

November 30, 2015

Mr. Robert Stein  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

Re: Docket No. 461 - CSC 461 Greenwich Substation and Line Project

Dear Mr. Stein:

This letter provides the response to requests for the information listed below.

Response to PANTRY-02 Interrogatories dated 11/16/2015

PANTRY-001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018,  
019, 020, 021, 022, 023, 024, 025

Very truly yours,

John Morissette  
Project Manager  
Siting  
As Agent for CL&P  
dba EversourceEnergy

cc: Service List

**CL&P dba Eversource Energy**  
**Docket No. 461**

**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-001**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

Are the firefighters in the Greenwich area trained to combat an electrical disaster at the proposed facilities?

**Response:**

While Eversource has operated several substations in Greenwich for many decades, the Greenwich Substation is proposed to have a portion indoors within a building. This aspect of the substation is different and Eversource will review the operation of the new substation with the Greenwich fire department.

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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-002**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

What was the response time for the firefighters who responded to the fire at Cos Cob.

- a. How long did it take?
- b. How long did it burn?

**Response:**

The company does not have information on the response time for the firefighters who responded to the fire at Cos Cob substation. The duration of the fire was approximately 3 hours.

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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-003**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

Is Amtrak a customer of Eversource? What percentage of overall use is used by them?

**Response:**

Eversource does not supply Amtrak from any substations located in Greenwich. However, Amtrak is a customer of Eversource outside of southwest Connecticut.

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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-004**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

Is Metro North a customer of Eversource? What percentage of overall use is used by them?

**Response:**

Metro North is a transmission level customer of Eversource in Greenwich. The Metro North substation at Cos Cob is metered as a customer on the 115-kV system. Metro North's demand represents less than 10% of the 115-kV transmission supply to Cos Cob Substation.

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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-005**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**  
Who owns the train electrical substations?

**Response:**  
It is our understanding that the Connecticut Department of Transportation (CDOT) owns the portion of the electrical substation at Cos Cob that supplies Metro North Railroad. However, please contact CDOT for further information.

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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-006**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

Who pays for the electric service to the trains in the Greenwich area? Does the public or the train companies privately? Are they subsidized by the state or federal government?

**Response:**

Metro-North Railroad pays for the electric service for the trains in the Greenwich area as a transmission level customer of Eversource. Eversource has no knowledge of how Metro-North recovers its costs or to what extent it is subsidized.

**Witness:**           **Witness Panel**  
**Request from:** **Pet Pantry Super Discount Stores**

**Question:**

Eversource indicated previously that you have service personnel:

- a. Who respond to emergencies at the substations?
- b. Where are their offices located?
- c. What happens if they are at other sites conducting emergency services?
- d. What is the next available resource and where is located? What would be the response time?
- e. What geographical areas does the one closest to Greenwich cover?

**Response:**

The following responses apply to service personnel responsible for substation operations in Greenwich.

- a. Substation Electricians and their supervisors respond to emergencies at the substations. Other qualified personnel may also respond depending on the situation.
- b. The offices for the personnel responsible for Greenwich substations are located at Eversource's Norwalk work center.
- c. Additional resources are available at Eversource's Stamford and Norwalk work centers, which would allow response to multiple emergencies.
- d. Additional resources are available at Eversource's Stamford and Norwalk work centers. Depending on traffic it would take approximately 15-30 minutes to arrive at the site.
- e. Eversource's Stamford work center covers Stamford and Darien.



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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-008**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

Eversource indicated that they did testing at the site at approximately 40 borings to test soil consistency and composition but other sampling may have to be undertaken? In what circumstances would that occur?

**Response:**

Currently an additional 16 borings have been proposed for the HPFF underground line route, the proposed Cos Cob Substation expansion and the proposed Greenwich Substation. Those borings are scheduled pending CDOT permission and access availability.

At the proposed Cos Cob Substation expansion, there are 4 proposed soil borings. Percolation tests will be performed on all the proposed borings.

Along the preferred 115-kV underground HPFF route, there are 3 proposed soil borings, two of which include installation of water monitoring wells, with the third to have the soil samples taken for geothermal testing.

Close to the proposed Greenwich Substation, there are 9 proposed soil borings. Percolation tests will be performed on 6 of them.

Should the underground route be shifted, more soil borings would be expected.

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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-009**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

Would inconsistency of soil or its composition that may not have been discovered delay the Project and is there an estimate as to how long would it be delayed in worst case scenario and would it add to the cost of the Project?

**Response:**

It is unlikely that inconsistencies of soil or its composition would be discovered during construction. Eversource has taken greater than 40 soil and water samples along the proposed and alternative routes to obtain initial data with respect to quality and compatibility with the proposed Project. These samples were taken to assist Eversource and its Engineers in preparing its preliminary engineering designs and developing a conceptual construction approach. If the Siting Council approves the Project, Eversource will take additional samples to refine this analysis at the location of the new substation and the route of the Project transmission lines. This additional sampling would further decrease the likelihood of having an unplanned discovery. In the event that there is an unanticipated discovery of incompatible soils, it would likely be confined to a small geographic area and not be a significant cost adder to the Project or result in a delay of the Project. Despite the best information that can be obtained from borings or test pits, Eversource frequently encounters conditions during construction that must be managed and with no significant impacts to cost or schedule. At this time Eversource cannot estimate how long a delay or how much cost would be incurred for such an unanticipated discovery.

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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-010**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

Has the State disclosed the extent of the I-95 highway expansion in Greenwich and to what extent would the expansion prevent Eversource from installing lines in a longitudinal direction along the highway?

**Response:**

ConnDOT has not provided any information on the extent of the I-95 highway expansion in Greenwich.

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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-011**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

When is the ConnDot expansion to occur in the Greenwich area? Is it to be co-ordinated with Eversource and what is Eversource's role in that expansion.

**Response:**

ConnDOT has not provided any schedule information for the I-95 highway expansion in Greenwich. During the design of an expansion of I-95, should it occur, ConnDOT would contact all utilities that could be impacted by the expansion, for relocation and/or protection of existing utility facilities.

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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-012**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

Eversource claimed that there were 3 cable failures between Cos Cob and Prospect substations. What was the cause of the each failure and when did each occur?

**Response:**

See Eversource's response to OCC-04, Q-OCC-042.

**Witness:** Witness Panel  
**Request from:** Pet Pantry Super Discount Stores

**Question:**

What is the electrical consumption in the immediate areas next to Greenwich such as Norwalk, New Canaan, Stamford, Darien as compared to Greenwich?

**Response:**

Based on the 2013 peak load year we are providing a table of MWhr delivered by the substations in the above areas.

<b>Substation</b>			
<b>Location</b>	<b>Substation</b>	<b>kV</b>	<b>2013</b>
Darien	<b>Darien 13S</b>	13.2	228,480,872
Greenwich	<b>Cos Cob 11R 13.2kV</b>	13.2	92,810,721
Greenwich	<b>Cos Cob 11R 27.6kV</b>	27.6	475,093,662
Greenwich	<b>Tomac 12H</b>	27.6	139,940,888
Norwalk	<b>Flax Hill 24A</b>	27.6	189,487,160
Norwalk	<b>Flax Hill 24A</b>	13.8	23,995,516
Norwalk	<b>Norwalk 9S</b>	13.8	214,140,754
Norwalk	<b>Norwalk 9S</b>	27.6	365,591,958
Norwalk	<b>Norwalk 9S</b>	4.8	21,018,911
Redding	<b>Peaceable 12N</b>	13.8	118,980,388
Stamford	<b>Cedar Heights 4R</b>	13.2	257,755,708
Stamford	<b>Glenbrook 1K</b>	13.2	315,285,263
Stamford	<b>South End 1G</b>	13.2	412,733,007
Stamford	<b>Waterside 22M</b>	13.2	443,615,310
Weston	<b>Weston 21M</b>	27.6	161,737,855
Westport	<b>Compo 23K</b>	13.8	152,834,074
Westport	<b>Sherwood 18P</b>	13.8	13,663,592
Wilton	<b>Wilton 35A</b>	13.8	343,256,474

Note: The data above is the total MWhrs delivered by the specified substations to all their customers. The MWhrs cannot be broken up by customers served in adjacent towns. We can supply the number of customers served by substation based on 2015 customer counts.

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**Data Request PANTRY-02**  
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**Q-PANTRY-014**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

Have new substations been installed in the last five years in any of those municipalities?

**Response:**

The South Norwalk Electric and Water's (SNEW) Substation and the City of Norwalk Third Taxing District Electric Department's Substation have been installed in the last five years and are both connected to Eversource's 115-kV transmission lines. The distribution portion of SNEW's Substation was built and is owned by SNEW; Eversource built and owns the transmission portion of the substation. Both portions of the City of Norwalk Third Taxing District Electric Department's Substation are owned by the city. No other electric substations have been installed in Darien, Greenwich, New Canaan, Norwalk or Stamford in the past five years.

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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-015**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

Do the new lines have an impact as to the distribution systems or will it only be as to Transmission?

**Response:**

Yes, the new Greenwich Substation and transmission lines will greatly improve distribution system reliability in Greenwich. Please see the Company's response OCC-04, Q-OCC-058 for more information on this benefit of the Project.



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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-016**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

What is the estimated cost and repair of existed lines as opposed to the cost and maintenance of newly installed lines?

**Response:**

There are no existing transmission lines west of Cos Cob Substation.

Per page G-23 of the application, the life-cycle cost of the transmission lines is estimated to be \$121.6 million dollars. This includes cost of installation and maintenance activities.

**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

What will happen to the soil that is excavated from the sites?

- a. Will it be reprocessed, treated?
- b. Will the soil be sold?

**Response:**

a. During construction of the proposed substation, any excavated soils compatible for reuse will be used as backfill in proximity to the same excavation area from where it originated. Any excess excavated soils not suitable for reuse would be trucked off-site and managed in accordance with applicable regulations. Rock, concrete and other debris would be removed and trucked off-site prior to reusing the soils.

All excavated soils generated during the construction of the underground cable would be trucked off-site and managed in accordance with applicable regulations. The trench would then be backfilled with a fluidized thermal backfill and a high-strength concrete cap to serve as a protective layer. Within the tidal basin, subsurface tidal wetland sediments would be reused as additional backfill if determined suitable based on industry standards. Stockpiled surficial tidal wetland sediments would be reused to cover the top 12 inches of the trench within the tidal basin. Any excess excavated tidal wetland sediments would be trucked off-site and managed in accordance with applicable regulations.

Soils generated during construction of the substation and underground cable would not be reprocessed or treated on site.

- b. No, excess soils would not be sold.

**Witness:**           **Witness Panel**  
**Request from:** **Pet Pantry Super Discount Stores**

**Question:**

Eversource stated that in Summer of 2011 that the customer load was interrupted for several days

- a. by what?
- b. Why did that occur?
- c. Was it preventable?
- d. How was it preventable?

**Response:**

Customer load was interrupted for several days in the summer of 2011:

- a. By lightning strikes during storm conditions.
- b. Distribution equipment was damaged by the lightning strike.
- c. Events were not preventable. The arresters did not fail. During normal operation, the arrester acts as an open circuit and when a voltage surge occurs the arrester goes into conduction, passing harmful voltage to ground.
- d. N/A

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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-019**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

Did Eversource perform a study on the imposition of a microgrid in the Greenwich area?

- a. Is that available?
- b. Was it provided in the Application exhibits?
- c. If Not, why not?

**Response:**

Refer to the Application section F.3.3 for the discussion of microgrids and why they are not a feasible technical solution.

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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-020**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

What other new substations have been built within the last 5-6 years in Connecticut and where?

- a. What was their costs?
- b. Did they have any project overruns?

**Response:**

Eversource has not built a Gas Insulated Substation (GIS) in Connecticut in the last 6 years, The only new Eversource open air substation in the last six years in Connecticut was Sherwood Substation in Westport. The Sherwood Substation initial estimate was \$20.05 million, the actual total costs were approximately equal to the estimate.

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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-021**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

What would an energy efficient program in the Greenwich area yield in reduced need?

- a. Were there any studies done?
- b. Were they submitted?
- c. If not why?

**Response:**

No studies have been conducted on the impact of energy efficiency programs in the Greenwich area. Eversource already has energy efficiency programs available to Greenwich customers (see Section F.3 of the Application; OCC-2, QOCC-26; OCC-02, Q-OCC27; HD-01,Q-LF-007), and energy efficiency is already factored into load forecasts. While additional energy efficiency efforts might reduce customer demand by additional small increments, it would not be able to offset the need for the Project.

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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-022**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

Have you evaluated the top 25 users to get them on microgrids and other energy efficient systems, when, and what was the reductions yields.

**Response:**

Eversource did not study the top 25 users for a microgrid and other energy efficient systems. Refer to Eversource's answers in PANTRY-02, Q-PANTRY-019 and PANTRY-02, Q-PANTRY-021.

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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-023**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

When were the latest upgrade made to the substation at 330 railroad ave over the last 5-6 years. What was it for?

**Response:**

There have been no upgrades to Prospect Substation at 330 Railroad Avenue during the last six years. The latest major upgrades to Prospect Substation have been the addition of a 27.6- to 13.2-kV transformer in 2007, and the replacement of all 27.6-kV circuit breakers and associated switches in 2004.



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**Data Request PANTRY-02**  
**Dated: 11/16/2015**  
**Q-PANTRY-024**  
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**Witness:           Witness Panel**  
**Request from:   Pet Pantry Super Discount Stores**

**Question:**

What will be the role of the operations at 330 railroad under the current plan.

**Response:**

Prospect Substation would continue to be a critical distribution tie station for the existing 27.6-kV system, including for service to the customers that are directly supplied at 27.6 kV and customers served by the secondary network.

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**Data Request PANTRY-02  
Dated: 11/16/2015  
Q-PANTRY-025  
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**Witness:           Witness Panel  
Request from:   Pet Pantry Super Discount Stores**

**Question:**

As Eversource indicate, the site at 290 Railroad is to be demolished? Why can't the site at 330 be demolished and rebuilt with the additional height included? Is not that site larger than 290? Please explain?

**Response:**

Application section H.2.2.1 and H.2.2.3 provide the analysis of the 290 and 330 Railroad Avenue sites.