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December 11, 2019

Jeffrey R. Gaudiosi, Esq.
Executive Secretary
Public Utilities Regulatory Authority
10 Franklin Square
New Britain, CT 06051

Re: Docket No. 17-10-46, Application Of The Connecticut Light And Power Company D/B/A Eversource Energy To Amend Rate Schedules – (Compliance with April 18, 2018 Decision Order No. 4 & Section 3.a.ii.2.a of the January 11, 2018 Settlement Agreement)

Dear Mr. Gaudiosi:

The Connecticut Light and Power Company d/b/a Eversource Energy (the "Company") submits this filing in compliance with: (1) Order No. 4 of the April 18, 2018 final decision ("Decision") in this docket, directing the Company to file any known updates to the 2020 Core Capital Plan initially developed in December 2016 and submitted to this docket in 2017 as part of the rate-case filing;[1] and (2) Section 3.a.ii.2.a of the January 11, 2018 Rate Case Settlement Agreement ("Settlement Agreement"), requiring the Company to submit any known updates to the 2020 System Resiliency Capital Plan initially developed in December 2016 and submitted to this docket in 2017 as part of the rate-case filing.[2]

To meet the requirements set by settlement and by the Decision issued by the Public Utilities Regulatory Authority ("PURA" or the "Authority"), Exhibit 1(a) presents actual capital additions for 2018 and projected capital additions consistent with the Company's authorized capital budget for 2019 and 2020. Exhibit 1(a) demonstrates that:

1. The Company did not exceed the boundary on plant additions for 2019-2020 established by the Settlement Agreement.
2. A meaningful amount of storm-related capital plant additions occurred in 2019, which the Company does not forecast and which were driven, in part, by PURA's April 17, 2019

[1] Order No. 4 states "No later than November 30, 2018, 2019 and 2020, respectively, the Company shall provide the Authority with the budget of construction program capital spending by initiative or category for the following year. The filings shall be consistent with the terms of the New Capital Tracker filings as described in Section 3.a. of the Amended Settlement Agreement and Section 1. Enhanced Tree Trimming and Enhanced Tree Removal of Amended Attachment 1 of the Amended Settlement Agreement."

[2] Section 3.a.ii.2.a of the Settlement Agreement states, "Annual plans of proposed system resiliency work and actual after-the fact results shall be filed with PURA each November 30th and May 31st, respectively, consistent with the current approach established in the most recent system resiliency decision in Docket No. 12-07-06RE01."

decision in Docket No. 18-11-12, directing the Company to capitalize additional storm-related amounts in 2019.[3]

3. The Company's actual and planned plant additions for 2019-2020 for Reliability projects are higher than the amounts initially projected in December 2016 as part of the Company's rate-case filing in 2017. A statement of the basis for 2019-2020 Reliability projects is provided in Exhibits 1(a) and Exhibits 1(b) hereto. Exhibit 1(a) is an Excel file that shows the cost Reliability additions versus the 2016 forecast, and Exhibit 1(b) is a Word file that describes in detail the key drivers for the updated amount of Reliability additions.

Additionally, Section 3.a.ii.2.a of the Settlement Agreement directed the Company to file in this docket the same type of detailed data that it has previously filed each November/December in the prior system resiliency proceeding in Docket No. 12-07-06RE01.[4] In compliance with that requirement, Exhibits 2 and 3 hereto provide the requested data for the Company's system resiliency program for 2020.

The Company shared a copy of this filing with the Office of Consumer Counsel ("OCC"). OCC agrees that the level of annual plant additions for 2019-2020 are within the range allowed in the Settlement Agreement.

The attached Exhibits demonstrate that the 2019 and 2020 plant additions conform with the terms of the settlement, and therefore, the Company anticipates seeking recovery through its Electric System Improvement (ESI) capital tracking rate. The Company respectfully requests a letter confirming the Authority's review and approval of this compliance filing. If you have any questions in connection with this filing, please do not hesitate to contact Troy M. Dixon, Director of Revenue Requirements-CT, at 860-665-3609.

Sincerely,
Christopher R. Bernard
Christopher R. Bernard
Manager, Regulatory Policy & Strategy
On Behalf of CL&P dba Eversource Energy

cc: Service List

[3] See Docket No. 18-11-12, Petition Of The Connecticut Light And Power Company d/b/a Eversource Energy For Approval To Recover Its 2017-2018 Catastrophic Storm Costs, April 17, 2019 Decision.

[4] See footnote 2, supra.

EXHIBIT 1(a)

Recovery of Capital Plant Additions per Rate Case Settlement Agreement in Docket No. 17-10-46

Core Capital Program

(1) Boundary Established by Rate Case Settlement (n.1)	2018	2019	2020	Description
Total Capital Additions Allowed in Base Rates	$ 270.0	$ 270.0	$ 270.0	Per Settlement (n.2)
Reliability Capital Additions (n.3)	73.9	133.0	111.6	2018 Actual; 2019-2020 per Company Authorized Capital Budget
Total Capital Additions Eligible for Recovery under Settlement	$ 343.9	$ 403.0	$ 381.6	

(2) Operating Results	2018	2019	2020	Description
Actual/Planned Core Capital Additions	$ 242.6	$ 214.6	$ 239.4	Excludes Reliability & Catastrophic Storms. 2018 Actual; 2019-2020 per Authorized Capital Budget.
Reliability Capital Additions	73.9	133.0	111.6	2018 Actual; 2019-2020 per Company Authorized Capital Budget.
Unanticipated Catastrophic Storm Capital Additions	25.9	20.8	-	2018 and 2019 Actual. 2020 per Company Authorized Budget is $0 (n.7)
Total Actual/Planned Additions Eligible for Recovery	$ 342.4	$ 368.4	$ 351.0	
Amount Below Settlement Boundary	$ (1.5)	$ (34.6)	$ (30.6)	Line 16 - Line 10

(3) Reliability Investment Analysis	2018	2019	2020	Description
Actual/Planned Reliability Additions	$ 73.9	$ 133.0	$ 111.6	Line 14; 2018 Actual; 2019-2020 per Company Authorized Capital Budget
Forecasted Reliability Additions filed in Rate Case	96.3	78.1	79.2	See Q-AC-101 in Docket No. 17-10-46
Increase /(Decrease) Compared to Rate Case Forecast	$ (22.4)	$ 54.9	$ 32.4	Line 22 - Line 23 (n.4)

System Resiliency Program

Comparison to Estimates at Time of Rate Case (2017)	2018	2019	2020	Description
Total System Resiliencey Additions	$ 83.7	$ 66.3	$ 59.5	2018 Actual; 2019 and 2020 per Company Authorized Capital Budget
Previously Approved Carryover Projects prior to Rate Case	$ 43.8	$ 7.5	$ 2.5	(n.5)
Actual / Planned Additions for New System Resiliency Plan	$ 39.9	$ 58.8	$ 57.0	Line 30 - Line 31. Excludes Catastrophic Storms. 2018 Actual; 2019-2020 per Company Authorized Capital Budget.
Projected New System Resiliency Additions filed in Rate Case	$ 44.3	$ 60.7	$ 56.1	(n.6)
Amount (below) / above rate case forecast	$ (4.4)	$ (1.9)	$ 0.9	

Notes:

(n.1) Rate Case Settlement approved 4/18/18 in Docket No. 17-10-46.

(n.2) Rate Case Settlement at § 3(a)(ii)(1)(a) ("Plant Additions for core capital projects of $270 million for calendar years 2018- 2020 shall be recovered in base distribution rates. If Plant Additions for core capital projects are greater than $270 million per year for calendar years 2018-2020, then the Company shall recover “reliability” Plant Additions (which are a subset of core capital projects) for that time period through the New Capital Tracker up to the amount in excess of $270 million." (See also 11/20/19 CL&P Written Exceptions in Docket No. 19-03-01 at Pages 7-11.)

(n.3) 2019 and 2020 Plant Additions are derived from the Company's authorized operating plan capital expenditures, converted to plant additions based on historical averages. Actual additions will vary.

(n.4) 2018: The total amount of 2018 actual plant additions was less than forecast in 2016 due to unanticipated catastrophic storms in 2018 that caused planned capital reliability projects, to be carried over into 2019. Exhibit 1(B) to this filing provides addtional details. All planned O&M for 2018 was completed.

2019: In 2019, updated projections of plant additions reflect: (1) carryover projects originally projected to be completed in 2018; and (2) increased replacements of URD/DB cable for reliability improvement.

2020: In 2020, updated plant additions reflect replacements of URD/DB cable to improve reliablity and achieve a more cost-effective permanent solution.

(n.5) Reflects projects previously approved by PURA in Docket Nos. 12-07-06 and 12-07-06RE01 prior to the 2017 rate case. Footnote 7 of the 1/11/18 Rate Case Settlement authorizes recovery of such previously approved system resiliency projects in the ESI Capital Tracker. (See also 11/20/19 CL&P Written Exceptions in Docket No. 19-03-01 at Pages 20-24.)

(n.6) Projected New System Resiliency ("SR") Additions filed in Rate Case:

	2019	2020	Notes
SR Plant Additions in Original Rate Case Filing	$73.80	$69.30	See Docket No. 17-10-46, Q-AC-101, Att. 1
SR Plant Additions in Settlement	$54.10	$49.50	50% ETT reduction & 33.3% ETR reduction per PURA-ordered amendment to Rate Case Settlement
SR Plant Additions in Settlement when ETT changed to O&M	$41.00	$36.20	
SR Plant Additions from Line 57 increased per Rate Case Re-opening	$60.70	$56.10	6/13/19 PURA decision in Docket No. 17-10-46RE02 authorized additional amounts for ETR program in 2019-2020

(n.7) The Rate Case Settlement Agreement does not address the treatment of capital plant additions associated with catastrophic storms. Therefore, the Company has isolated these plant additions for illustration purposes.

Exhibit 1(b)

Updated Projection of Core Capital "Reliability" Plant Additions

1. Updated Reliability Plant Additions for 2018, 2019 and 2020.

The following Table from Exhibit 1(a) shows the updated Reliability Plant Additions as compared to the 2016 forecast of Core Capital "reliablity" plant additions for 2018 through 2020.

Reliability Investment Analysis	2018	2019	2020
Actual/Planned Reliability Additions	$ 73.9	$ 133.0	$ 111.6
Forecasted Reliability Additions filed in Rate Case	96.3	78.1	79.2
Increase /(Decrease) Compared to Rate Case Forecast	$ (22.4)	$ 54.9	$ 32.4

2. Actual Reliability Plant Additions in 2018.

In 2018, the Company had to divert construction resources from planned capital additions to storm-related plant additions to address the impacts of unanticipated catastrophic storms, which occurred during construction months in March and May of that year (snowstorm and tornados, respectively). These circumstances caused the projected additions relating to capital reliability projects to be below the 2016 forecast amount, with the planned additions rolling forward for completion in 2019.

3. Expected Reliability Plant Additions in 2019.

In 2019, the total amount of plant additions was greater than forecast in 2016 for the following reasons: (1) reliability projects planned for completion in 2018 were rolled forward and completed in 2019 due to unplanned catastrophic storm work; (2) the Company implemented a strategy to replace direct buried underground cable to forestall increasing reliability issues due to cable failures; and (3) the Company had to address unanticipated, emergent reliability problems affecting lateral devices supplying 100 or more customers. Each of these factors is described in greater detail below.

a. Carryover Plant Additions from 2018

Due to emergent work caused by unanticipated catastrophic storm events that occurred in 2018, certain reliability projects were carried over into 2019. Two examples of reliability projects that were completed in 2019 instead of 2018 are: (1) the new Greenwich 28F Bulk Substation (Project #201444); and (2) the Rockville-to-Mansfield distribution line reliability project (project #CD00563). Both projects represent planned, reliability-based, substation upgrades. Approximately $8.8 million of planned capital additions rolled over into 2019 instead of occurring

in 2018 associated solely with these two projects. Additional projects planned for completion in 2018 were rolled over to 2019, on a smaller scale.

b. URD/DB Cable Reliability Program

In the last rate case in Docket No. 17-10-46, the Company discussed the fact that there is approximately 460 miles of direct buried ("DB") electric distribution cable in underground residential ("URD") and commercial developments that have a propensity to fail prematurely. (See, e.g., Docket No. 17-10-46, Q-EN-001, Att. 1 at Page 11.) The Company explained that, on an industry-wide basis, much of the original primary cable installed in the DB system has not achieved its engineered life expectancy due to premature degradation of this insulated distribution cable. (Id.) The Company further explained it planned to remediate approximately 25.6 miles per year of URD/DB faulty cable through a two-pronged approach in which: (1) approximately 66% of the annual work would involve the attempted temporary rejuvenation of failing cables by injecting fluid into them to restore the protective insulation at an estimated cost of $47 per square foot; and (2) the remaining approximately 34% of the work would involve the complete replacement of failing cable at an estimated cost per square foot of $210. (Id.) Thus, the Company's 2016 capital forecast anticipated implementation of this strategy.

By 2018, the Company was encountering an increasing number of corroded neutrals and a larger than anticipated number of blocked conductors in relation to URD/DB cable. With a persistent (and increasing) level of failure, it became necessary for the Company to reevaluate its remediation strategy. In particular, the Company had to deal with the fact that the "rejuvenation" of URD/DB cable requires that certain physical pre-conditions be met; otherwise, replacement is the only method of remediation to cure failures. The Company determined that only about 30% of the DB cables (not the originally estimated 66%) could potentially be rejuvenated.

In addition, with respect to the small population of DB cables that could potentially be rejuvenated, the rejuvenation process has several shortcomings. First, locating and attempting to rejuvenate DB cables (via the injection of fluid) does not improve the future performance of the rejuvenated cable. Second, not all attempts at rejuvenation are successful; and in the event of a future failure, rejuvenation does not eliminate the need to fault locate, dig and splice cable. Rejuvenated cables are likely to fail again, often requiring multiple return visits. Third, the electrical carrying capacity of older DB cable is lower than the Company's standard conductors that are utilized today, which renders those cables less capable of meeting current reliability needs of residential and commercial customers, even after costs are devoted to the rejuvenation phase.

For these reasons, the Company's evaluation determined that replacement of all URD/DB cable over the long term was a superior, permanent solution that would greatly improving reliability of service. Therefore, starting in 2019, the Company instituted a course of replacement with annual replacement targets. The specific drivers of this strategy are as follows:

1. Replacement of failing DB cable constitutes a more appropriate, long-term solution because it yields a permanent solution whereas rejuvenation yields a sub-optimal temporary fix that often requires future return visits for rejuvenation and/or ultimate replacement.

2. Replacement of failing DB cable increases reliability and customer satisfaction by yielding a permanent solution utilizing new cable that meets today's updated reliability and voltage needs of residential and commercial customers.

3. Replacing a cable also allows for current and future growth of electrical loads such as anticipated increased at-home or at-work electric vehicle charging.

4. The process to evaluate whether a DB cable can potentially be rejuvenated on a temporary basis requires an upfront costly and time-consuming evaluation of the cables to determine the level of corrosion of the cable's neutral. In the vast majority of cases, the test results now demonstrate that a replacement (not rejuvenation) is necessary. By modifying this program to now replace all DB cable, the cost associated with this upfront testing is eliminated.

5. Cable replacement is now effectuated through use of a comparatively newer technique called CIC (Cable-in-Conduit) that is implemented through HDD (Horizontal-Directional-Drilling). This new approach yields several benefits. First, HDD decreases the amount of landscaping restoration and paving when compared to traditional trenching methods, which increases the aesthetic satisfaction level of affected municipalities and customers, and reduces restorative landscaping and paving costs. Second, using CIC provides a solution that allows the Company to replace cable more efficiently and expediently by utilizing the conduits. Because the new cable is installed in conduit, any future failures in that section of cable simply require replacement of the cable; reducing fault location, digging and splicing needed for direct buried cables. Third, the Company's affiliate's Eastern Massachusetts South Division transitioned to utilizing the CIC/HDD approach for all such installations with very positive results.

6. In addition to the fact that in the long-term a one-time permanent fix is a more appropriate solution compared to making multiple return trips to temporarily repair faulty DB cable, the use of the new HDD technique has reduced the capital cost of replacement from the estimated $210 per square foot reported in the last rate case (see Docket No. 17-10-46, Q-EN-001, Att. 1 at Page 11) to the current capital cost of approximately $178 per square foot.

For all of these reasons, the Company determined it was advisable to transition from a mixed rejuvenation/replacement approach to a targeted plan for replacing failing DB cables, with the outcome being the improvement of reliability, customer satisfaction and municipal satisfaction,

while yielding a permanent solution over time through the implementation of a one-time fix versus a series of temporary fixes often requiring multiple return site visits.

c. The Lateral Reliability Program.

The Connecticut Lateral Reliability Program is a component of the Company's Core Capital reliability program initiated by the Company in 2019. The Company's analysis documented a connection between a higher number of tree-caused and animal-caused system outages in system zones with unfused transformers. Based on this information, the Company implemented a program to perform reliability work on lateral devices that had experienced outages over the past four years and on any lateral device supplying 100 or more customers within the towns most impacted by animal-related outages. The lateral reliability program includes fusing existing unfused transformers, adding animal protection, adding lightning arrestors and replacing main line hot clamps.

This program provides two types of reliability benefits: (1) it avoids and prevents future outages by developing a trend analysis that will provide a comparison with a previous time period and (2) it minimizes outages by identifying the number of outages that are isolated to the transformer primary side fuse as outages occur.

Based upon the data showing which towns were most severely impacted by such outages, the Company targeted the following 17 towns in 2019: Greenwich, Stamford, Norwalk, Guilford, Weston, Waterbury, New Canaan, Westport, Darien, Bristol, Ledyard, Mansfield, Stonington, Vernon, South Windsor, Southington and New Britain. The work completed (shown in number of units installed) in these towns in 2019 is depicted on the map below. In 2020, the program will target the following towns: Meriden, Naugatuck, Newington, Plainville, Manchester, West Hartford, Enfield, Stafford, Tolland, Watertown, Torrington, Weston, Glastonbury, Middletown, Branford, Clinton, Old Saybrook, East Lyme and Waterford.

