

**MINUTES OF THE
PLANNING ADVISORY COMMITTEE (PAC)
MEETING HELD ON MAY 18, 2023
VIA WEBEX & TELECONFERENCE**

Attendee	Organization
J. Truswell - Chair	ISO New England
J. Macura - Secretary	ISO New England
S. Adams	ISO New England
R. Albrect	Consulting Energy
P. Asarese	ISO New England
D. Basler	Chaco Companies
S. Beale	NESCOE
P. Bernard	ISO New England
J. Beard	ISO New England
J. Burlew	ISO New England
D. Burnham	Eversource Energy
A. Chapin	New Leaf Energy
M. Coleman	Jeraamericas
R. Collins	ISO New England
A. Crowley	ISO New England
V. DelVillano	Eversource
J. Dong	Eversource
J. Donovan	MA AG
M. Drzewianowski	ISO New England
J. Fenn	FENNCO LLC
P. Fitzgerald	SGCENG
B. Fowler	Wheelabrator North Andover Inc.; Exelon Generating Company LLC; Nautilus Power; Dynegy Power Marketing, LLC; Entergy Nuclear Power Marketing LLC; Great River Hydro, LLC
A. Gagnon	MA AG
S. Garwood	NHT
R. Guay	Maine PUC
J. Halpin	Eversource Energy
M. Haskell	Maine PUC
H. Hunt	NESCOE
J. Iafrati	Customized Energy Solutions
S. Judd	ISO New England
T. Kaslow	First Light Power
S. Keane	NESCOE
A. Kniska	ISO New England

A. Krich	Boreas Renewables
F. Kugell	Central Maine Power Company
A. Kuriakose	National Grid
R. Lafayette	Eversource Energy
A. Lawton	Synapse Energy
J. Lucas	Eversource Energy
A. Margolis	VT DPS
J. Martin	New England Power Company
T. Martin	New England Power Company
D. Matthews	National Grid
B. McKinnon	South Hadley Electric Light & Norwood Municipal
L. Milton	Southcoast Wind
A. Mitchell	National Grid
B. Oberlin	ISO New England
R. Panos	National Grid
H. Pathan	Eversource Energy
D. Patnaude	Eversource Energy
H. Presume	VELCO
J. Rotger	Customized Energy Solutions
E. Runge	Day Pitney
D. Schwarting	ISO New England
M. Scott	National Grid
J. Slocum	MA Dept. Transportation
E. Snyder	Eversource Energy
C. Soderman	Eversource Energy
K. Sreenivasachar	ISO New England
R. Stein	H.Q. Energy Services
B. Swalwell	Tangent Energy
D. Tremont	TMLP
P. Vijayan	ISO New England
J. Zhang	ISO New England

Item 1.0 – Chairs Remarks

Ms. Jody Truswell welcomed PAC and reviewed the day’s agenda. She reminded the committee that the upcoming EAG is May 19 and IPSAC is May 23. She informed PAC that ISO plans to post the Boston and Vermont scopes of work at the end of the month to reflect updates from the draft 2023 CELT report.

Item 2.0 – Browns River 345kV Capacitor Bank Station Cost Update

Mr. Steve Garwood (NHT) presented the cost update for the Browns River 345 kV Capacitor Bank Station. In 2020, NHT estimated costs at \$8.9 million (-25/+50%). Today, the estimated

cost is \$22.9 million. This increase was driven by several factors, including changes in scope (\$10.9 million), changes from advanced engineering (\$1.4 million), market-pricing impacts (\$0.4 million), and incremental AFUDC and contingency(\$1.4 million).

In response to Stakeholder questions, the following statements were issued:

- At \$7 million, the harmonic filters are the largest expense attributed to changes in scope for the project. The remaining \$3.9 million was associated with the addition of line-sectionalizing.
- In cases like this, harmonics analysis cannot be done as part of the needs assessment because the solution itself is unknown at that point in the process. The goal is to strike a balance between performing the necessary analysis and halting all projects waiting for analysis to be completed.
- There was a concern about pushing harmonic content too high in that area, which drove the need for the additional analysis.
- NHT worked with Eversource and ISO during the study phase of the project. Due to harmonic issues in the area, Eversource decided not to put capacitors in Amherst at that time. ISO found that installing a 300 +/- MVAR STATCOM was not the best proposed solution for mitigating the voltage criteria violations in the southern NH (*see slide 4*).
- In January, NHT provided the project's complete cost estimate increases to the ISO.
- NHT explained that ISO's questions about the longevity of the project's C-type filter helped identify its rating error. Unfortunately, filters' components are very expensive, so the corrected rating resulted in a million dollar price increase. NHT noted that is stakeholders had additional questions on filter costs to reach out directly.
- NHT would need to follow up with a detailed explanation as to why NHT installs two filters to each capacitor bank.
- It is more efficient to install a C-type filter within each capacitor bank due to the filter's reactive contribution to the system.

Item 3.0 – Adams #21 Substation Relocation

Mr. Rafael Panos (National Grid) presented solutions for flood mitigation at Adams #21. The project moves the station to a new location that is higher in elevation (2,585' – 3,155'). National Grid plans to remove, stabilize, and re-vegetate the existing substation and reroute the overhead line in and out of the new location. The project's total T&D cost is \$133.5M (+50/25%), with \$55.1M PTF. The expected in service date is set for Q1, 2030.

In response to Stakeholder questions, the following statements were issued:

- National Grid will follow-up to confirm future proofing.

- The new site's elevation is three times as high as the original.
- National Grid is working with local resources to complete all siting and zoning requirements, however, current approval statuses are unknown.
- Before selecting this location, National Grid viewed five potential sites and met with those landowners.
- National Grid's projects undergo complete sound testing. After construction, National Grid follows up to ensure all applicable sound regulations and guidelines are met.

Item 4.0 – NH Line Asset Condition Projects

Mr. Chris Soderman (Eversource Energy) presented Northern New Hampshire's rebuilds on 115 kV lines B112, Q195, and U199.

Line B112

- Replace 254 wood structures with new steel structures
- Re-conductor 22.9 miles of 336 ACSR with 1272 ACSS
- Install 45.8 miles of OPGW (2 x 22.9 mi)
- Estimated PTF Cost: \$105.43M (-25% / +50%)
- Projected In-service Date: Q4, 2024

Line Q195

- Replace 224 wood structures with 223 new steel structures
- Re-conductor 17.5 miles of 336/477/795 ACSR with 1272 ACSS
- Install 35 miles of OPGW (2 x 17.5 mi)
- Estimated PTF Cost: \$100.00M (-25% / +50%)
- Projected In-service Date: Q4, 2026

Line U199

- Replace 104 wood and 1 steel structures with new steel structures
- Re-conductor 9.75 miles of 795ACSR with 1272 ACSS
- Install 19.5 miles of OPGW (2 x 9.75 mi)
- Estimated PTF Cost: \$51.18M (-25% / +50%)
- Projected In-service Date: Q2, 2026

In response to Stakeholder questions, the following statements were issued:

- The interconnection upgrade's scope is smaller than an asset condition project (referencing B112). The interconnection upgrade is simple splice replacements.
- A TCA at the Reliability Committee will follow. Ultimately, the ISO coordinates when specific projects are presented. Under ISO's current processes, projects presented at the PAC and RC are coordinated near one another.

- The project's construction schedule has not been set.
- The cost listed only covers asset conditions (not splicing).
- The Q195 tap will be reconducted. B112 does extend through forestland, but the project impacts will be minimal.
- Eversource believes it has been in coordination with National Grid about the Moore substation relocation.

The following comments were issued:

- A stakeholder noted previewing 2024 projects would be helpful.
- Line outages can have a significant impacts on generation and a decent amount of wind and hydro could be affected in that area.

Item 5.0 – New Hampshire Wood Structure Replacements & OPGW Installations

Mr. Chris Soderman (Eversource Energy) presented New Hampshire's wood structure replacements and OPGW installations. Recent inspections identified structural wood degradation on the 391, 373, R193, S153, A126, E194, U181, D121, 307, B143, and J114 lines. In addition the alumoweld shield wire will be replaced with OPGW on lines 307, B143 & J114. Eversource proposes to replace 309 existing wood structures, with similar light duty weathering steel structures and 49.04 circuit miles of existing shield wire with OPGW. The project's estimated total PTF costs is \$102.31M (-25% / +50%).

In response to Stakeholder questions, the following statements were issued:

- Civil work will start around the end of Q2 on some lines.
- Much of the work will be done live line. There will be short duration outages when angle structures are replaced.

Item 6.0 – Asset Condition Replacement Projects: Visibility Process Enhancements and Rightsizing

Ms. Heather Hunt and Ms. Sheila Keane (NESCOE) presented on process improvements for asset condition project planning. NESCOE suggests focusing on near-term visibility process improvements, as well as longer-term asset condition planning reform and right sizing.

In response to Stakeholder questions, the following statements were issued:

- NESCOE would like to continue to utilize PAC as a discussion forum to gain stakeholder feedback.

- Creating new asset condition project processes should strive to improve visibility and cost-management.
- A link exists between longer-term transmission, Phase 2 and right sizing. The purpose of Phase 2 is to give states the ability to operationalize solutions identified in the long-term transmission planning studies, e.g. 2050 Transmission Study. NESCOE is hopeful the right sizing effort can move in tandem with Phase 2.
- NESCOE stated its asset condition process improvement initiative is high priority. It hopes to work with the states, the TOs, and the ISO to see results at a good pace. NESCOE is hopeful that right sizing will work in line with policy changes.
- Facility owners are in charge of identifying needs.
- NESCOE is interested in helping the asset condition process gain foresight when reviewing projects.
- In the past, the ISO has attempted to right size projects, but was met with stakeholder opposition because imminent need was not proven. The ISO supports efforts to build out the system with a longer-term view because these assets are long-lasting. Since the material cost is a small percentage of the overall project cost, it is sensible to coordinate building out the system, so assets are sized correctly through their useful lives.
- RTO counterparts around the country are also challenged with asset condition project concerns, similarity rooted in desire for increased visibility, transparency and confidence.
- NESCOE plans to rely on ISO's planning expertise as it continues to push this initiative forward and reform the asset condition process.

The following comments were issued:

- One stakeholder found slide 3 to be contradictory to the NESOE's letter issued April 28 in relation to the public policy studies.
- Many stakeholders support NESCOE's initiative and their concern aligns over how asset condition spending is reviewed and the level of scrutiny it receives. Further stakeholder discussion was welcomed to find solutions that maximize benefits and minimize costs for consumers.
- Asset condition projects will be a main driver of transmission upgrades for years to come, but there needs to be a significant emphasis on right sizing.
- A stakeholder suggested the ISO could take an "if you build it, they will come approach" but another stakeholder raised concern that this could be "building a bridge to nowhere."

- There is a tremendous need to rebuild New England's transmission system because of its age.

Item 7.0 – Closing Remarks/Adjourn for the Day

Ms. Truswell announced the next PAC meeting is on Thursday, June 15, 2023.

The meeting adjourned at 11: 05 A.M.

Respectfully submitted,

_____/s/____

Jillian Macura

Secretary, Planning Advisory Committee