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July 10, 2023

Melanie Bachman, Esq
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Petition No. 1575: Salisbury Substation Transformer Replacement Project

Dear Ms. Bachman:

The Connecticut Light and Power Company doing business as Eversource Energy submits the enclosed original and 15 copies of the response to the request for information listed below:

Response to CSC-01 Interrogatories dated June 20, 2023

Set 01 – Questions 1-23

Sincerely,

A handwritten signature in cursive script that reads "Deborah Denfeld".

Deborah Denfeld
Team Lead – Transmission Siting

Encl

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 1

Referencing Petition p. 16, were there any additional comments received from the Town of Salisbury or abutting property owners since the filing of the Petition? If so, what were their concerns, and how were these concerns addressed?

Response:

Eversource has received no comments or concerns from the Town of Salisbury or the Town of Sharon (which abuts the Company's property to the south) regarding the Project, either during consultations with municipal officials during the Project planning process or after the submission of the Petition to the Council.

Since the Petition filing, Eversource has continued to communicate with the single property owner north of the substation off Indian Mountain Road who previously expressed concerns about the fenced area expansion on the north side of the substation and the visual impact to his property. Eversource has continued to review potential mitigation options with the property owner (e.g., placing vinyl or wood fencing outside of the substation fence line, weaving green vinyl into the fence line to blend into the natural surroundings, or plantings for visual screening). Eversource discussed the mitigation options with the property owner during an onsite meeting on May 5, 2023 and expects to have further consultations with the property owner.

In addition, Eversource has consulted with the owner of the property south of the substation (off Mudge Pond Road in the Town of Sharon) to review vegetation screening mitigation options. In this area, Eversource determined that some dead trees will have to be removed to avoid potentially blocking the access road around the south side of the substation or damaging the abutter's fence and farm building located to the south of the Company's property line.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 2

Referencing Petition P. 16 and Attachment A, provide the line list identifying the property owners who were notified of the project.

Response:

Below is a list of the abutting property owners who were notified of the Project.

Line List Number	Owner	Site Address	City	State	Zip Code
018-076	ANN C TROTTA	238 MUDGE POND RD	SHARON	CT	06069
018-075	EMILY ELLIOT	310 INDIAN MOUNTAIN RD	SALISBURY	CT	06039
018-072	PATRICIA S STIMPSON REVOC TRUST	23+25 VALLEY RD	SALISBURY	CT	06039
018-073	SHARON LAND TRUST	MUDGETOWN RD	SHARON	CT	06069
018-077	311 IMR LLC C/O ERIC MANSON	311 INDIAN MOUNTAIN RD	SALISBURY	CT	06039
018-079	GEORGE S MASON AND PAMELA K WILSON	MUDGE POND RD	SHARON	CT	06069

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 3

Under Regulations of Connecticut State Agencies (RCSA) 16-50j-2a(29), Site means a contiguous parcel of property with specified boundaries, including, but not limited to, the leased area, right-of-way, access and easements on which a facility and associated equipment is located, shall be located or is proposed to be located. Is the Project area described in the Petition synonymous with the existing facility site? Explain.

Response:

Yes, the "Project area" referenced on three pages of the Petition (pp. 12, 13, and 14) is synonymous with the existing facility "Site" described in RCSA §16-50j-2a(29). Otherwise, the Petition uses the term "site" to refer to the 7.78-acre Eversource property on which Salisbury Substation is located and where the Project activities will occur.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 4

Provide a drawing with distances from the proposed expanded substation facility to abutting property lines.

Response:

Attachment 4.1 includes two drawings – the first drawing illustrates the distance from the existing substation fence to the northern property boundary, while the second drawing depicts the distance from the proposed expanded substation fence to the northern property boundary. For this Project, the substation fenced area will only be expanded to the north; as a result, there will be no change in the distance from the substation fence to properties that abut the Company property on the east, south, or west.

As illustrated on the Attachment 4.1 drawings, the substation's existing northern fence is not uniformly aligned parallel to the property boundary. As a result, as summarized in the table below, after the proposed expansion of the substation and the relocation of its northern fence by 15 feet to the north, the distances from the substation fence to the abutting property boundary also will vary from west to east.

Fence	Distance from Northern Substation Fence to Abutting Property Line (
	Northwest Fence Corner	North-Central Fence	Eastern Fence
Existing Fence	24 feet11 inches	24 feet7 inches	30 feet7 inches
Proposed Expanded Fence	9 feet11 inches	9 feet7 inches	15 feet7 inches

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 5

Referencing P. 4 of the petition, would the spare transformer remain at the substation and be used to back up the new transformer? Explain.

Response:

No. The existing spare transformer, which was manufactured in 1948, is not rated to support the substation's proposed transformer. Both the existing spare transformer and the substation's existing transformer are 13-mega volt ampere ("MVA") 69- / 13.2-kilovolt ("kV") transformers, whereas the proposed replacement will be a 40-MVA 115- / 69-kV transformer.

In the event of an emergency, Eversource would deploy a compatible mobile transformer to serve substation load.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 6

Referencing Map Sheet 1, describe why the area south of the substation is designated as a No Parking Area.

Response:

The portion of the Eversource property along the existing access road around the south side of the substation is shown on the Attachment A aerial map as a "No Parking Area" because only the existing access road will be used during Project construction in this area.

Eversource's objective in designating this area as a "No Parking Area" is to preserve the existing vegetative screening along the southern property line. Eversource's property has ample space for Project construction vehicles and equipment to park in other locations, including those that were previously used for such purpose during the recent 69-kV transmission line rebuild work near the substation (e.g., as shown on the aerial map, at the laydown area east of the fenced substation and at the construction support areas west of the substation; refer to Section 4.1 of the Petition).

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 7

What is the total estimated cost of the project? Of this total, what costs would be regionalized, and what costs would be localized? Estimate the percentages of the total cost that would be borne by Eversource ratepayers, Connecticut ratepayers, and the remainder of New England (excluding Connecticut) ratepayers, as applicable.

Response:

The total estimated cost of the project is approximately \$14.5 million. The Salisbury Substation transformer replacement project does not include Pool Transmission Facilities, and thus the entire cost will be allocated to customers of The Connecticut Light and Power Company d/b/a Eversource Energy.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 8

Is the proposed project identified in any ISO-New England, Inc. (ISO-NE) needs and solutions analyses? Is the proposed project on the ISO-NE Regional System Plan (RSP) Project List and/or Asset Condition List? If yes, identify.

Response:

The Project was not identified in an ISO-NE needs and solution analysis and is not included in the ISO-NE Regional System Plan project list or the Asset Condition List. The Project is included on Eversource's Local System Plan as "Salisbury Substation – Transformer Replacement (Salisbury)".

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 9

Are any generation facilities listed on the ISO-NE interconnection queue associated with the proposed project? If so, please identify the generation facilities and the queue position.

Response:

The Salisbury Substation transformer replacement need is to improve system reliability driven by asset condition concerns. The Project scope is not attributable to support a generator interconnection and no ISO-NE project is associated with the proposed Project.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 10

How would the proposed project address and/or resolve the risk of a contingency, such as the single contingency line loss that required the 10 MW of emergency standby generation at Salisbury Substation in 2020 for related facility modifications under Petition 1371?

Response:

The risk does not apply to this Project, which is a transformer replacement, because the single contingency line loss ("SCLL") that required 10 MW of emergency standby generation was necessary because the line was taken out of service. With respect to the proposed Project, the mobile transformer that will be used during the replacement process will serve to cover the load requirements for the transformer that will be replaced and thus will resolve the SCLL concern during construction.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 11

Please describe how the proposed project is consistent with the recommendations of the Federal Energy Regulatory Commission (FERC) and the North American Electric Reliability Corporation (NERC) Report on Transmission Facility Outages During the Northeast Snowstorm of October 29-30, 2011 Causes and Recommendations.

Response:

The identified joint FERC and NERC report (dated May 31, 2012) does not identify any recommendations specific to substation design or modifications such as those Eversource proposes for this Project (that is, replacement of a 70-year-old transformer). The report focuses primarily on vegetation management of transmission line rights-of-way in order to avoid risks to the transmission grid from storm-induced damage to trees.

Eversource already maintains vegetative clearances from the substation and will continue to do so. As part of this Project, dead trees near the substation will be removed. Vegetation along the ROWs of the two 69-kV transmission lines that connect to Salisbury Substation is already managed in accordance with Company specifications.

Overall, the replacement of the 70-year-old existing transformer at Salisbury Substation is needed to maintain the reliability of the transmission system and in that regard is consistent with FERC and NERC objectives regarding grid reliability.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 12

Please provide a drawing of the proposed firewall and its dimensions.

Response:

Attachment 12.1, Drawing 22203-11102, provides the details of the proposed firewall and its dimensions. The firewall plan and sections are highlighted in yellow.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 13

Quantify the amounts of cut and fill that would be required for the proposed project.

Response:

In general, the amount of cut and fill required for the proposed Project will be minimal and the amount of excavated material will be comparable to the amount of fill, as follows:

Activity	Cut (Excavation) Amount (Cubic Yards)	Fill Amount (Cubic Yards)
Transformer oil containment and foundation	370	370
Other concrete, foundation, trench, and conduit work	260	260

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 14

Referencing Attachment B provide the height of the tallest existing and proposed equipment within the substation compound.

Response:

The height of the tallest existing equipment within the Salisbury Substation fenced area is a terminal structure (69-kV transmission line entry connection to the substation), with lightning arrestor, that is a total of 60 feet 4.5 inches in height.

A circuit switcher, which will be 27 feet 1 inch in height, will be the tallest piece of equipment installed as part of the Project.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 15

Provide the distances of the two nearby wetlands from the existing access road and the proposed staging areas.

Response:

As illustrated on the Attachment A aerial map, wetland W1 consists of two separate areas, located south and north of the existing Salisbury Substation access road. Stream S1, which flows beneath the access road in a culvert, connects the two portions of W1.

The following provides the distances from each portion of W1 to the access road and proposed staging areas:

Portion of Wetland W1 south of the access road:

- +/-5 feet from the existing access road.
- +/-11 feet from the staging area to the west.
- +/-40 feet from the staging area to the east.

Portion of Wetland W1 north of the access road:

- +/-10 feet from the existing access road.
- +/-38 feet from the staging area to the southwest.
- +/-44 feet from the staging area to the southeast.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 16

Please identify the early successional dependent species referenced on P. 13 of the Petition.

Response:

While no specific onsite wildlife surveys were conducted as a part of this Project, the Eversource property on which Salisbury Substation is located, including the Company's 69-kV transmission line ROWs that extend to the substation fence, offers suitable early successional habitat for reptiles such as the eastern milk snake, garter snake, brown snake, and green snake. Suitable amphibian breeding and feeding habitat is present for the spring peeper, green frog, American toad and gray treefrog.

With respect to birds, the area in the vicinity of the substation represents suitable habitat for a variety of "shrubland birds". Potential species include the blue winged warbler, prairie warbler, Indigo bunting, field sparrow, eastern towhee, grey catbird, and common yellowthroat. Suitable habitat is also present for gamebirds such as American woodcock, which benefit from the protective nesting sites afforded by thick stands of small trees and shrubs along the edge of the Eversource property near the substation and along the edge of the nearby maintained ROWs, and wild turkey, which benefit from the abundance of insects found in the densely vegetated herbaceous openings.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 17

How would the proposed substation modifications comply with any standards and guidelines for animal deterrents at electric substations?

Response:

To avoid or minimize the potential for animal-related issues, the proposed Project modifications to Salisbury Substation will conform to Eversource's standards, which are in accordance with the Institute of Electrical and Electronics Engineers ("IEEE") Standard 1264 - IEEE Guide for Animal Deterrents for Electric Power Supply Substations. In general, physical barriers will be installed on energized equipment in order to minimize the possibility of animal contact that could result in outages. The substation fence also acts as physical barrier to animals.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 18

For the mobile, proposed and spare transformers, please provide oil containment measures and type of oil utilized for each transformer.

Response:

Information regarding the type of oil and oil containment measures for the substation's existing transformers (operational transformer and spare), the mobile transformer (which will be on site during construction), and the proposed replacement transformer are as follows:

Existing Transformer and Existing Spare Transformer

The specific type of oil in the existing operational and spare transformers is not known but is likely CrossTrans 206, a specially processed electrical insulating oil that is commonly used in transformers, or equivalent. The two existing transformers are equipped with secondary containment over trap rock. Pursuant to 40 Code of Federal Regulations Part 112, Eversource has a Spill Prevention, Control, and Countermeasures ("SPCC") Plan for the transformers (SPCC Short Form, Self-Certified Facility < 10,000 gallons of oil).

Mobile Transformer

The mobile transformer, which will be deployed to Salisbury Substation during the Project construction, is equipped with a self-contained secondary containment system, and it utilizes CrossTrans 206 oil.

Proposed Replacement Transformer

The proposed replacement transformer design includes a secondary oil containment system provided by Solidification Products International, Inc. ("SPI").

The oil containment pit for the replacement transformer is designed with ample capacity to accommodate the larger of two scenarios: 110% of the total transformer oil volume or the anticipated rainfall from a 24-hour period during a 25-year storm event.

The bottom of the oil containment pit will be equipped with a high-quality geomembrane liner that will be supplied and installed by SPI.

The proposed replacement transformer will use HyVolt II oil, a dielectric fluid that meets Eversource and industry specifications.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 19

Is the oil within the transformers (mobile, proposed, spare) biodegradable or have other properties so that it is not hazardous to the environment in the event of a spill?

Response:

The oils used in the existing transformer, existing spare transformer, mobile transformer, and the proposed replacement transformer (refer to the response to Interrogatory #18) do not meet the U.S. Environmental Protection Agency ("EPA") requirements to be considered biodegradable.

The transformer oil (i.e., Cross Trans 206 and HyVolt II) will biodegrade over time but not as fast as the EPA requires for them to be classified as "readily biodegradable". However, as detailed on the Safety Data Sheets for Cross Trans 206 and HyVolt II, neither transformer oil contains hazardous ingredients.

Moreover, Eversource implements spill prevention, containment, and control measures to avoid the potential for a spill of transformer fluid and, should a spill occur to the environment, to promptly contain and clean up the spilled fluid so as to avoid or minimize effects on the environment.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 20

Would the Project comply with the 2023 National Electrical Safety Code, effective February 1, 2023?

Response:

Yes, the Project would comply with the 2023 National Electrical Safety Code, effective February 1, 2023.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 21

How were noise levels determined? Would the firewall provide any incidental noise mitigation?

Response:

Eversource conducted an engineering evaluation of the sound levels that would be associated with the operation of the proposed new 40-MVA transformer, based on specifications provided by the transformer manufacturer. The objectives of the evaluation were to (1) define acoustic design goals based on applicable noise regulations; and (2) estimate sound levels from the proposed replacement transformer at the substation property boundaries.

The results of the analysis determined that at all property boundaries, the sound levels from the replacement transformer would be less than 39.3 dB(A), below the State noise regulations of 61 dB(A) daytime and 51 dB(A) nighttime from an industrial emitter (such as the substation) to residential receptors. (The towns of Salisbury and Sharon do not have local noise regulations.)

The firewall, which will be located to the west of the replacement transformer, could serve to further reduce sound levels in that direction; however, the primary purpose of the firewall is to protect the control enclosure located west of the transformer.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 22

Please describe how the proposed project is consistent with the NERC Evaluation of the Physical Security Reliability Standard and Physical Security Attacks to the Bulk-Power System, dated April 14, 2023 and available at:
<https://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/NERC%20Report%20on%20CIP-014-3.pdf>

Response:

Salisbury Substation is not classified as a bulk power facility and therefore is not subject to the requirements of CIP-014 detailed in the above-referenced report.

Date Filed: July 10, 2023

Request from: Connecticut Siting Council

Question: 23

Please describe how the proposed project would comply with the Council's *White Paper on the Security of Siting Energy Facilities* available at: https://portal.ct.gov/-/media/CSC/1_Dockets-medialibrary/Docket_346/whitepprFINAL20091009114810pdf.pdf

Response:

The physical security of the Salisbury Substation is consistent with the Council's *White Paper on the Security of Siting Energy Facilities*, as amended, which was initially adopted in the Council's Docket 346, "*White Paper*". The *White Paper* guidelines focus on the unpredictable intentional act of perpetrators designed to damage the physical structures of the certificated facilities (as opposed to, for instance, cyber security). The Project modifications also will be consistent with the Council's *White Paper* Guidelines.

The following summary follows the format suggested by the Council in its *White Paper*, which focuses on security issues associated with four areas: Planning, Preparedness, Response, and Recovery. Each section first presents the discussion topic included in the *White Paper*, and then provides Eversource's proposed security approach for the particular area.

PLANNING

Identify the physical vulnerabilities most likely to pose a security threat.

All substations are subject to attempted entry by unauthorized persons. Although the substation is accessible from public roads, it is fenced and remotely monitored. There are existing security measures in place and the proposed Project improvements will not add any new vulnerabilities.

Identify the type and characteristics of the facility and any ways in which the facility's setting affects security concerns.

The Salisbury Substation is a 69-kV facility that presently includes one 69- to 13.2-kV transformer and interconnects two 69-kV transmission lines. The setting of the Salisbury Substation is in a rural area and not visible from the public roadway. The substation's setting poses no particular security concern.

Examine any pertinent ways in which the facility is linked to other facilities and systems and potential repercussions from a facility or system interruption. Examine whether the proximity of the facility to other electric facilities, either dependent or independent, presents security challenges.

Salisbury Substation interconnects two 69-kV transmission lines, one of which connects to another Eversource substation (Falls Village); the other line serves as an interconnection with a Central

Hudson Gas and Electric substation in New York. Due to the interconnecting line being 69 kV and not a substantial system interconnection, the substation has low value as a target for system threats.

Examine if there is an established method to help regional, state and national security officials maintain situational awareness of this facility.

Eversource has established procedures to help regional, state and national security officials maintain situational awareness of its facilities. The Connecticut Valley Electric Exchange (“CONVEX”) monitors Eversource’s transmission facilities and those of other member utilities in Connecticut and Western Massachusetts in real time, and ISO-NE similarly monitors the security status of the entire New England bulk power system.

Causes of outages are investigated promptly and, when appropriate, reported to law enforcement officials. Maintaining situational awareness is a dynamic task. In 2006, when NERC applied to be designated by the FERC as an Electric Reliability Organization (ERO), NERC included a provision for maintaining situational awareness and it continues to develop improvements to address and/or improve awareness.

PREPAREDNESS

Examine site security infrastructure, including site monitoring, physical and nonphysical barriers and access controls.

Salisbury Substation is enclosed with a 7-foot high chain link fence topped with an additional 1 foot of three strands of barbed wire to discourage unauthorized entry and vandalism. The fence that will be added for the expanded substation area will also consist of 7-foot high chain link fence topped with an additional 1 foot of three strands of barbed wire. Access to the substation is limited through locked gates and only authorized personnel are permitted to enter. Thus, the Salisbury Substation is secure and classified as a “low” risk per the North American Electric Reliability Corporation (“NERC”) Physical Security Standard. Security at low risk sites includes electronic access control and closed circuit TV. Additional security measures may be installed based on experience at the specific location.

Site security monitoring for the substation will continue to be provided by Eversource security’s central monitoring station located in Berlin, Connecticut. Additionally, as part of its duties, CONVEX maintains a procedure regarding how sabotage events will be identified and reported to local and federal officials, neighboring utilities, and to regulatory bodies. NERC provides guidelines for assessing the degree of protection each component of the grid should receive and recommended types of precautions that these facilities should have in place.

PERSONNEL

Review any simulated exercises that include local police, fire, and other emergency response teams. Examine whether local law enforcement/emergency response liaison is in place, and review mutual aid agreements between affected entities.

Eversource regularly consults with first responders across its service territory. The proposed changes will not call for any change in established procedures that are in place for notification and response. Eversource Public Outreach personnel are available to act as liaisons between municipal officials and the Company through well-documented and exercised protocols.

The Connecticut Department of Emergency Services and Public Protection (“DESPP”) Training and Exercise Division sponsors emergency preparedness training, seminars, exercises, and conferences for local first responders, as defined in Homeland Security Presidential Directive 8 (i.e., police, fire, emergency management, emergency medical services, public health, public works, private sector, non-governmental organizations and others). These presentations and seminars are designed to cover Planning, Preparedness, Response, and Recovery. Eversource is represented on the Private Sector Council of DESPP, which meets quarterly and more frequently as needed. Eversource has participated, and will continue to participate, in state and regional emergency exercises.

RESPONSE

Examine notification procedures to public and/or local officials, including the types of security issues that would warrant such notification.

Upon completion of construction, the proposed Project will not require any change in existing, pre-established public notification procedures. After the transformer replacement work is complete and the new transformer and related equipment is operational, Eversource will continue to adhere to NERC and CONVEX protocols and will coordinate further with these entities as well as public and/or local officials regarding the best mechanism for communicating incidents.

MITIGATION

Examine mitigation measures, including alternate routing of power, strategically located spares and mobile backup generation.

Eversource keeps an inventory of spare equipment to enable it to quickly restore facilities to service after most failures. For example, spare switching equipment is located in a central storage area to be deployed as may be required. Moreover, the substation has a disconnect switch to facilitate the installation of a mobile transformer in case one of the permanently installed transformer is removed from service for a prolonged period of time. Since transformers could fail without warning, Eversource is prepared to quickly respond to a transformer failure. Distribution circuits have connections to circuits from other substations which would provide backup power to customers in the event of an outage at Salisbury Substation.

RECOVERY

Identify measures that will be taken, if necessary, to restore natural resources at the site of the facility.

In the event of an incident, the first priority would be to eliminate any threat to public safety and then to repair the transmission facilities. During the response to an incident, natural resources at or adjacent to the site would be protected to the extent practical and subsequently restored to pre-incident conditions as practicable. In general, the resource protection and mitigation measures

would be the same as those employed during Project construction. If wetlands or water resources are involved, mitigation protocols would be coordinated with the appropriate resource agencies, such as the U.S. Army Corps of Engineers and the CT Department of Energy and Environmental Protection.

REPORTING

Determine whether reporting procedures are established to evaluate and improve the effectiveness of local emergency response teams, methods to limit negative impacts on neighboring electric facilities, and restoration of the natural environment.

Eversource will investigate and respond to any incident associated with its infrastructure. Depending on the magnitude and consequences of the incident, Eversource's processes and/or after action reviews will evaluate what improvements may be needed in future incidents response to minimize the potential for future adverse effects on its facilities, the environment and neighboring electric facilities, as well as the effectiveness of the interface with local emergency response teams.