STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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 CIRCUITS EXTENDING APPROXIMATELY 2.3 MILES BETWEEN THE PROPOSED SUBSTATION AND THE EXISTING COS COB SUBSTATION, GREENWICH, CONNECTICUT, AND RELATED SUBSTATION IMPROVEMENTS.

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BRIEF OF THE TOWN OF GREENWICH

The Town of Greenwich ("Town") submits this post-hearing brief.

INTRODUCTION

Following six hearing days, it is clear that Eversource has not met its burden of establishing the need for this proposed $140 million project (the "Project"). The load projections on which this entire Application is premised have proven to be over-stated. The supposed risk of overloads on transformers at the Cos Cob Substation is one which will not be reached for many years to come. Nevertheless, Eversource has proposed an exorbitant transmission line project that would provide more capacity than may ever be needed in the Town.

The Town fully supports upgrades that will enhance reliable electric service. The record in this case demonstrates that before this massive construction Project is considered, there are several alternative, lower-cost solutions that should be employed, including: installing larger capacity transformers in the Cos Cob Substation, upgrading the existing distribution lines in Greenwich, shifting load from the Prospect Substation to the North Greenwich Substation, and installing higher capacity transformers at the Prospect Substation. Yet, instead of these lower-cost alternatives, Eversource proposes a transmission solution, which ensures that it will receive a faster rate of return from ratepayers, even though the Project would result in far greater transformer capacity than will be needed under the most aggressive Eversource projections. The Town should not be subjected to the large scale disruption that this Project will cause, and most importantly Connecticut ratepayers should not be forced to incur the financial burden of this unnecessary Project. The proposed Project is nothing less than gross over-building at ratepayer expense, and should be denied.

However, if the Council concludes that the need for this Project has been met, and that the benefits of a transmission solution outweigh the excessive costs to Connecticut ratepayers that could be avoided through a distribution solution, the record demonstrates that the only route that should be considered is siting the transmission line along the Metro North Railroad ("MNRR") corridor, in accordance with LFE-003. This route would achieve a $22 million savings compared to the Preferred Route, and would preserve Bruce Park and its precious natural resources. Conversely, the environmental impact of the Preferred Route would devastate Bruce Park, in direct violation of the environmental protection statute governing this proceeding, The Public

Utility Environmental Standards Act, *§§16-50g, et seq.*, of the General Statutes ("PUESA").

THE STATUTORY STANDARD UNDER PUESA

Consideration of Eversource's Application is governed by PUESA, Conn. Gen. Stat. *§§16-50g, et seq.* PUESA is an environmental protection act put into place to ensure that Connecticut's environmental resources are of paramount concern in siting decisions, particularly when considering large projects such as the transmission line and the substation which are the subject of this docket. In enacting §16-50g of PUESA, the Legislature made this abundantly clear:

> The legislature finds that power generating plants and transmission lines for electricity and fuels…have had a significant impact on the environment and ecology of the state of Connecticut; and that continued operation and development of such power plants, lines and towers, if not properly planned and controlled, could adversely affect the quality of the environment, the ecological, scenic, historic and recreational values of the state. The purposes of this chapter are to provide for the balancing of the need for adequate and reliable public utility services **at the lowest reasonable cost to consumers *with the need to protect the environment and ecology of the state and to minimize damage to scenic, historic, and recreational values.***

(emphasis added). The need to protect the environment must be an equal player with the need for electricity.

ARGUMENT

I. Eversource has failed to establish the need for this Project.

A. Eversource bases its Application on inflated projections, which do not support the need for this Project.

As detailed in the Town's Proposed Findings of Fact, Eversource's claimed need for this Project is based on projections of load usage on the Cos Cob transformers that have now been shown to be grossly inflated based on actual load usage in 2014 and 2015. Eversource's projections of peak load are based on 2013 load data as a starting point, and then an assumption of 1% growth rate each year into the future. Contrary to Eversource's projections, the actual peak load usage on the Cos Cob transformers declined significantly in 2014 and 2015.[1] Nevertheless, Eversource neglected to update its projections to reflect this decline in load usage.[2] Similarly, Eversource over-projected the peak load usage on the Prospect transformers, based solely on 2013 peak load data.[3] As with the Cos Cob transformers, in 2014 and 2015, the peak load usage on the Prospect transformers declined, and Eversource failed to provide updated projections reflecting actual data in 2014 and 2015. Instead, Eversource clings to Tables E-1 and E-2 to justify this Project, ignoring the fact that the projections in those Tables for 2014 and 2015 have now been demonstrated to be false.[4]

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[1] Eversource projected a peak load on the Cos Cob transformers for 2014 of 131.8 MVA, and a peak load in 2015 of 133.1 MVA. *Eversource Application at Table E-1*; *Tr. 3-10-16 at 92*. The actual data for 2014 reflected a peak load on the Cos Cob transformers of 107.7 MVA, and actual peak load in 2015 of 114.8 MVA. Therefore, Eversource over-projected the peak load usage on the transformers by 18.3% in 2014, and by 13.7% in 2015.

[2] Tr. 3-10-16 at 96.

[3] Eversource projected peak load usage on the Prospect transformers of 51.7 MVA in 2014, and 52.2 MVA in 2015. In actuality, as with the Cos Cob transformers, Eversource's projections were proven to be false, as peak load usage declined in 2014 to 44 MVA, and in 2015 to 47 MVA.

[4] Tr. 3-10-16 at 96.

B. If approved, Eversource's Project would result in significant overcapacity on the transformers serving Greenwich, under the most far-reaching projections.

As shown above, Eversource's projections of peak load usage on the Cos Cob and Prospect transformers were proven to be grossly inflated based on actual usage in 2014 and 2015. However, even if one accepts these inflated projections, the Project itself would result in significant overcapacity, far in excess of even the most aggressive projections of load usage.[5]

Eversource proposes a new Greenwich Substation with new transformers containing a short term emergency load limit of 144 MVA. These new transformers would be added to the existing transformers at the Cos Cob Substation containing a short term emergency load limit of 135 MVA.[6] Once the new transformers are installed, Eversource would remove transformers from service at the Prospect (54 MVA short term emergency load limit) and Byram (16 MVA short term emergency load limit) Substations, resulting in a total retirement of 70 MVA of transformer capacity.[7] Accordingly, if Eversource's Project is approved, transformers with short term emergency load limits of **209 MVA** would be active between the Cos Cob and new Greenwich Substations (144 MVA at Greenwich Substation, plus 135 MVA at Cos Cob Substation, less retirement of capacity of 70 MVA).[8]

According to Table E-1 of the Application, the farthest into the future that Eversource projects peak load levels at the Cos Cob Substation is 2023. Even accepting Eversource's inflated projections as depicted on Table E-1, the total peak

[5] Eversource Responses to OCC-81, 83; Tr. 3-10-16 at 99.
[6] Eversource Response to OCC-83.
[7] Eversource Response to OCC-81.
[8] Eversource Responses to OCC-81, 83; Tr. 3-10-16 at 98-99.

load level on the transformers in 2023 is projected to be **144.2 MVA**. Therefore if Eversource's Project is approved and transformers with short term emergency load limits totaling **209 MVA** are installed at the Cos Cob and new Greenwich Substations, in 2023 there will be an overcapacity of **64.8 MVA** between the two substations, based on Eversource's most far-reaching projections.[9]

The inescapable conclusion is that this $140 million Project is overkill for the issue to be solved.

C. Alternative solutions exist which will improve reliability in Greenwich, with far less environmental impact, and at much less cost to Connecticut ratepayers.

Rather than constructing a new $140 million transmission line, the need for reliable electric service in Greenwich can be met by installing higher capacity transformers in the Cos Cob and Prospect Substations, shifting load from Prospect to the North Greenwich Substation, and upgrading existing distribution lines in the Town.

As shown by the Town, higher capacity transformers can be installed within the dimensions of the Cos Cob Substation. Council member Ashton properly rebuked the Eversource panel on this point: "And what else could you do at Cos Cob to help the problem? And I don't buy there's no room at Cos Cob. I know the station."[10] By simply e-mailing the Cos Cob Substation dimensions to transformer manufacturers, the Town was able to obtain responses from two vendors confirming that higher capacity transformers could indeed fit at the substation.[11]

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[9] Eversource Application at Table E-1.
[10] Tr. 10-6-15 at 37.
[11] Town of Greenwich Responses to CSC-1.

And if there is an issue with load limits of the Prospect Substation transformers – an assumption which is also premised on Eversource's inflated projections, which have proven to be false – surely Eversource can figure out a way to install higher capacity transformers there as well. Alternatively, Eversource could certainly shift load away from the Prospect Substation to the North Greenwich Substation, which has excess transformer capacity.[12] This load shifting would alleviate any concern about the capacity of the Prospect transformers.

Moreover, there is no assurance that the exorbitant transmission Project put forth by Eversource will address the distribution problems in Greenwich. Indeed, Eversource admitted that even after its Project would be built, if both of the 115-kV lines between Stamford and the Cos Cob Substation failed, all of the customers fed by the Cos Cob and North Greenwich Substations would be impacted.[13] Thus, in addition to the fact that the proposed Project would be overbuilding, at a massive financial and environmental cost, because the Project is a transmission-based solution addressed to a distribution problem, it still leaves Greenwich residents exposed to outages if there is a failure in the transmission system. In short, Eversource proposes an exorbitant transmission solution to a localized distribution problem, without truly addressing the Town's need for improved reliability of its distribution system.

Rather than saddling Connecticut ratepayers with a Project that will cost more than $100 million, to solve an issue of transformer capacity which will not arise for years to come, the Town again urges Eversource to find alternative, less intrusive solutions that truly address the need for reliable electric service in the Town. Eversource should

[12] Eversource Response to OCC-57
[13] Eversource Response to OCC-58(b)

devise a cost-effective plan to upgrade the capacity of the transformers at Cos Cob and Prospect (or to shift load away from the Prospect transformers), while also identifying distribution solutions, without subjecting the Town and the State to the unnecessary environmental impact and excessive costs that this Project would entail.

II. The Preferred Route would result in significant environmental harm.

The environmental impacts of the Proposed Route (and any of the alternative permutations suggested by Eversource in the Application) are significant. Most notably, the Proposed Route would traverse Bruce Park, a pristine, recreation area that is the Town's oldest public park.[14] As the result of the installation of the HPFF transmission cable, tidal basins would be disturbed, growing seasons would be impacted for at least one year, and vegetation would be removed.[15]

The Town has identified several impacts that could affect environmentally vulnerable areas in Bruce Park if the 115 kV transmission line is allowed to be installed as proposed in the Application materials:

- Impacts to the historic nature of Bruce Park, which was established in 1908.[16]
- Impacts to the recreational aspects of Bruce Park, specifically the ball field that would be affected by the proposal.[17]
- Impacts to the tidal basins and estuarine environments, which provide feeding, breeding, nesting and nursing areas for many animals;

[14] Town Exhibit 8, Response to CSC-11 Supplemental, 2-22-16 at 6.
[15] Eversource Response to CSC-1, (CSC-2) Tr. 9-09-15 at 4.
[16] Town's Exhibit 8, Response to CSC–11, Supplemental Filing 2-22-16 at 6, Exhibit D-1
[17] Tr. 2-23-16 at 29 - 31.

- Impacts to the species of interest that migrate to the fresh water in the park to spawn, specifically the river herring that has been identified by the National Oceanic and Atmospheric Administration ("NOAA").[18]
- Impacts to the waterfowl that rely on Bruce Park as a wintering area, and impacts to the great egrets and snowy egrets (both characterized with threatened status in Connecticut) and osprey that rely on Bruce Park as a summer foraging area.[19]
- Impacts to the carefully protected shellfish beds, which are an important aspect of the ecosystem.[20]
- Impacts to the connectivity between the soils (that are expected to include bedrock and deep sediments), tidal ponds and the Long Island Sound because of the impact of the drilling and long term installation of HPFF cabling.[21]
- Impacts to the Bruce Park Arboretum, scheduled for inception this spring (2016). Any tree removal that would result from the transmission line or staging through Bruce Park could significantly affect the tree species to be included in the Bruce Park Arboretum.[22]
- Impacts to cultural resources on or within close proximity of Bruce Park. [23]

If a new transmission line is approved by the Council, all of these environmental impacts could be avoided by locating the proposed 115kV transmission line along the

[18] Town's Exhibit 6, Response to CSC-11, 2-16-16 at 2, Exhibit F.
[19] Town's Exhibit 6, Response to CSC-11, 2-16-16 at 3, Exhibit G.
[20] Town's Exhibit 6, Response to CSC–11, 2-16-16 at 3, Exhibit H.
[21] Town's Exhibit 6. Response to CSC–11, 2-16-16 at 4.
[22] Town's Exhibit 8, Response to CSC-15 Supplemental, 2-22-16 at 1.
[23] Town's Exhibit 6, Response to CSC–11, 2-16-16 at 5.

Metro North Railroad hybrid route ("MNRR Hybrid Route") as depicted in LFE-003. Specifically, Eversource's witness (Libertine) conceded that not installing the overhead routing through Bruce Park would avoid long term aesthetic impacts to the Park.[24] He went on to elaborate: "(I)f we can avoid Bruce Park, then any potential impacts to species and/or landscape would be mitigated."[25] When discussing the potential impact to tidal ponds and associated fish and wildlife, Eversource's witness (Bowes) agreed that those areas of potential impact could be avoided by siting the transmission line along the MNRR corridor.[26] Finally, Mr. Libertine responded affirmatively when asked whether the environmental impacts identified in the original application are avoided by using the MNRR Hybrid Route.[27]

III. If the Council determines that Eversource has met its burden of showing the need for the Project, the only route that should be considered is the Metro North Railroad hybrid route depicted in LFE-003.

If the Council determines that Eversource has proven the need for the project, the Town supports the siting of the line along the MNRR Hybrid Route, as depicted in LFE-003.[28] Indeed, from the beginning, the Town requested that Eversource consider siting any potential transmission line along the MNRR corridor. Yet, Eversource flatly rejected the Town's suggestion, responding that it could not possibly construct the line in this location and that the concept was "off the table."[29] Only after prodding from the Siting Council did Eversource backtrack, now acknowledging that construction along the MNRR corridor is technically feasible. Not only can the line be built along the MNRR

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[24] Tr. 3-10-16 at 115.
[25] *Id.* at 117.
[26] *Id* at 118.
[27] *Id* at 119.
[28] LFE-03; Tr. 3-10-16 at 102.
[29] Tr. 2-23-16 at 24; See also, Application at H-18.

corridor, but the MNRR Hybrid Route depicted in LFE-003 would result in far fewer environmental impacts than the Proposed Route, would preserve Bruce Park, and would cost less to implement.

Eversource testified that regardless of which variation within LFE-003 is adopted, in each instance the line would be reliable and would be constructed in less than two years. Further, the Connecticut Department of Transportation has confirmed that the MNRR Hybrid Route is a viable construction solution.[30]

If the MNRR Hybrid Route is approved, in Segment 2 one option is for the siting of the line overhead to the south of the railroad tracks in accordance with variation 2B. If this variation is approved, it is critical that the construction must not impede the Town's ability to comply with the federal consent decree requiring that the Town replace and upgrade the force main in that location. Any siting of the line in that location must ensure that the Town will continue to have access to the force main to perform work that may be needed, now and into the future.[31]

In Segment 4 of the MNRR Hybrid Route depicted in LFE-003, the line transitions underground to the new proposed Greenwich Substation. Unfortunately the pole at the point of transition is a massive 119' 8" structure, located at the intersection of Greenwich and Railroad Avenues.[32] This is one of the most heavily traveled intersections in Greenwich.[33] Accordingly, the underground portion of this line should be extended as far east as technically feasible towards structure 2 depicted in LFE-025, p. 3 of 17, but a minimum of 100 feet eastward. Reliability will not be impacted, and this

[30] Tr. 1-12-16 at 83.
[31] Tr. 3-10-16 at 104-106.
[32] LFE-025, p. 3 of 17.
[33] LFE-025, p. 3 of 17; Tr. 2-23-16 at 166; Tr. 3-10-16 at 110.

slight revision will significantly reduce the visibility of the huge structure in that intersection.[34] This aesthetic concern is a factor to be considered pursuant to PUESA §16-50g.

Significantly, the massive environmental impacts to Bruce Park, including its scenic, historic and recreational values, are completely avoided by siting along the MNRR corridor.[35] Preserving these values goes to the heart of the statutory mandate in PUESA.

Finally, the estimated cost for the MNRR Hybrid Route depicted in LFE-003 is approximately $22 million less than the estimated cost of the Preferred Route in the Application.[36] If the need for the Project has been met, construction of the MNRR Hybrid Route depicted in LFE-003 meets PUESA's statutory mandate to ensure "the lowest reasonable cost to consumers," when compared to the $140 million proposed Preferred Route. §16-50g of PUESA.

If the line is sited in accordance with the MNRR Hybrid Route depicted in LFE-003, the Town intends to be an active participant in the D&M Phase, as the details of construction, including pole heights and location, coordination with current and future work on the existing force main, and aesthetic concerns relating to poles and substation design, landscaping, and vegetation removal and replacement, would all need to be addressed. The Town is hopeful that if this route is approved, Eversource will honor its word to work with the Town collaboratively on all of these issues in the D&M Phase.

[34] Tr. 3-10-16 at 112-113.
[35] Tr. 3-10-16 at 115-119.
[36] LFE-003; Tr. 1-12-16 at 83-84.

CONCLUSION

For the foregoing reasons, the Application should be denied. The need for reliable electric service in the Town can be met through a number of distribution solutions and the implementation of less intrusive upgrades, without subjecting the Town to the enormous disruption of constructing a new transmission line, and at far less cost to Connecticut ratepayers. If, however, the Council approves this Project, the new transmission line should be sited along the MNRR Hybrid Route, as depicted in LFE-003.

Respectfully submitted,

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CERTIFICATE OF SERVICE

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