

questions on X-178 plan-as-presented-by Eversource’s PAC presentation document:

Page 3 states: “First section of line built between Beebe River and North Woodstock in 1948

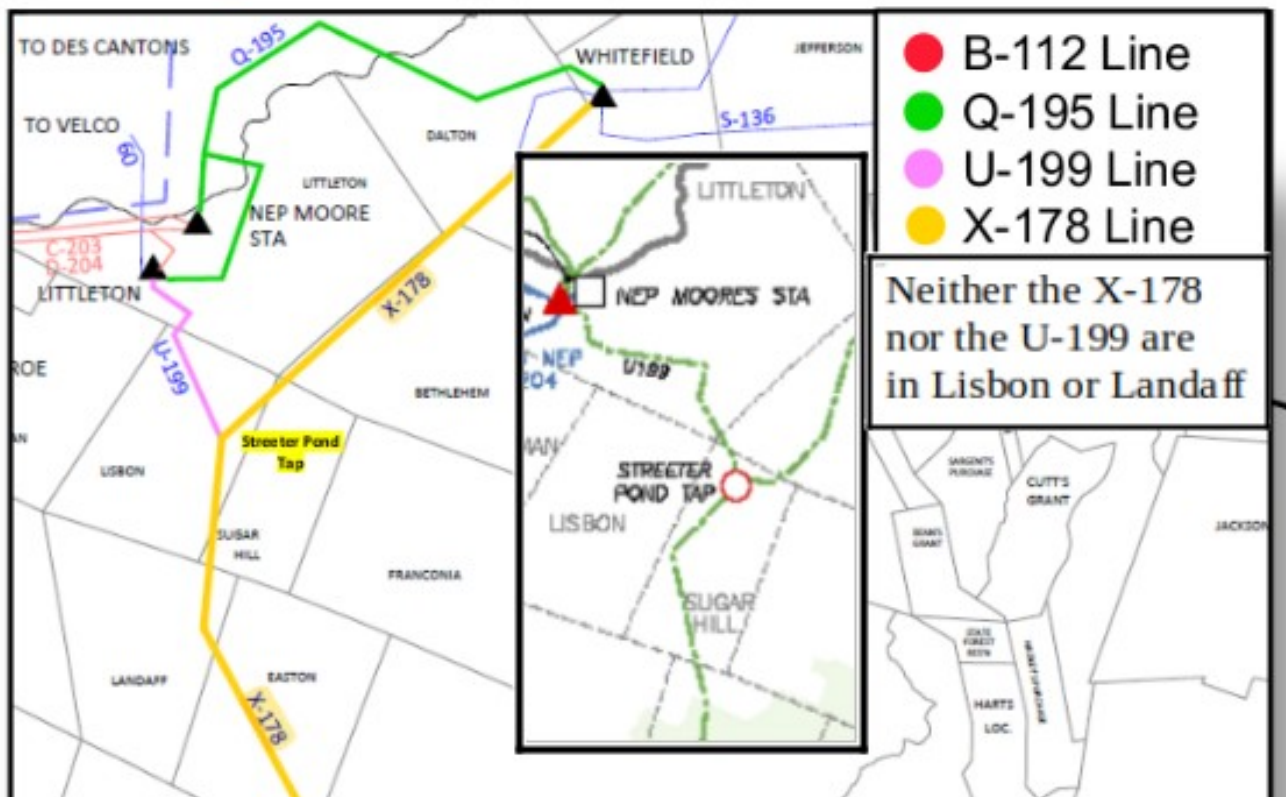
A 1948 condemnation deed seized property in Easton for the X-178 to connect North Woodstock to Groveton. Both Easton and Groveton are considerably north of North Woodstock. Explain.

Page 3 states: “Majority of Streeter Pond tap to Whitefield built in 1969” Do you mean re-built including structures, or just reconducted? Provide proof of this rebuild and/or reconductor.

Page 3 states: “Average structure age: 45 years old”. This figure is worse than useless to describe the age of 570+ structures in two age groups; 39 years, and either 76 or 54 years

Page 4: Your project location map incorrectly shows the X-178 running through Landaff and Lisbon, rather than bisecting Sugar Hill. This map also shows the U-199 running through Lisbon, which is incorrect. Below, I have added an inset showing the correct routes.

Project Locations



Page 5: fails to provide the recommendations for each pole classification or the length of the inspection/maintenance cycle (10 years), which is a egregious omission:

- 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*

Is it correct to say that no structures need immediate repair, reinforcement or replacement, 41 structures need repair or replacement in ten years and 550 structures require no action, absent Eversource’s plan to install OPGW and 1272 ACSS conductor?

Pages 6, 7 and 8: photos need to be dated. Pre-repair photos need to be identified. Please provide an explanation for Eversource’s failure to install pole covers. Please provide the ratings on the poles shown. Please provide the age of each structure/pole shown.

Page 9: Define the North Country loop. The Coos Loop has OPGW except for the S-136 which Eversource plans to “upgrade” soon with more new structures, larger conductor and OPGW, at a cost of \$140 m. (a 2020 partial structure replacement was \$25 m.)

Page 10:

“OPGW installation expands a private Eversource OPGW / Synchronous Optical Networking (SONET) loop

–Provides a controlled, alternate fiber communication path supporting the long-term buildout of the fiber optic network

–Greatly reduces the reliance on leased services for protection, SCADA, and Phasor Measurement Unit (PMU) and Dynamic Disturbance Recorder (DDR) installations (ISO-NE OP-22)

–A private network is segregated from third-party telecom services, improving the overall reliability and security of communications paths”

Explain the existing private Eversource OPGW/SONET loop.

Explain Eversource's leased services for protection, what SCADA, PMU and DRR installations are, and how these relate to Eversource's leased services.

Provide the cost of these leased services.

Provide the cost of stringing OPGW elsewhere.

Explain how expanding the existing Eversource OPGW loop and reducing reliance on leased services could justify the expenditure of \$386 m. (plus the costs of the other line rebuilds)

Page 10: You state:

“The DOE and EPRI recommend fiber as a means to strengthen the security and resilience of critical communication infrastructure to protect against the consequences of electromagnetic pulse attacks.”

Please provide the references for these claims.

EPRI, 2017: Fiber network investments have both capital and operational funding aspects that must be compared to alternatives involving hybrid or third-party ownership. Our research revealed interesting decision trends regarding capital versus operating expense when third party service providers are involved. Results also emphasize the importance of breaking down siloed perspectives by adopting a strategic analysis approach to fiber network decisions.”

I am unable to find a recommendation for fiber optic in the DOE 2020 report.

Why do you fail to mention that the DOE recommends ACCC type conductor, which you refuse to use for this, or any other asset condition project:?

“Actuator and hardware solutions (e.g., power flow controllers, advanced conductors, and cables) focus on improvements in the physical assets and infrastructure responsible for carrying, converting, or controlling electricity. These technologies are generally more capital-intensive than sensor and software solutions and improve the long-term reliability and resilience of the grid. This suite of technologies can be used in isolation or in tandem to improve the overall efficiency and effectiveness of the transmission network. Additionally, these technologies can help increase the reliability and resilience of the entire electric power system. Finally, they can also assist the designers to envision and create the system of the future that can rapidly adapt and change as the demand and use cases for electricity evolve.

DOE Advanced Transmission Technologies, 2020

Page 11: What is the problem the word “Solution” refers to?

Define ACR and LWS:

“Alternative 1: Install OPGW and only replace ACR and OPGW-overloaded structures
Scope:

Replace 287 structures (41 ACR + 2 LWS + 244 OPGW loading)...

“Multiple [many?] miles of matting installation, requiring a significant cost and significant permitting effort may be required each time defective structures are found”

Since the WMNF section has no structures requiring immediate replacement, and may have no structures requiring repair or replacement in ten years, and access in WMNF is likely to be by helicopters, this claim is extremely misleading.

This is an example of why each structure’s inspection rating needs to be provided.

Page 12: Eversource’s preferred “solution” to the “problem” of “its” planned-but-not-built corporate-profit-producing \$386 m. infrastructure:

“Eliminates need for repeated re-entry into RoW over coming decades, mitigating impact to local communities, landowners, and sensitive environmental regions”

Eversource has easements, not rights of way. “Repeated re-entry” is redundant.

Explain why a no-build alternative is not presented.

“Total estimated PTF cost: \$384.61M (-50/ +200%)” :

Define PTF and provide probability percentages for costs along the -50-+200% range

Why was the following alternative not presented: (please correct any incorrect /unprovided figures and provide the weight of the proposed and alternative lighter weight OPGW)

Southwire Badlands ACCC type conductor can carry the same amount of power as the existing conductor and weighs 356 lbs, per 1,000’, compared to 1,094 lbs per 1,000’ of the existing conductor. If the line was re-conducted with Badlands, there would be 738 lbs less weight per

1,000'. The proposed OPGW weighs approximately 537 lbs per 1,000' (Eversource won't say) and the existing ground wire weighs 413 lbs per 1000', so that leaves an ACCC reconducted line with OPGW weighing 638 lbs less per 1,000', which would significantly decrease the load on the existing structures.

Page 13: Provide third party verification of your claim that:

“Due to the combination of various reliability needs ... a full rebuild of the line is the most cost-effective solution for long-term reliability.”

Explain how, as an unregulated monopoly, Eversource can speak of cost-effectiveness for any entity except its “self”; a corporation serving its shareholders.

Provide the length of “long term” in “long term reliability”

Provide full-rebuild cost-benefit figures for the stake-holders; rate-payers, easement-encumbered landowners and the environment.

Provide documentation that the 1986 conductor is aging, or is that term used literally, thus applicable to everything?

Provide planned conductor type; (ACSS), size; (1272), amperage; (2,200), weight per 1.000'; (1,633), and the same for the existing conductor (ACSR, 975, 908 amps, 1094 lbs per 1,000') and how Eversource justifies having a standard conductor that is low-performance, high-sag, has high-line losses, and requires taller structures compared to DOE recommended ACCC type conductor?

Justify Eversources 2,200 amp conductor as its standard conductor for all its 115kV rebuilds.

“Incorporates OPGW to provide high- bandwidth, low latency, secure network operations”

Explain why high-bandwidth and low latency matter for transmission and whether a lighter weight OPGW is available.

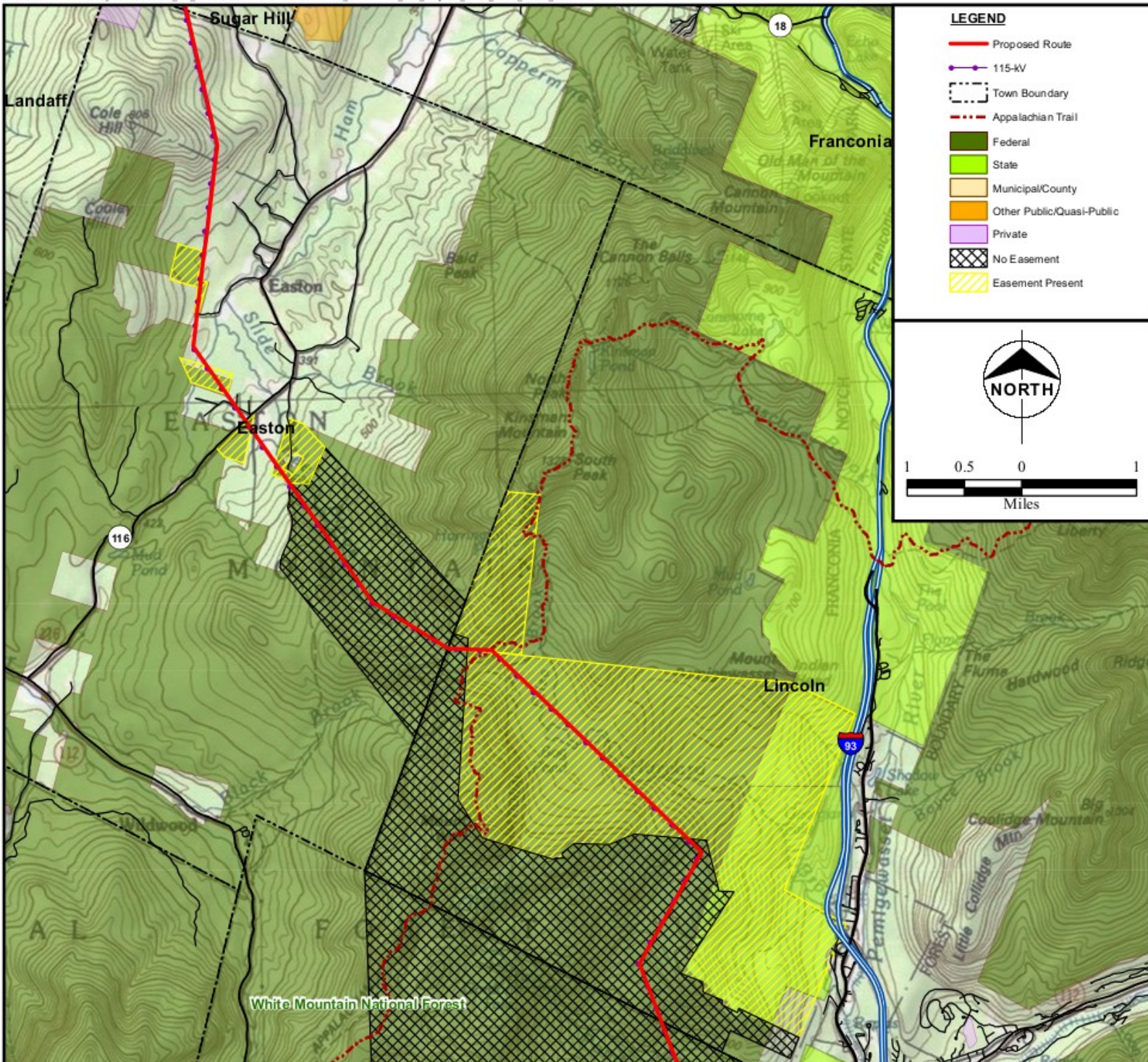
Explain how siting OPGW in remote areas can be considered “secure network operations” when a drone could easily be used to disable the OPGW.

Page 14:

“Right-of-way intersects with Appalachian Trail” is incorrect. Eversource has no right-of-way, it has an easement.

Why does Eversource fail to mention that it has no easement through a significant section of White Mountain National Forest which is also a Roadless area?

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Page 15: The significant increase in conductor size/weight was not mentioned in the documents given to the public. The project was described repeatedly as a reliability project, implying that it had been approved as necessary for system reliability. The majority of the project representatives were clueless about the project details. The only documents more misleading than this PAC document are the ones given to the public as “outreach.”

kris pastoriza February 27, 2024 (two and a half working days after the X-178 PAC document was posted.)