

Electricity
Transmission

ISO-NE PAC MEETING

04/20/2023

E131 Asset
Condition
Refurbishment

nationalgrid



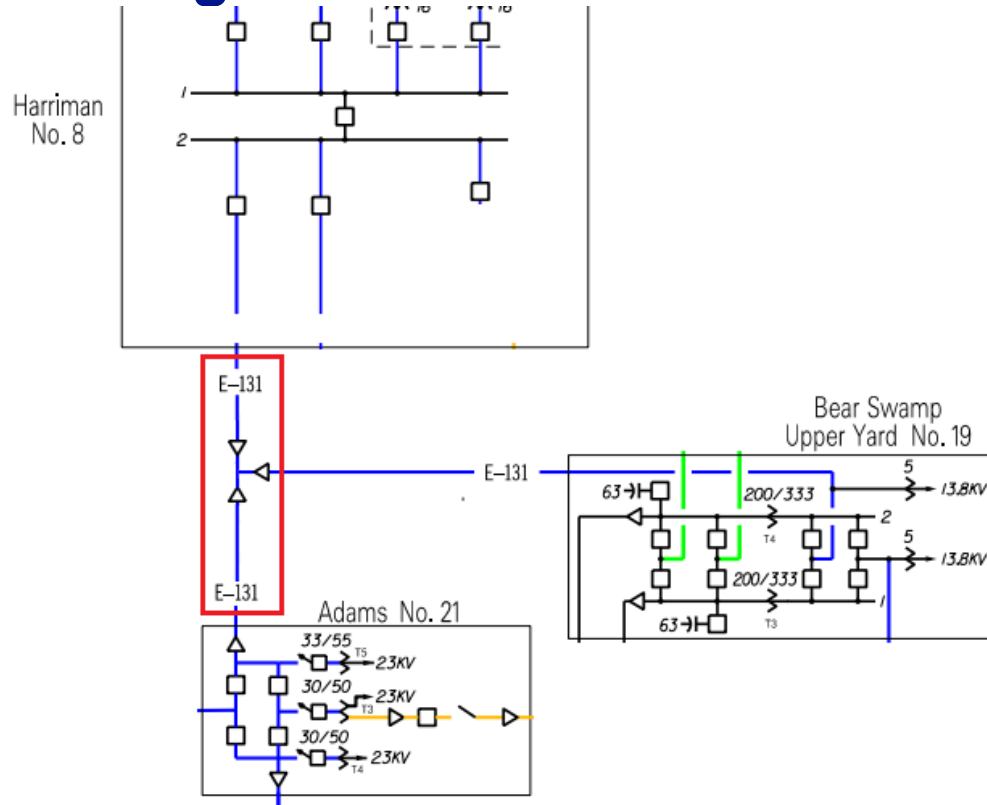
Outline

Purpose: Discuss E-131 condition needs and the proposed solution to address them

- E-131 One-Line Diagram
- Aerial View
- Asset Condition Needs
- Proposed Solution Scope of Work
- Questions

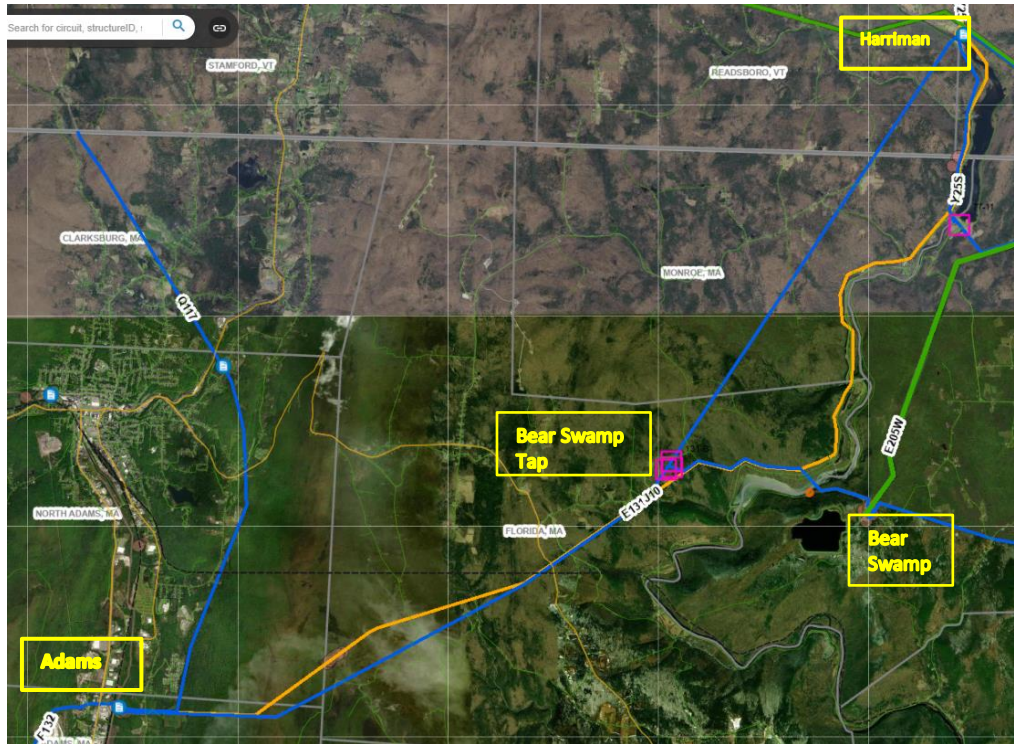
This document has been reviewed and does not contain Critical Energy/Electric Infrastructure Information (CEII).

E-131 One-Line Diagram



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Aerial View



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National Grid E131 ACR - 04/20/23

Asset Condition Needs

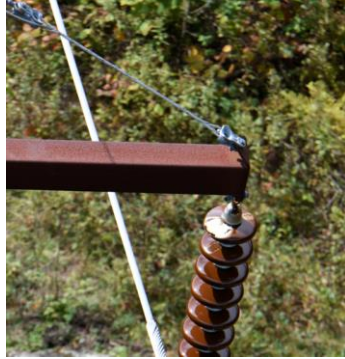
- The E-131 115kV transmission line originates at the Harriman #8 substation in Readsboro, VT and terminates at the Adams #21 substation in Adams, MA. It also has a tap to Bear Swamp substation
- E-131 is approximately 12.3 circuit miles in length and the tap is 2.6 circuit miles long in a mountainous area with rough and steep terrains
- It was originally constructed in 1925 and updated in 1971. The line and its tap contain 209 structures, which includes 182 structures on the main line and 27 structures on the tap
- Wood Poles are showing signs of deterioration due to various reasons such as pole top splitting and woodpecker damages



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Asset Condition Needs, Continued

- Pole top deterioration
- Insulation flashover
- Missing/broken hardware



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Proposed Solution Scope of Work

- Removing 3 lattice towers and 178 wood structures from the main line and installing 177 new steel structures and hardware, one steel structure will be reused
- Replacing 2 wood structures on the Bear Swamp tap with 2 new steel structures and adding 2 steel poles to accommodate the existing OPGW
- Replacing the two existing shield wires with OPGW to complete the communication path between Harriman and Adams substations
- Reusing the existing conductor, 1113 kcmil 54/19 strand ACSR “FINCH”, except for five (5) sections that will be replaced with the same new conductor for constructability purposes
- The project also includes replacing three (3) fly over type switches at the Bear Swamp Tap
- Access road improvement, and construction of new permanent access roads
- Estimated in service date: Third quarter of 2027
- Total Project Cost \$138.3M (+50/-25%), 100% PTF

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