STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

RE: EVERSOURCE ENERGY APPLICATION FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE, AND OPERATION OF A 115-KILOVOLT (KV) BULK SUBSTATION LOCATED AT 290 RAILROAD AVENUE, GREENWICH, CONNECTICUT, AND TWO 115-KV UNDERGROUND TRANSMISSION LINES EXTENDING APPROXIMATELY 2.3 MILES BETWEEN THE PROPOSED SUBSTATION AND THE EXISTING COS COB SUBSTATION, GREENWICH, CONNECTICUT, AND RELATED SUBSTATION IMPROVEMENTS.	:	DOCKET NO. 461 **APRIL 11, 2016**

POST-HEARING BRIEF OF FIELD POINT ESTATE TOWNHOUSES (INTERVENOR)

Field Point Estate Townhouses ("FPET") hereby submits its brief in the above-captioned proceeding ("Proceeding").

BACKGROUND

This Proceeding concerns the application ("Application") of Eversource Energy ("Eversource" or "Company") for a certificate of environmental compatibility and public need submitted to the Siting Council in June 2015. The Application requests authority to build a new 134MVA bulk substation on 290 Railroad Avenue, Greenwich, CT ("Property") to meet Company-forecasted energy needs of Greenwich, CT ("Greenwich"). FPET notes that this forecast has been questioned and disputed numerous times during the evidentiary process.

EVERSOURCE FORECAST

A. Base year for multiyear forecast of Greenwich energy needs

1) Forecast begins with 2013 Cos Cob summer peak load of 130.5MVA (Tr. 01/12 at 73-4), and continues with annual increases projected into 2023. (Application, p. E-5)

2) Eversource's rationale for focusing on this peak number is to alert the Siting Council to the fact that the Cos Cob substation was operating close to its peak permissible load rating of 135MVA in 2013. (Application, p. E-14) Per Eversource, this fact foreshadows a future peak load that will inevitably overload the Cos Cob substation which Eversource refers to as the "cornerstone of the [town's] electric distribution system." (Application, p. E-3-4)

3) In subsequent years, 2014 and 2015, summer peak loads dropped to 107.7MVA and 114.8MVA respectively (Eversource response to OCC-31), representing 17.5% and 12.0% declines from 2013's peak of 130.5MVA.

4) In the twelve years of actual Cos Cob peak load data provided by Eversource, the 2013 peak is the highest peak on record. (Eversource response to OCC-22)

5) Excluding 2012, the highest summer peak load prior to 2013 was *seven* years earlier, back in 2006 when the peak load was 125MVA. (Eversource response to OCC-22)

B. Forecasted peak usage growth rate

1) While Eversource projects a strict linear forecast in peak energy increase starting from 2013 (Application, p. E-5), historical summer peak loads from 2004 to 2015 are a series of peaks and troughs where peaks are rarely immediately followed by higher peaks. (Eversource response to OCC-22)

2) Eversource uses a 1% annual growth rate derived by looking at two, year-over-year changes in peak loads (2010 vs. 2011 and 2012 vs. 2013). (Eversource response to OCC-30)

3) Eversource also sees validation for its 1% forecast for Greenwich from similar increases in Darien and New Canaan in the same period. (Tr. 1/12/16 at 101-2.)

4) Eversource cites an ISO-NE forecast of 1.2% compounded annual growth rate ("CAGR") as support for its 1% growth rate despite the fact that that forecast relates to southwestern CT as opposed to Greenwich alone.

5) The particular ISO-NE forecast cited by Eversource does not include the impact of future energy conservation measures.

6) The Town of Greenwich ("Town") does not envision growth in either population or commerce to warrant the 1% annual growth number. (Letter from Greenwich First Selectman dated November 23, 2015, p. 12)

7) The CT Economic Resource Center ("CERC") projects a small decrease in town population by 2020, moving in the opposite direction of county and state populations which are projected to increase slightly.

C. Forecasted peak usage in the year 2023

1) Eversource's forecast projects Cos Cob substation's summer peak load to be 144.2 by 2023 (Application, p. E-5), requiring 9.2 MVA in additional transformer capacity from the present MVA of 135.

TOWN ANNUAL USAGE

1) Eversource submitted a revised LF-20-RV-01 on March 7, 2016, following the Office of Consumer Counsel's questions concerning the direction of kWh usage in Greenwich (Tr. 02/23/2016, p. 184), and Attorney General Jepsen's letter expressing concern about Eversource's forecast. Eversource's revised filing contains a new Greenwich usage total for 2015 of 484,235,481kWh, up 26,355,506kWh from 457,879,975kWh originally reported in LF-20. (Motion of the OCC dated March 9, 2016, p. 2-3)

2) Eversource's revised number is a mathematically derived estimate to "add back" the usage that the 11R-1X transformer failed to record from September 13, 2015 to November 1, 2015, a nonpeak period. (LF-20-RV-01)

3) The Office Consumer Counsel points out that the estimated adjustment of 26,355,506kWh for the 1.5 months of unrecorded usage, annualized, would mean that the 11R-1X transformer provided 210,844,048kWh for the year 2015. (Motion of the OCC dated March 9, 2016, p. 2-3) This 210,844,048kWh is unprecedented for any Cos Cob transformer, even 11R-2X and 11R-3X, each of which typically supplies

twice the usage as 11R-1X. The 210,844,048kWh number represents nearly a two fold increase from what 11R-1X produced in 2014, which was 116,916,682kWh. (Response to OCC-022f)

OCC-022f-Cos Cob Annual KWhr Usage (Excerpt)

Transformers	2010	2011	2012	2013	2014
11R-1X	42,141,562	84,643,962	68,405,507	101,597,185	116,916,682
11R-2X	81,554,502	207,061,523	198,172,937	187,447,565	178,434,095
11R-3X	78,581,166	187,107,485	198,309,107	186,048,912	175,138,406

FPET ANALYSIS

Eversource's application requests approval of a new 134MVA bulk substation in downtown Greenwich so that the Cos Cob substation can offload excess load demands which threaten to overload the Cos Cob substation which Eversource refers to as the "cornerstone of [Greenwich's] electric distribution system." (Application, p. E-3-4) Eversource forecasts these excess load demands to be 9.2MVA (roughly 7% of new bulk station's capacity) by 2023. (Application, p. E-5)

Eversource's growth forecast is troubling from a statistical standpoint because it relies on two handpicked year-over-year data points, i.e., the year over year percentage change in 2013 vs. 2012 and the year over year percentage change in 2011 vs. 2010. (Response to OCC-030) This is more anecdote than statistical trend. For validation, Eversource noted similar increases in peak loads in towns like Darien and New Canaan. Eversource claimed that these similar increases were due to underlying energy demand growth ignoring the fact that all three towns experienced similar weather. It should be noted that Greenwich did not experience any demographic or developmental activity that could account for that 1% increase.

Long-run forecasts are rarely built on a few, handpicked data points; rather, they are built on multiple data points, in this case, multiple years. Multi-year data is better as it smooths statistical noise and outliers into clearer, more reliable trends not tainted by the subjectivity required in handpicking data. Nevertheless, all forecasts based on statistical data are subject to measurement date problems. What we choose for beginning and ending data points can dramatically impact the trajectory of a trend, making any outcome possible. To illustrate, consider an investor investing in the S&P 500 at the start of February 2008 and selling her holdings at the end of February 2016. The investment would have yielded an

annualized return of 6.547% (assuming dividends are reinvested). If that investor had instead invested at the start of February 2009 rather than 2008, she would have gotten an annualized return of 15.38% (assuming dividends are reinvested). The point of this illustration is to show that measurement dates can create a myriad of answers, any answer its creator seeks.

Nevertheless, the situation does require some sort of multi-year forecast based on historical data. To that end, I illustrate below a method that compares historical highs in peak loads to estimate a growth rate. I made two comparisons: (1) 2006's peak load (the highest peak load until 2012) with 2012's; and (2) 2006's peak load with 2013's (the highest peak load to date). The first calculation yields a 0.42% CAGR resulting in a forecasted 2023 peak load of 136.1MVA (requiring 1.1MVA in additional transformer capacity); the second calculation yields a 0.62% CAGR resulting in a forecasted 2023 peak load of 138.8MVA (requiring 3.8MVA in additional transformer capacity). Note that both forecasts assume smaller growth rates than Eversource's forecast which is built on two handpicked datapoints. Over a 30 year period these forecasts diverge significantly, impacting the measure of capacity needed. In all forecasts, it is clear that 134MVA new capacity for the proposed substation is excessive for the projected need.

		2023 Forecast (MVA)			2043 Forecast (MVA)		
Trend line	**CAGR**	**Peak Load**	**Excess MVA***	**% Capacity of Proposed 134MVA Substation**	**Peak Load**	**Excess MVA***	**% Capacity of Proposed 134MVA Substation**
2006-2012 Peak to Peak	0.42%	136.1	1.1	0.8%	148.0	13.0	9.7%
2006-2013 Peak to Peak	0.62%	138.8	3.8	2.9%	157.1	22.1	16.5%
Eversource	1.00%	144.2	9.2	6.8%	175.9	40.9	30.5%

*Peak load in excess of existing Cos Cob substation 135MVA rating.

Returning to the 1% forecast with a starting base of the 2013 peak load, submitted by Eversource: This number has been greeted with considerable skepticism by the Town of Greenwich, Greenwich residents, and the Office of Consumer Counsel. It has also not escaped Attorney General Jepsen's scrutiny. The forecast does not square with what the Town Planner and other Greenwich residents see and experience. Greenwich is not a growing town nor does it aspire to grow or change for that matter. It actively works to stay

the way it is. For better or worse, it is happy with what it is. The fact that the forecast necessitates such a drastic response and a change to the community upsets its residents.

Possibly in response to this skepticism, Eversource submitted a revised LF-20-RV-01 on March 7, 2016, which provided a new usage total for 2015. The timing of this revision is curious as is its math and its deployment in supporting Eversource's claim about Greenwich's rising energy needs. Previously, Eversource made its case for its proposal on the basis of summer peak load. Now, by inference, it appears that Eversource is saying that its proposal is justified because Greenwich energy needs are growing.

Eversource's upward revision, as the Office of Consumer Counsel points out, is mathematically questionable. Accepting it would mean that the Cos Cob 11R-1X transformer was supplying an unusual amount of energy to Greenwich, twice what it has historically done and more than what Cos Cob's larger transformers, 11R-2X and 11R-3X have done, despite it being in an offpeak period, September 13 to November 1!

FPET RECOMMENDATIONS

While it is prudent to add capacity to Greenwich's electrical system so residents can enjoy reliable electrical service in hot summer months, Eversource's proposal is plainly overkill. Building a 134MVA solution to address a forecasted excess load of 4MVA in 2023 and 22MVA in 2043, less than 20% of the new substation's capacity, is grossly excessive. As stated earlier, Greenwich is already a fully developed town that is not and has no interest in growing or changing. Future Greenwich will look a lot like today's Greenwich. This capacity will go unused in our lifetimes.

Eversource's $140mm proposal is a white elephant, a boondoggle, to be paid for by Eversource customers statewide for years to come. Connecticut is already the most expensive state for electricity on the continent. Approving this application will further cement the state's dubious distinction.

Our state also should not be so heavily invested in technology that may be obsolete in 10 years. Our energy resource planning should give consideration to including at least some of the innovative technology that we are seeing in alternative energy and distribution infrastructure. In addition, the promotion for the energy efficiency program, administered by Eversource, should be more robust and focused on reduction of summer peak use. Greenwich's energy usage is growing slowly enough to afford a more deliberate and

thorough planning approach. Part of that thorough approach should include: 1. Eversource making a serious, good faith effort to work with transformer manufacturers on replacement transformers at the Cos Cob site; 2. The Town of Greenwich ("Town") and Eversource working together to make Town properties more energy efficient especially during summer months and adopting building codes and zoning rules which help reduce electrical load.

In closing, Field Point Estate Townhouses requests the Connecticut Siting Council to require Eversource to resubmit their application based on scaled back solutions to meet Greenwich summer peak load increases of 10-22MVA. The resubmitted application should show fiscal prudence in providing solutions that are not only appropriate to the size of the problem but also provide the state flexibility to take advantage of some of the innovations that the future may offer. The application should also offer collaboration with the Town of Greenwich to reduce energy needs that the Town can directly control. This type of private-public partnership would be welcomed especially as it may serve as a successful case study for Connecticut's many mature townships and cities.

Respectfully submitted,

DWIGHT UEDA
FIELD POINT ESTATE TOWNHOUSES
(INTERVENOR)

cc: Service List