1 at B.1.2. The Elton G. Rogers Park is located to the south and east of the Site. The park is undeveloped and includes hiking trails. However, there are no identified scenic vistas within the park (which is crossed by the Eversource right-of-way). UI Exhibit 1 at 4-12. Finally, the Project will have no adverse effect on community facilities and services or developed recreational areas. UI Exhibit 1 at 4-12, 5.

5. Visual Assessments

Once constructed, the visual assessment conducted by UI shows that the Project will only have a localized effect on views and overall, the nearby commercial developments and forest cover will serve to obstruct most views of the new substation. UI Exhibit 1 at 5-7. The Project will be visible from locations on Kaechele Place and in winter will be more visible for some residences along Sequoia Road. *Id.* UI plans on retaining as much vegetation as possible in order to provide natural screening. The removal of the existing 105-foot lattice towers will be a change to the visual environment, but the new steel monopoles are expected to be at the same height as the existing towers. Based on the results of UI's visual assessment, the Project will not adversely affect views in the surrounding community.

6. Wildlife and Vegetation

The development of the substation will have a minor impact on wildlife and vegetation and areas near the proposed site can be expected to provide habitat for any

displaced wildlife species. UI Exhibit 1 at 5-5. Based on consultations with the Connecticut Department of Energy and Environmental Protection's Natural Diversity Database, there are potential populations of eastern box turtle near the Project Site. Therefore, during construction UI will implement best management practices to protect the species of concern. October 15, 2020 Tr. at 53; UI Exhibit 1 at 5-5 – 5-6.

All vegetation within the footprint of the proposed substation will be removed. This includes approximately 60 trees with a diameter greater than 6 inches and the forested vegetation that covers most of the undeveloped portion of the site will be replaced near the substation yard. Vegetation in the Eversource right-of-way and access road will be affected. Vegetation in the right-of-way will be cut or mowed as necessary to allow construction access and to extend the 115-kV transmission lines into the new substation. While the development of the new substation will result in the conversion of approximately 1.5 acres of land to utility purposes the remainder of UI's property adjacent to the existing substation will not be affected and will stay a forest land. UI Exhibit 1 at 5-4 – 5-5.

7. Transmission Lines

The proposed project will be served by and interconnected with two of Eversource's 115-kV transmission lines³ and a third 115-kV transmission line (the 1714 Line), will be re-routed to the new substation yard to accommodate a future connection to the Old Town Substation. October 15, 2020 Tr. at 43; Eversource Exhibit 1, pp. 1-2. The upgrades to be completed by Eversource in order to interconnect the substation to the Eversource transmission system include (i) the

³ The 1710 Line extends between Eversource's Devon Substation in Milford, CT and UI's Pequonnock and Old Town Substations in Bridgeport, CT. Eversource's 1222 Line extends between UI's Old Town Substation, in Bridgeport, CT and its Hawthorne Substation in Fairfield, CT.

installation of four new transmission structures and (ii) relocation and/or replacement of transmission line conductors, communication and shield wires and other associated fixtures and appurtenances from Eversource's two existing lattice structures to the four new monopole structures. Two existing steel lattice structures and the attachments to such structures will be removed as part of Eversource's interconnection work. Eversource Exhibit 2, p. 5.

UI specifically asks that as part of the Council's consideration of the Project that it also approve the facilities and upgrades to Eversource's transmission system that are required for the Project as the construction of Eversource's proposed facilities will not have a substantial adverse environmental effect, will avoid permanent environmental effects and any short-term environmental effects during construction can and would be mitigated.

III. Conclusion

The effects associated with the construction, operation, and maintenance of a new 115/13.8-kV AIS electric substation and associated facilities located at 312 and 330 Kaechele Place, Bridgeport, do not conflict with State policies concerning such effects and do not constitute sufficient cause to deny the Application. The Project will not result in substantial impact to the natural environment; ecological integrity and balance; forests and parks; scenic, historic, and recreational values; air and water purity; fish and wildlife; or public health and safety. The benefits of a new substation in the Greater Bridgeport Area far outweigh any potential disruption to the Property or surrounding area. Therefore, UI respectfully requests that the Council issue a

Certificate of Environmental Compatibility and Public Need for the Project as provided
by Conn. Gen. Stat. § 16-50k.

Respectfully submitted

The United Illuminating Company

A handwritten signature in blue ink, appearing to read "Bruce L. McDermott", is positioned above a horizontal line.

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CERTIFICATE OF SERVICE

I hereby certify that on this 13th day of November, 2020 a copy of the foregoing was sent to the service list in compliance with Regs. Conn. State Agencies Section 16-1-15.

A handwritten signature in blue ink, appearing to read "Bruce L. McDermott", is centered on the page. The signature is written in a cursive style with a horizontal line extending from the end.

Bruce L. McDermott