

**Planning Advisory Committee
WebEx Teleconference
February 11, 2022**

Attendee	Organization
J. Truswell - Chair	ISO New England Inc.
M. Lyons - Secretary	ISO New England Inc.
M. Allen	VELCO
S. Allen	Eversource Energy
R. Andrew	Eversource Energy
M. Babula	ISO New England Inc.
C. Benker	Eversource Energy
D. Bergeron	Maine Public Utilities Commission
P. Bernard	ISO New England Inc.
M. Birchard	Acadia Center
P. Boughan	ISO New England Inc.
J. Breard	ISO New England Inc.
J. Burlew	ISO New England Inc.
D. Burnham	Eversource Energy
D. Capra	NESCOE
D. Cavanaugh	Energy New England
B. Chamberlain	Olivewood Energy
R. Collins	ISO New England Inc.
W. Coste	ISO New England Inc.
B. Cracolici	Maine Public Utilities Commission

F. Dallorto	ISO New England Inc.
B. D'Antonio	NESCOE
J. Desai	Power Energy
F. Dieng	Eversource Energy
M. Drzewianowski	ISO New England Inc.
F. Etori	VELCO
J. Fenn	Versant Power
B. Forshaw	CMEEC
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
P. Fuller	Autumn Lane Energy
N. Gangi	ISO New England Inc.
M. Gonzalez	ISO New England Inc.
J. Gordon	CPV Towantic
L. Guilbault	HQ US
P. Holloway	Massachusetts DOER
D. Hurley	Synapse Economics
S. Judd	ISO New England Inc.
S. Kaminski	New Hampshire Electric CoOp
T. Kaslow	First Light Power Management
S. Keane	NESCOE
A. Kniska	ISO New England Inc.
M. Kotha	ISO New England Inc.
N. Krakoff	Conservation Law Foundation
A. Krich	Boreas Renewables

B. Kruse	Calpine
F. Kugell	Avangrid
R. Lafayette	Eversource Energy
J. Litynski	Synapse Economics
X. Liu	Eversource Energy
P. Lopes	Massachusetts DOER
J. Lucas	Eversource Energy
J. Martin	New England Power Company
A. Nichols	ISO New England Inc.
D. Norman	Versant Power
A. Novicki	Avangrid
B. Oberlin	ISO New England Inc.
H. Pathan	Eversource Energy
D. Phelan	New Hampshire Public Utilities Commission
H. Presume	VELCO
S. Rastegar	ISO New England Inc.
C. Richards	PPL Energy Plus
J. Rotger	Galt Power, Cross Sound Cable, BP Energy, Mercuria Energy and DTE Energy
E. Runge	Day Pitney
A. Sarmadi	New England Power Company
D. Schwarting	ISO New England Inc.
C. Sedlacek	Eversource Energy
P. Silva	ISO New England Inc.
M. Simmons	Maine Public Utilities Commission
J. Slocum	Massachusetts Public Utilities Commission

C. Soderman	Eversource Energy
R. Stein	Generation Group Member, NRG Power Marketing, HQ Energy Services, PSEG Energy Resources & Trade, SunEdison
A. Steppa	Eastern Generation
B. Swalwell	Tangent Energy
Z. Teti	Avangrid
B. Thomson	MMWEC
J. Vaile	Eversource Energy
P. Vijayan	ISO New England Inc.
A. Weinstein	Dynegy Marketing and Trade
P. Wong	ISO New England Inc.
A. Worsley	Transmission Analytics
F. Zeng	ISO New England Inc.
J. Zhang	ISO New England Inc.

Item 1.0 – Chairs Remarks

Ms. Jody Truswell welcomed the committee and reviewed the days’ agenda.

Item 2.0 – Eversource Line 1428 Structure Replacement and Optical Ground Wire (OPGW) Project

Mr. Chris Soderman (Eversource Energy) provided an overview of the Line 1428 Structure Replacement and Optical Ground Wire (OPGW) Project. The 115 kV Line 1428 is 6.5 miles long from the Fairmont 16H substation to the Mt. Tom 22C substation. The lattice structures are over 60 years old and are deteriorating. They will be replaced with steel monopole structures. At the same time, the existing static wire is 3/8” copperweld and will be replaced with OPGW. The projected project costs is estimated to be \$7.9M (-25% / +50%) with an estimated in service date of Q4 2022.

There were no questions from the committee on this topic.

Item 3.0 – Transmission Planning Technical Guide and Transmission Planning Process Guide Updates

Mr. Jon Breard (ISO-NE) provided an overview of the revisions and updates for the Transmission Planning Technical Guide and Transmission Planning Process Guide. The system is undergoing changes in the generation mix, which caused the need to review the Attachment K provisions on resources that can be relied upon to address system concerns in Needs Assessments (NA) and Public Policy Transmission Studies (PPTS). The previous language in Attachment K did not allow the ISO to rely on certain resources in NA or PPTS which are operational. Previously only resources that had an obligation through the Forward Capacity Market, were contractually bound by a state RFP, or had a financially binding obligation pursuant to a contract could be relied on. However, many resources are being operated independently of any obligation to do so, yet Attachment K did not allow the ISO to utilize these resources to address system concerns in the NA or PPTS. The ISO proposed changes to Attachment K to expand the resources that can be relied on to address system concerns and to provide clarification to the current language. In addition, many resources are being operated independently of any obligation to do so, yet Attachment K did not allow the ISO to utilize these resources to address system concerns in NA and PPTS. The ISO-NE proposed changes to Attachment K to expand the resources that can be relied on to address system concerns and to provide clarification to the current language. FERC approved the Tariff changes on January 4, 2022, which require updates be made to the Transmission Planning Technical Guide and Transmission Planning Process Guide.

In response to stakeholder questions, ISO-NE provided the following replies:

- ISO stated while there is not a binding obligation pursuant to a contract, HQICC's will be considered as available in NA and PPTS. The calculation is based on a running average of HQICC's across Phase II, which is approximately 950 MWs. However, ISO-NE will not be treating NY Tie Benefits the same way.
- ISO-NE stated that reliance on Phase II has been filed and received approval by FERC.
- A stakeholder commented that this is another example of the market based system not working. We perform reliability studies and then modify or create new market rules to justify the study needs.
- Another stakeholder commented that ISO-NE should benchmark this process. All of the other areas in the Eastern Interconnection do not use non-firm imports for capacity. We believe this is a bad decision.

Item 4.0 – 2021 Economic Study - Future Grid Reliability Study (FGRS) Phase I – Resource Adequacy Screen and Probabilistic Resource Availability Analysis – Preliminary Observations and Recommendations – Part 4

Mr. Fei Zeng and Ms. Manasa Kotha (ISO-NE) provided an overview of the 2021 Economic Study - Future Grid Reliability Study (FGRS) Phase I – Resource Adequacy Screen and Probabilistic Resource Availability Analysis – Preliminary Observations and Recommendations – Part 4. ISO-NE is presenting the final results of four of the five Resource Adequacy Screen (RAS) scenarios as well as the preliminary results of the Probabilistic Resource Availability Analysis (PRAA) scenarios except S3 Alternative B and Alternative D for S1, S2 and S3.

In response to stakeholder question, ISO-NE provided the following statements:

- The reserve margin is approximately 15% of system load.
- In regards to the modeling of renewable resources between RAS and PRAA, the RAS overstates their capacity contribution when compared to the PRAA. These values could change based on the time of day.

ISO-NE agreed to take back the following questions for addition research:

- How many MW hours are being lost during the outage time calculated in the study?
- In regards the LOLH (loss of load hours), the proxy units are a 4-hour battery. Would it be helpful to have a 6-hour or 8-hour battery duration to improve reliability? ISO-NE stated that we did look at the battery impact based on duration. As the battery duration increases, it will help with reliability. ISO-NE has agreed to take that back and test what the results would be with a longer duration battery as well as the outage time of day.

Item 5.0 – 2022 Economic Study Process Update

Mr. Steven Judd (ISO-NE) provided an update for the 2022 Economic Study Process. For 2022, ISO-NE is interested in exercising the part of the Tariff that authorizes the ISO to submit its own study request. The ISO's request would build upon the 2021 Economic Study (Future Grid Reliability Study – Phase I), and other past studies, to make a repeatable analysis framework. The overall goal is to give stakeholders a base of analysis that reflects stakeholder feedback over the years. The ISO's proposed request would provide for stakeholders to make more targeted sensitivity requests based on preliminary results from the reference scenarios.

In response to stakeholder question, ISO-NE provided the following remarks:

- The current language in Attachment K describes the process for ISO-NE to determine what future Economic Studies will be performed for a given study cycle. The initial straw priority list will take into consideration the impact on the ISO budget and other priorities and be discussed with stakeholders in May.

- ISO-NE expects that the workload for the 2022 Economic Study will be less than the 2021 study as we will not need to set up and perform as many different scenarios as the 2021 study.
- Per the language in Attachment K, the Economic Study process allows ISO-NE to submit their own Economic Study request.
- Regarding Phase II of the FGRS process, ISO-NE does not intend for this effort to replace Phase II of the FGRS. It is more an evolution and implementation of lessons learned from the 2021 Economic Study.

Stakeholders provided the following comments to ISO-NE regarding their proposal:

- Eversource representative agrees with this proposal as it's a more efficient way of doing future Economic Studies.
- Cross Sound Cable representative stated that in regards to the Attachment K implications, they believe Attachment K changes could be needed.
- The Boreas Renewables representative also agrees that this is a process improvement. Although, there are concerns regarding Economic Studies because it seems there are few actionable results based on past Economic Study results. The results of the study process versus the tangible benefits that would feed into a Market Efficiency Transmission Upgrade (METU) do not seem to align. Similar to other areas of the country, we should perform a regular review of the regional transmission system that looks for upgrades with significant economic benefits.
- The HQ US representative commented that there are concerns because ISO should not have the sole determination of what future Economic Studies will be performed. I believe stakeholders should have input on what studies should be performed. I believe the pipe and bubble model of the studies is not necessarily the right method to perform the studies. We can't know what transmission will be needed by 2040 or 2050 if we don't know when or where new generation will be located and therefore if a specific transmission line even needed.
- The Cross Sound Cable representative stated that the language in Attachment K is pro forma. They also agree that the Economic Studies are not as useful as they could be. There is an Attachment N for METUs. The transmission upgrades get complicated based on the required customer cost allocation.
- NESCOE agrees that the outcome of Economic Studies should have more actionable results.
- The Maine PUC representative stated that they don't have significant concerns removing stakeholder input for the selection of Economic Study will be performed and giving that decision process to ISO.

- The representative from Autumn Lane Energy suggested adding a broader range of scenarios that identify definite results that test for common elements and then choose the best method on how to proceed.

Item 6.0 – Closing Remarks

The next regularly scheduled PAC meeting will be Wednesday, March 16, 2022 via WebEx Teleconference. There will be a Joint MC/RC meeting scheduled for Wednesday, February 16, 2022 to continue discussions on the FGRS study.

Meeting Adjourned at 12:30 PM

Respectively submitted,

Marc Lyons
Secretary, Planning Advisory Committee