Eversource – New Hampshire Asset Condition Wood Structure Replacements

Planning Advisory Committee Meeting

June 15, 2022

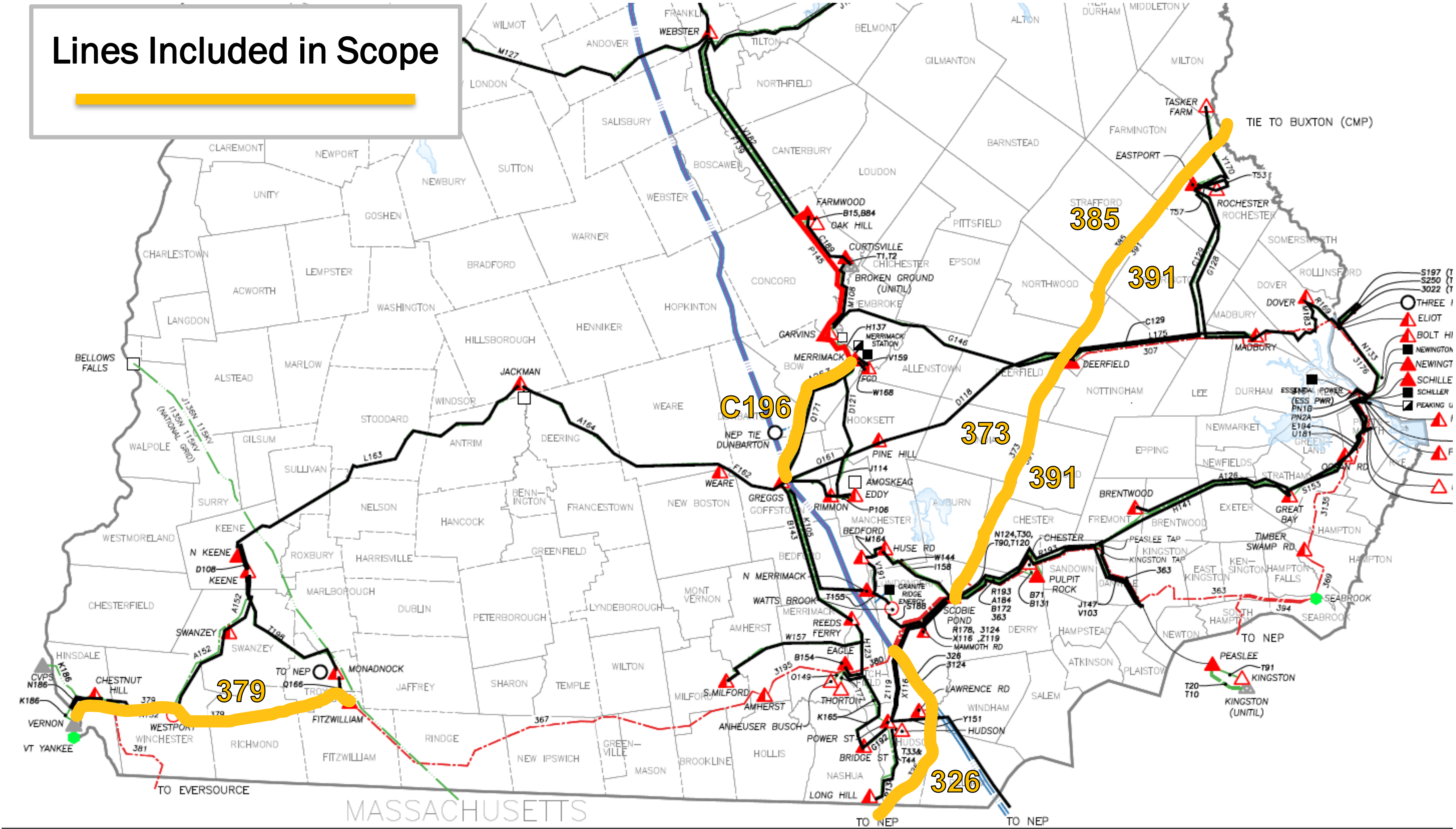
Agenda

- Project Background
- Project Location
- Project Need
- Project Scope
- Project Summary

Project Background

- Eversource manages ~4,000 miles of overhead transmission lines
  - Nearly 40% of all transmission in New England
- Eversource takes a proactive approach to maintaining long-term structural integrity and continued reliability of its transmission infrastructure through regular inspections (walk-down ground inspections, structure ground line, flyovers, etc.)
- Supporting structures for lines within project scope are a combination of round wood, laminated wood or steel H-frame
  - Structures targeted for replacement as part of this project are all round wood and some laminated wood (379 line only)
  - Scope does not include any steel H-frame replacements
- Lines in this project scope are primarily geographically located in New Hampshire

Project Location



Project Need

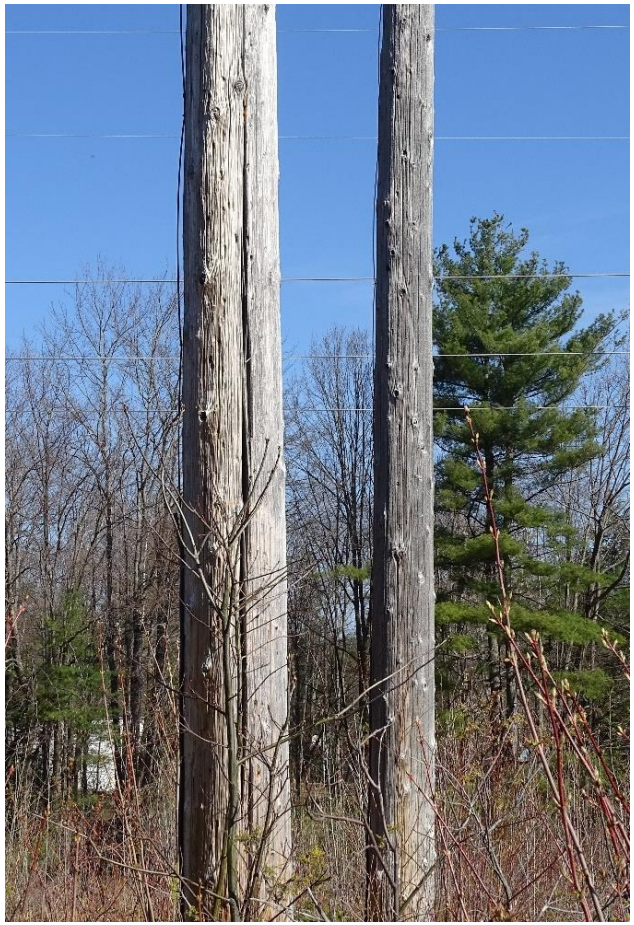
- Recently completed inspections of these lines graded condition of all structures in accordance with Electric Power Research Institute (EPRI) guidelines:
  - *A: Nominal Defect – No Action Required*
  - *B: Minimal Defect – Monitor Degradation*
  - *C: Moderate Defect – Repair or Replace under next maintenance*
  - *D: Severe Defect – Repair, Reinforce, or Replace immediately*
- Grade C/D round and laminated wood structures showed one or more of the following age-related degradations, leading to decreased load carrying capability:
  - Woodpecker damage
  - Top rot
  - Cracking/splitting
- Additional Grade B structures were identified and prioritized for replacement based on identified efficiencies in required permitting and approvals for replacing Grade C/D structures, as well as minimizing environmental impacts
- If not addressed, the issues noted above jeopardize the long-term integrity of the transmission system and its continued reliability

Project Need

385 Line – Top Rot and Splitting

391 Line – Top Splitting and Cracking

Project Need



C196 Line – Pole Splitting

379 Line – Pole Splitting and Woodpecker Damage

Project Need

373 Line – Top Rot and Splitting

326 Line – Top Splitting and Cracking

Project Scope

Line	kV	Length (mi)	Replacement Structures	Total Structures	Estimated Cost (-25% / +50%)	In-Service Date
373	345	18.6	24	178	$7.1M	Q4 2023
326	345	18.3	22	167	$6.2M	Q4 2022
379	345	20.3	25	169	$8.0M	Q4 2022
385	345	18.7	17	169	$5.0M	Q4 2023
391	345	37.1	27	335	$9.0M	Q4 2022
C196	115	10.8	47	145	$14.8M	Q1 2023
Totals		123.8	**162**	1,165	**$50.1M**	-

Project Summary

- Inspections have indicated significant degradation of several round and laminated wood structures along the identified lines in this presentation
  - Existing structures will be replaced with light duty steel equivalents
- All replacements will be designed to meet current design criteria
- Resolves multiple structural issues
- Supports long-term integrity and reliability of the Eversource transmission system

Estimated Cost = $50.1 Million (-25% / +50%)

Projected In-service date: Q4 2023 for all lines

Questions