Operations Project Authorization Form

Date Prepared: 9/16/2020	**Project Title: Mitigate Historical Osprey outages**
Company/ies: Eversource CT	**Project ID Number: CD01621**
Organization: Distribution Electric	**Class(es) of Plant: Distribution**
Project Initiator: [redacted]	**Project Category: Environmental Line**
Project Manager: [redacted]	**Project Type: Reliability**
Project Sponsor: [redacted]	**Project Purpose: Resolve Osprey Outages**
Estimated in service date: 3/31/2021	**If Transmission Project: PTF? N/A**
Eng. /Constr. Resources Budgeted? Y	**Capital Investment Part of Original Operating Plan? Y**
Authorization Type: Initial Funding	**O&M Expenses Part of the Original Operating Plan? Y**
Total Request: 53K	

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

Resolve 2020 outages caused by nesting osprey by March 2021. If a nest has young not allowed to remove until after they fledge and leave the nest. The resolution will be accomplished by removing the nests, installing deterrents, and if necessary, installing a platform on a standalone pole.

Project Costs Summary

	Prior Authorized	20__	20__	20__+	Totals
Capital Additions - Direct	$0	$30	$0	$0	$30
Less Customer Contribution	$0	$0	$0	$0	$0
Removals net of Salvage ____%	$0	$3	$0	$0	$3
Total - Direct Spending	$0	$33	$0	$0	$33
Capital Additions - Indirect	$0	$18	$0	$0	$18
Subtotal Request	$0	$51	$0	$0	$51
AFUDC	$0	$0	$0	$0	$0
Total Capital Request	$0	$51	$0	$0	$51
O&M	$0	$2	$0	$0	$2
Total Request	$0	$53	$0	$0	$53

Financial Evaluation

Note: Dollar values are in thousands

Direct Capital Costs	Year 1	Year 2	Year 3+	Total
Straight Time Labor	$2	$0	$0	$2
Overtime Labor	$0	$0	$0	$0
Outside Services	$23	$0	$0	$23
Materials	$8	$0	$0	$8
Other, including contingency amounts (describe)	$0	$0	$0	$0
Total Direct Costs	**$33**	**$0**	**$0**	**$33**

Indirect Capital Costs	Year 1	Year 2	Year 3+	Total
Indirects/Overheads (including benefits)	$18	$0	$0	$18
Capitalized interest or AFUDC, if any	$0	$0	$0	$0
Total Indirect Costs	**$18**	**$0**	**$0**	**$18**
Total Capital Costs	**$51**	**$0**	**$0**	**$51**
Less Total Customer Contribution	**$0**	**$0**	**$0**	**$0**
Total Capital Project Costs	**$51**	**$0**	**$0**	**$51**
Total O&M Project Costs	**$2**	**$0**	**$0**	**$2**
Total Project Cost	**$ 53**	**$ -**	**$ -**	**$ 53**

Technical Justification:

Project Need Statement

Proactively eliminate osprey outages at known problem areas. Removing double crossarms (preferred for nesting) and install singles composite crossarms. Ensure that single crossarms are on the next three (3) adjacent poles in each direction and install guards. Install pole & nesting platforms as necessary to draw birds away from our facilities.

Project Objectives

Eliminate osprey caused outages in known nesting location. For 2021 the Districts prefer that one segment be assigned to each District.

Project Scope

Install the single compositive crossarms, nesting platforms and guards at five locations in the Eastern Region. See locations on attached excel spreadsheet.

Background / Justification

The summer of 2020 experienced multiple osprey outages. Those that could not be immediately resolved due to eggs and nestlings will be resolved via this project.

Business Process and / or Technical Improvements:

DSEM 2.601.

Reliability
Section 02.60

AVIAN PROTECTION **02.601**

GENERAL – This section provides instructions and guidelines to be used to implement an avian (large bird) protection program to be in compliance with state and federal laws to protect certain birds and their habitat. The main focus is on protecting certain migratory birds such as Osprey, Hawks, Eagles, Great Blue Herons, Crows, and Ravens. These birds typically return annually to the Company's service territory from their winter nesting grounds. Protective equipment installed under this program will have an additional benefit to prevent contact by other animals on energized distribution lines, thus improving system reliability. This program is to be used to determine the proper application of avian protective equipment, and identify the need when to contact the Environmental Affairs Department.

BACKGROUND – An Avian Protection Team was developed by the Director of Engineering Services after the "take" (death) incident of a bald eagle in our service territory. The Team researched laws, regulations, industry standards, and surveyed other utilities to identify best practices to enhance protection from animal contact on the system.

The U.S. Migratory Bird Treaty Act (MBTA) protects most species of migratory birds. North American Eagle species are protected under the Bald and Golden Eagle Protection Act (BGEPA). MBTA and BGEPA are enforced by the U.S. Fish & Wildlife Service (USFWS). The USFWS can impose civil and criminal penalties for the "take," or death, of protected species for violations. Raptors (birds of prey) typically nest in high locations near food sources (shore, dump, etc.) the Company has MBTA permits that allow relocation of a limited number of "active" Osprey, Heron or Hawk nests per year, provided a suitable artificial platform is erected and the nest is properly relocated.

INSTRUCTIONS – Contact Environmental Affairs Department before physically touching a migratory bird or its habitat (nest). This department will address questions and coordinate actions to ensure that the Company meets regulatory requirements.

SUMMARY TABLE – The summary table below provides a central reference for materials and design changes that will help decrease Avian and wildlife related outages.

Reliability
Section 02.60

AVIAN PROTECTION **02.602**

Avian (Large Bird) and Wildlife Protection Standards Summary

Standard Description	Protection Application	Distribution Engineering Bookshelf Reference
Avian (Large Bird) Specific Protection		
Nesting platform	Nest relocation (consult Environmental Affairs)	**DTR 10.013**
Raptor guards	Protect overhead conductor (Ph to Ph) contact	Material Book **Section C**
Crossarm half pipe cover/deterrent	Deter nest build/rebuild on crossarms	
Ten (10) ft. crossarms	Increase phase to phase spacing to eliminate contact risk of large bird wing span (risk reduced for spacing > / = 60″)	**DTR 10.013** and Material Book **Section C**
General Wildlife/Animal Protection (Including Avian)		
Covered (tree) wire	Protect overhead conductor (Ph to Ph) contact	**DTR 10.001** and **DTR 32.001**
Covered tap wire	Protect contact between energized and grounded equipment	Material Book **Section C**
Composite (fiberglass) crossarm	Reduction in number of arms for some corners, deadends reduces footprint for nest build.	Material Book **Section C** and **DSEM 06.222**
Traditional squirrel/ animal guard	Protect contact between energized and grounded equipment (e.g.–transformer bushings, Las)	Material Book **Section G**
Electrostatic squirrel guard		
Insulation (e.g. MidSun, Raychem, shrinkable)	Covered exposed bus, taps, and equipment	Consult Substation Engineering
Metalclad switchgear	Design consideration for bus/station rehab or replacement	

Alternatives Considered with Cost Estimates

None

Project Schedule

Milestone/Phase Name	Estimated Completion Date
Initial Funding Approval	10/8/2020
Full Funding Approval	12/31/2020
Complete Construction	2/15/2020

Regulatory Approvals

NA

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2021	High/Medium/Low	Included contingency costs in the funding request. Perform detailed Field Analysis and walk down in project development to avoid potential issues.
Customer Permission / Siting Council / Municipal approvals	2021	High/Medium/Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2021	High/Medium/Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Internal engineering resources not available to perform the work.	2021	High/Medium/Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2021	High/Medium/Low	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2021	High/Medium/Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2021	High/Medium/Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.

Attachments (One-Line Diagrams, Images, etc.)

Osprey locations.xlsx

CD01621_Osprey Mitigation in year 202