Operations Project Authorization Form

Date Prepared: November 28, 2017	Project Title: **Distribution Vegetation Management** Program – Enhanced Tree Trimming (ETT) Program and Enhanced Tree Removal (ETR)/Hazard Tree Removal Program, and Full Width Distribution ROW Clearing
Company/ies: Eversource Energy	Project ID Number(s): ETT2018, ETR2018, ETTCF18, CTROW18, R18HAZ, R18ETT, C18ETT, C18ROW, R18ROW, C18HAZ, ETREM18, ETRWM18, ETTWM18
Organization: Operations Services	Class(es) of Plant: Outside Services
Project Initiator: [redacted] – CT [redacted] – MA, NH	Project Category: Enhanced Tree Trimming/Removals
Project Owner/Manager: [redacted]	Project Type: *Annual*
Project Sponsor: [redacted]	Project Purpose: part of regulatory tracked program? CT Resiliency: ETT2018, ETR2018 NH REP: R18HAZ, R18ETT, R18ROW
Estimated in service date: Jan 01, 2018	If Transmission Project: PTF / Non-PTF / NA
Supplement to Existing Authorization? No	Capital Investment Part of Original Operating Plan? Yes
Eng./Constr. Resources Budgeted? Yes	O&M Expenses Part of the Original Operating Plan? Yes

Project Authorization

Project authorization must be in accordance with the approval levels included in the Delegation of Authority Policy (DOA).

If Chief Executive Officer or Subsidiary Board approval is required, document the review by Enterprise Risk Management (ERM) and Financial Planning and Analysis (FP&A)

ERM: _____

FP&A: _____

Executive Summary

An authorization of $95,606,000 is requested for the Enhanced Tree Trimming (ETT), Enhanced Tree Removal (ETR), Hazard tree removal, and full width clearing of rights-of-way portion of Eversource's annual distribution vegetation maintenance plan. The overall vegetation management program is designed to provide safe, reliable and cost effective distribution line clearance. The 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. NH (REP 3) and CT (Resiliency) have regulatory programs with targets for activity investment.

The 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. Additionally, the service area has experienced drought conditions and insect infestations that have negatively impacted tree health and there are signs of increased tree mortality for the coming years. The ETR/Hazard Tree Programs have been increased to further address these concerns.

The distribution vegetation management program provides for line clearance of 25% of the Eversource total primary system overhead distribution miles annually. The ETT program running, 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 target removals, primarily focused on circuit backbones. In MA removals are prioritized on the backbone of circuits, based on reliability performance across the distribution system and the scheduled cycle prune. In MA this activity is tracked and reported annually on a per circuit basis to the Department of Public Utilities, but there are currently no specific targets for investment level established by the regulators.

Distribution ROW clearing is a separate category under NH REP program. In CY, this is an included activity under the ETR Program.

Project Costs Summary

See APS3 and APS8 requirements and consult with Plant Accounting for capital/O&M determination. Use published loaders for benefits, materials, and invoices, maintained by the Director, Budget and Internal Reporting.
Note: Dollar values are in thousands

	Prior Authorized	2018	2019	2020	Total
Capital Additions - Direct		94,171.9			94,171.9
Less Customer Contribution					
Removals net of salvage _____%					
Total - Direct Spending		94,171.9	-	-	94,171.9
Capital Additions - Indirect		1,434.1			1,434.1
Subtotal Request		95,606.0			95,606.0
AFUDC					
Total Capital Request		95,606.0			
O&M					
Total Request		**95,606.0**	-	-	**95,606.0**

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

Op Co	Project ID	Project Title	2018 Funding ($K)	Budget CCC
CT	ETR2018	Enhanced Tree Removals - Resiliency	$19,706.0	15G
	ETT2018	Enhanced Tree Trimming - Resiliency	$23,400.0	15G
	ETTCF18	Customer Focused ETT	$5,000.0	15G
	CTROW18	Distribution ROW Tree Removals	$2,500.0	15G
		Total CT Program	**$50,606.0**	
NH	R18ETT	Enhanced Tree Trimming - REP 3	$3,087.9	7WA
	R18ROW	Full Width ROW Clearing - REP 3	$1,647.6	7WA
	R18HAZ	Hazard Tree Removal - REP 3	$2,264.5	7WA
	C18ETT	ETT - Base	$6,319.0	7WA
	C18HAZ	Hazard Tree Removal - Base	$8,839.5	7WA
	C18ROW	Full Width ROW Clearing - Base	$2,841.5	7WA
		Total NH Program	**$25,000.0**	
MA East	ETRME18	Enhanced Tree Removal	$10,000.0	N44
		Total MA East Program	**$10,000.0**	
MA West	ETRWM18	Enhanced Tree Removals	$5,000.0	6AD
	ETTWM18	Enhanced Tree Trimming	$5,000.0	6AD
		Total MA West Program	**$10,000.0**	
		Total Distribution Vegetation Management	**$95,606.0**	

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. The ETR/hazard tree programs remove trees that have the potential to impact the utility plant thereby extending the life of the plant. Both ETT and ETR programs meet the three tests for capitalization:

- Substantial investment towards asset life extension
- One time program cost as the activity can only be performed once
- Standalone program which will be budgeted, charged and tracked separately

Justification:
The 2018 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 tree 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 Company has made commitments to customers and regulators to improve reliability and system resiliency. In the case of CT, there are specific vegetation management program goals for ETT and ETR as part of the System Resiliency Program, which is scheduled to expire December 31, 2017. The MA companies are required to report annually on the hazard tree removal programs volume and investment. In NH, as part of the Reliability Enhancement Program the Company 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 both the 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 cost and volume and

risk/hazard tree removals on an annual basis in all three states. The Vegetation Management programs also receive intense scrutiny during storm cost recovery hearings and rate case proceedings, creating a regulatory risk for the Company.

Financial Evaluation

Provide the following financial information (attach additional detail if summarized items are significant or additional information is needed). Note: Dollar values are in thousands

Direct Capital Costs	Year 1	Year 2	Year 3+	Total
Straight Time Labor				
Overtime Labor				
Outside Services	94,171.9			94,171.9
Materials				
Other, including contingency amounts (describe)				
Total				

Indirect Capital Costs	Year 1	Year 2	Year 3+	Total
Indirects/Overheads (including benefits)	1,434.1			1,434.1
Capitalized interest or AFUDC, if any				
Total				

Total Capital Costs	95,606.0			95,606.0
Less Total Customer Contribution				
Total Capital Project Costs	95,606.0			95,606.0
Total O&M Project Costs				

Note: Explain unique payment provisions, if applicable

If this is a new business project, is a customer contribution required? If yes, please note the contribution amount.

In addition, for all electric and gas growth / new business projects, please attach the CIAC calculation

Provide other financial documentation as warranted by management and / or regulatory precedent. When performing financial analysis, use appropriate discount rate by company (can be provided by Budgeting and Internal Reporting or Financial Planning and Analysis).

Future Financial Impacts:

Provide below the estimated future costs that will result from the project:
Note: Dollar values are in thousands:

Future Costs	Year 20__	Year 20__	Year20__	Year 20__+	Total Future Project Costs
Capital	$ -	$ -	$ -	$ -	$ -
O&M	-	-	-	-	-
Other	-	-	-	-	-
TOTAL	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

Describe the estimated future Capital, O&M and/or Other costs noted above:

What functional area(s) will these future costs be funded in? Vegetation Management_____
A representative from the respective functional area is required to be included as a project approver.

If this is other than a Reliability Project, please complete the section below;

Provide below the estimated financial benefits that will result from the project:
Note: Dollar values are in thousands:

Future Benefits	Year 20__	Year 20__	Year20__	Year 20__+	Total Future Project Benefits
Capital	$ -	$ -	$ -	$ -	$ -
O&M	-	-	-	-	-
Other	-	-	-	-	-
TOTAL	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

Describe the estimated future Capital, O&M and/or Other benefits noted above:

What functional area(s) will these benefits be reflected in?_____
A representative from the respective functional area is required to be included as a project approver.

Asset Retirement Obligation (ARO):

An ARO is a current legal obligation to remove or retire property, plant or equipment at some point in the future. Please refer to APS8 or contact Plant Accounting for further detail.

Is there an ARO associated with this project? If yes, please provide details: