# 1231/1242 Reconductor and Structure Replacements

## TCA Submittal Presentation
## ES-22-TCA-29

NEPOOL Reliability Committee Meeting

August 15th, 2023

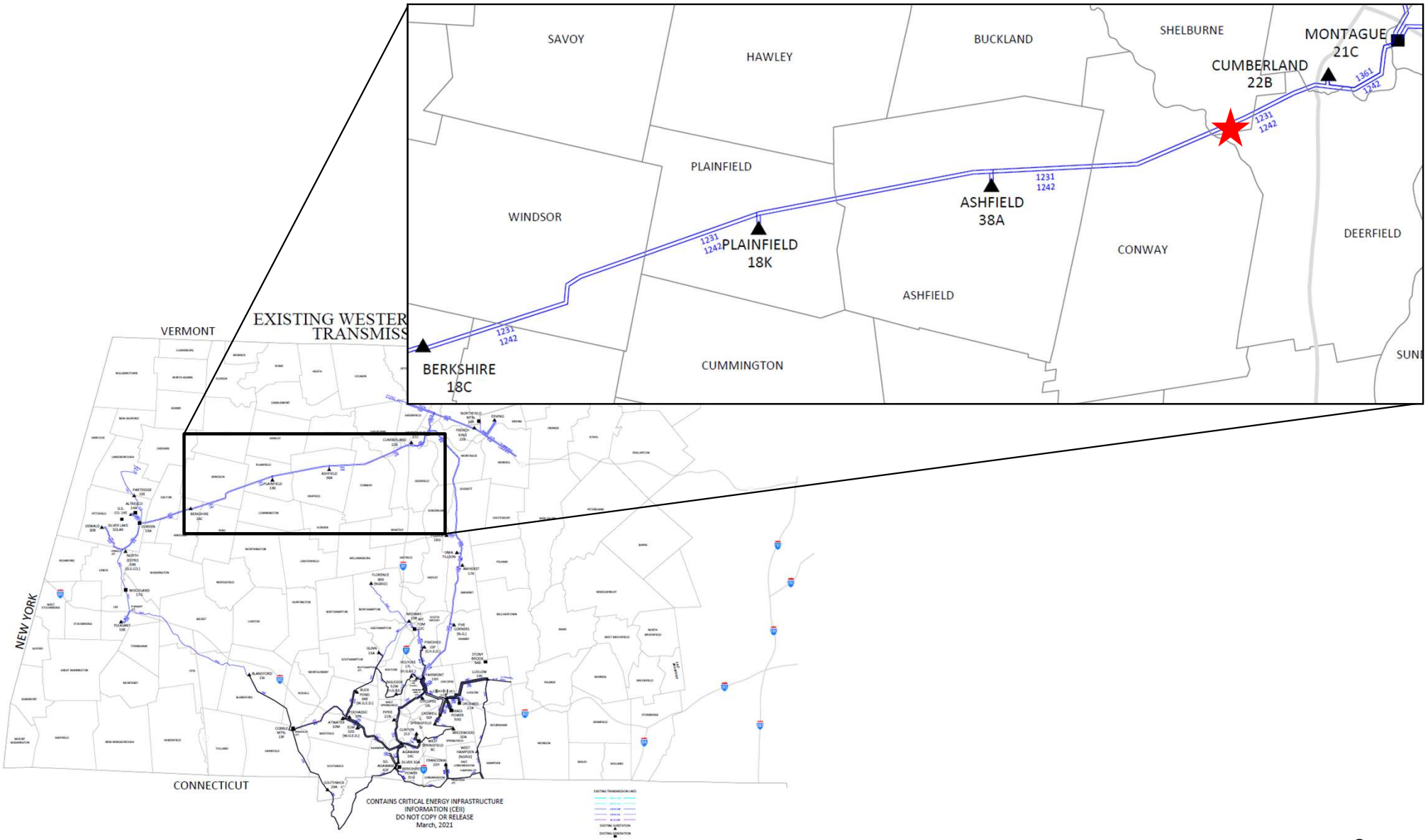
# Agenda

- Project Background
- Drivers
- Location
- Summary

# Project Background

- This presentation covers an asset condition project on the 115kV 1231/1242 Lines from Berkshire Substation to Cumberland Substation (1231) and Montague Substation(1242) in Western Massachusetts
- PAC History
  - Eversource Copper Conductor and Shield Wire Replacement - January 2021
  - Eversource 1231/1242 Line Reconductor and Structure Replacements - August 2022 (Project update)
- Project Drivers
  - Inspections have identified thermal and environmental degradation of copper conductor and shield wire. Recent tests have also identified loss of strength in copper materials.
  - Aging lattice towers with structural deterioration and missing/broken equipment
- Replacing the deteriorated structures, obsolete copper conductor/shield wire, and installing OPGW is the most cost-effective option to address the potential for system failures due to asset condition vulnerabilities
- Replacing the original 2/0 copper conductor with 1272 kcmil ACSS utilizes a larger standard conductor yielding added system reliability and is the most efficient solution within the right of way
- The addition of OPGW expands the Eversource OPGW / Synchronous Optical Networking (SONET) loop

# 1231/1242 Geographic Location



# Tower Failure - 2023

Buckled Damaged Lattice Tower
March 14, 2023

New Dual Circuit Monopole
March 29, 2023

# Summary

- Replace 213 existing transmission structures and remove 17 midspan structures
- Replace existing 2/0 copper conductor with 1272 kcmil ACSS
  - 51.62 miles (25.81 miles per line) between Berkshire and Cumberland substations on 1231 and 1242 lines
- Replace existing copperweld/alumoweld shield wire with OPGW
  - 25.81 miles between Berkshire and Cumberland substations on 1231 line
  - 28.65 miles between Berkshire and Montague substations on 1242 line
- Terminal structure replacements and ADSS installation at line terminal substations
  - Will not be seeking cost regionalization for non-PTF substation work

**Total estimated PTF Cost: $158.5M**

- Total Estimated Costs: $171.6M, includes estimated NonPTF costs of $13.1M

**In-service Date: December 2024**

# Questions