Project Authorization Form

Organization: Operations Services Company: EVERSOURCE Project Sponsor: [redacted] Project Originator: [redacted] Project Owner: [redacted] – CT [redacted] – MA, NH Project Objective: Improve System Reliability	Project ID Number(s): ETTCF16, ETT2016, ETR2016, C16ETT, C16ROW, C16HAZ, R16ETT, R16ROW, R16HAZ ETTWM16, ETRWM16, ETREM16 Project Title: Distribution Vegetation Maintenance – Enhanced Tree Trimming (ETT) Program and Enhanced Tree Removal (ETR)/Hazard Tree Removal Annual Programs Date Prepared: December 17, 2016 Supplement to Existing Authorization: NO Part of Original Capital Plan: YES O&M Expenses Part of the Original Budget:

Executive Summary:

An authorization of $57,451K is requested for the enhanced tree trimming enhanced tree removal/hazard tree removal portion of Eversource's 2016 annual distribution tree trimming program. The overall vegetation management program is designed to provide safe, reliable and cost effective distribution line clearance. The Enhanced Tree Trimming (ETT) Program is designed to prevent power outages by removing branches or trees that are either too close to power lines, or pose a risk of falling on power lines. Depending on local jurisdictions, one of two criteria is applied for the ETT Specification:

- A clearance zone is established as 8 feet from the primary conductor, from ground to sky, all vegetation will be cleared. Any incompatible species located under the electrical facilities will be removed. This standard is applied at CT, NH and Western MA.
- A clearance zone of 10 x 10 x 15 feet around the primary conductors is created by clearing all vegetation. This standard is applied as Eastern MA transitions through its first cycle of reclamation clearing. The standard clearing zone in Eastern MA had been 8x10x12 feet.

The Enhanced Tree Removal (ETR)/Hazard Tree Removal Programs strategically remove trees to proactively improve system resiliency and mitigate long term costs for the distribution cycle trimming programs. Tree removals, in conjunction with cycle pruning drive improved reliability performance.

The distribution vegetation management program provides for line clearance of 25% of the NU total primary system overhead distribution miles annually. The ETT program pruning is a subset of this, and varies per Operating Company regulatory programs. Risk/Hazard tree removals are performed annually as a complement to the program pruning activities. CT and NH have regulator supported programs that support removals, primarily focused on circuit backbones. In MA removals are prioritized on the backbone of circuits, based on reliability performance across the distribution system.

FORECAST OF EXPENDITURES IN WHOLE DOLLARS (in $000's)

	Prior Authorized*	2015	2016		Totals
Capital Additions – Direct	$	$	$56,582,012		$56,582,012
Expense (Technology projects only	$	$			
Removals net of Salvage	$	$			
Total – Direct Spending	$	$	$56,582,012		$56,582,012
Capital Additions – Indirect	$	$	868,860		868,860
Total Request	$	$	57,450,872		56,450,872

Authorizations, as defined in the Authority and Signature Delegation Policy			
Name of Approver	**Employee Number**	**Approval Signature**	**Date**

The requested funding is allocated among the operating company programs as follows:

Op Co	Project ID	Project Title	2016 Funding ($K)	Budget CCC
CT	ETR2016	Enhanced Tree Removals – Resiliency	$15,275.0	15G
	ETT2016	Enhanced Tree Trimming – Laterals (Resiliency)	$18,725.0	15G
	ETTCF16	CT Enhanced Tree Trimming – Base Program	$4,900.0	15G
		Total CT Program	**$38,900.0**	
NH	C16ETT/R16ETT	ETT (Both Non REP and REPIII)	$6,000.0	7WA
	C16HAZ/R16HAZ	Hazard Tree Removal (Both Non REP and REPIII)	$3,749.7	7WA
	C16ROW/R16ROW	Full Width ROW Clearing (Both Non REP and REPIII)	$3,201.6	7WA
		Total NH Program	**$12,951.3**	
MA West	ETRWM16	Enhanced Tree Removals 2016	$1,500.0	6AD
	ETTWM16	Enhanced Tree Trimming Program	$999.6	6AD
		Total MA West Program	**$2,499.6**	
MA East	ETREM16	Enhanced Tree Trimming and Hazard Tree Removals	$3,100.0	N44
		Total MA East Program	**$3,100.0**	
		TOTAL DISTRIBUTION VEGETATION MANAGEMENT	**$57,450.9**	

The criteria that results in the capitalization of costs are as follows:

- ETT goes beyond the level of O&M pruning in significantly improving reliability (functionality) for normal operations, and providing a greater level of resiliency during emergent events, and extending the useful life of the related conductor.
- Capitalization of ETT is consistent with the Plant Accounting Instruction 7A in the FERC Uniform System of Accounts Electric Plant Accounts, which allows capitalization of those costs to clear a right of way to the asset that benefits. The asset benefitting is in FERC account 365 (Overhead Conductors and Devices) contained in FERC 18 CFR part 101.
- ETT is a one-time program to perform work which was capitalized and depreciated as minor unit of property that did not previously exist. ETT is depreciated over the life of the conductor (account 365) benefitting from the specific tree trimming. After the initial cycle of enhanced tree trimming is complete, the company expenses subsequent cost to maintain the additional clearance established through ETT.

Justification:
The 2016 distribution prune program requires expenditures across all Eversource operating companies to address maintenance pruning and hazardous tree removals. These activities improve the system's ability to survive major storms with less extensive damage. This will improve reliability performance across the service area.

Alternatives Considered:
Eversource has delineated the benefits of enhanced trimming and enhanced/hazard tree removal programs to regulatory bodies in CT, MA, and NH as an important component of the vegetation management program for both day to day reliability improvement and increasing system resiliency for adverse weather events. Additionally, the majority of our customer and community officials have come to appreciate the impact of these programs and expect the Eversource companies to have robust line clearance efforts. The deferral of this proactive maintenance approach to address only specific instances of insufficient clearance runs counter to the goals of improved reliability and system resiliency.

Risk Assessment:
The Companies have made commitments to customers and regulators to improve reliability and system resiliency. In the case of Eversource CT, there are specific vegetation management program goals for ETT and ETR as part of the System Resiliency Program. The Eversource MA operating areas are required to report annually on the hazard tree removal programs volume and investment. Eversource NH through the Reliability Enhancement Programs (REP) committed to perform risk tree removal and distribution ROW reclaim.

- CT PURA 12-01-10 specified risk tree removal and the recapture of Enhanced Tree Trimming (ETT) clearances on backbones and large laterals.
- MA DPU Order 11-85-B/11-119-B includes the requirement to track and report volume and cost of hazard tree removals, by circuit.
- MA DPU 10-70 Rate Settlement includes requirements for ETT and ETR at WMECO.
- NH DE Order DE-09-035, Order No. 25, 123 specifies annual spend and program requirements for risk tree removal, distribution ROW reclaim.

There are both operational and regulatory risks associated with a failure to approve these programs. Operationally, there is an increased risk of more vegetation caused outages, both on normal days and during adverse weather. The Company is required to report on both program pruning program cost and volume and risk/hazard tree removals on an annual basis. The vegetation maintenance programs also receive intense scrutiny during storm cost recovery hearings and rate case proceedings, creating a regulatory risk for the Company.

Project Schedule, Milestones & Implementation Plan:

Task	Completion Date
Line Clearance and tree removal	December 31, 2016