

**Planning Advisory Committee
Teleconference
February 13, 2019**

Paula Abucewicz	New England Power Company
Bob Andrew	Eversource Energy
Peter Bernard	ISO New England Inc.
David Beron	New England Power Company
Alex Boutsioulis	Consultant
Cal Bowie	Eversource Energy
Jon Breard	ISO New England Inc.
David Burnham	Eversource Energy
Dorothy Capra	NESCOE
Ray Coxe	Mosaic Energy Insights for Brookfield
Liz Delaney	Environmental Defense Fund
Michael Drzewianowski	ISO New England Inc.
Frank Etori	VELCO
Jeff Fenn	Emera Maine
Kevin Flynn	ISO New England Inc.
Brian Forshaw	CMEEC
Steve Garwood	New Hampshire Transmission
Michael Henderson	ISO New England Inc.
Paul Holloway	Massachusetts DOER
Jeff Iafrazi	Customized Energy Solutions
Rich Kowalski	ISO New England Inc.
Michael Kuser	RTO Insider
Paul Lopes	Massachusetts DCAM
Marc Lyons	ISO New England Inc.
Michael Macrae	Harvard Dedicated
Tim Martin	New England Power Company
Aleks Mitreski	Brookfield Energy Marketing
Bruce McKinnon	New Hampshire Electric CoOp/South Hadley Electric Light
Margaret Neves	Power Engineering
Brent Oberlin	ISO New England Inc.
Theodore Paradise	Anabaric Development
Marianne Perben	ISO New England Inc.
Paul Peterson	Synapse Economics
Hantz Presume	VELCO
Jose Rotger	Cross Sound Cable
Eric Runge	Day Pitney
Melissa Scott	New England Power Company
Carissa Sedlacek	ISO New England Inc.
Bob Stein	HQUS/PSEG/NRG/Footprint
Brian Thomson	Massachusetts Wholesale Electric Company
George Wegh	Eversource Energy
Carol Wendell	ISO New England Inc.

Item 1.0 – Chairs Remarks

Mr. Pete Bernard welcomed the committee and reviewed the day's agenda.

Item 2.0 – 345 kV Asset Conditions Refurbishment Project – Lines 327, 303, 3520 and 315

Ms. Paula Abucewicz (New England Power) reviewed their project to perform a number of transmission tower replacements on the 345 kV 327, 303, 3520 Lines from Brayton Point to West Medway and the 315 Line from Brayton Point to West Farnum. This is due to asset conditions on the existing 857 wood poles (wood rot, woodpecker damage, warping) totaling just over 75 miles. The poles will be replaced with tubular steel poles. In addition, NGrid will also install optical ground wire during the pole replacement. There were also several customer complaints regarding audible noise emanating from the transmission lines. While the noise did not exceed any local ordinances or violated any standards, it was decided that an insulator replacement will be performed as the structures are replaced to eliminate the noise. Cost estimates are \$92M for the 327, 303, and 3520 Lines and \$70M for the 315 Line (+50%/-25%). No project completion date was provided. Stakeholder questions were primarily about the noise issue and the potential cost to mitigate the issue since no ordinance or standards are being violated. NGrid stated that the costs to replace the insulators to alleviate the customer noise concerns are minimal while the poles are being replaced.

Item 3.0 – Millstone Substation 15G High Creep Insulator Replacement Project

Mr. George Wegh (Eversource Energy) provided an overview of the Millstone Substation 15G High Creep Insulator Replacement Project. The existing insulators are 40 – 50 years old which is beyond their expected life span. IEEE 1313.2 provides recommended creepage distance requirements (mm/kV) for insulators for various pollution levels based on simulated testing and field experience. Creepage distance is the distance along the insulator surface between the energized and grounded end fittings. Eversource Energy proposes to replace the existing Millstone 15G substation equipment with equipment that utilizes glass High Creep Insulators. Equipment includes 22 Manual Disconnects, 4 Motor Operated Disconnects, 6 Voltage Transformers, 8 Lightning Arrestors, and Replace Bus insulators and revise existing bus support insulator design to meet present-day standards. All work will be coordinated with Millstone, Dominion and CONVEX and would be on 18 month cycles to coincide with planned generator outages at Millstone. Project completion is expected by December 2023. Project cost is \$11.5M (-25%/+50%). Stakeholder comments focused on flash overs. Eversource stated that recent flash overs primarily have occurred during hurricane and other extreme weather events over the past few decades.

Item 4.0 – 2019 Economic Study Request Process

Ms. Marianne Perben (ISO-NE) provided an overview of the 2019 Economic Study Request Process in accordance with Attachment K of the Tariff. Stakeholders must submit their Economic Study request(s) by April 1, 2019 and will be posted to the ISO website. ISO may submit their own proposal. ISO will then develop a scope of work and cost estimate for the study work and prioritize the study work based on perceived benefits. By May 1, 2019 Economic Study proponents will provide an explanation of their proposals to PAC. By June 1, the PAC will meet, discuss, and prioritize up to three Economic Studies to be performed. Additional meetings may be held to discuss the prioritization or substance of studies. By August 30, if no agreement is reached concerning the prioritization or substance of studies, then the dispute resolution provisions may be invoked by any PAC member. The ISO will issue a notice to the PAC detailing the prioritization of the Economic Studies. There are no deadlines for completion of the study. There were no significant stakeholder comments on the presentation or process.

Item 5.0 – Interregional Planning Update

Mr. Michael Henderson (ISO-NE) provided an update of the Interregional Planning activities with DOE, EIPC, NERC, NPCC, ISO/RTO Council, and the Northeast ISO/RTO Planning Coordination Protocol and Order 1000. Mike explained the roll of each of the organizations and how ISO interacts with them by assessing interregional system performance, coordinating system plans, sharing planning methods and tools, conducting interregional production cost studies, assessing the effects of proposed resource additions and potential generator retirements, identifying and addressing variable resource integration issues, and examining interregional fuel diversity issues. Stakeholders asked if Newfoundland will be joining NPCC now that they are connecting with the Maritimes. Mr. Henderson stated that he believes that they are associate members but wasn't sure if they will apply for full membership. A question was asked regarding a letter sent by a group of governors regarding the possible interconnection of East and West through ERCOT. Rich Kowalski (ISO-NE) replied that ISO is aware of the study but we have not been involved with this effort. EIPC has been following the work of which ISO-NE is a part, but we are not actively engaged with this particular initiative.

Item 6.0 – 2019 Regional System Plan (RSP 19) Scope of Work

Mr. Michael Henderson (ISO-NE) and Ms. Carissa Sedlacek (ISO-NE) provided an overview of the 2019 Regional System Plan (RSP 19) Scope of Work. The RSP is developed every other year. This year the Public Meeting will be held on September 12th at a location to be determined. Key messages in this year's report are:

- Energy security continues to be a critical reliability issue for New England
- Transmission development at the regional level, and in support of state policies, continues to enhance the regional power system

- “Grid Transformation” is occurring at a rapid pace and will continue to challenge planning and operations practices to understand, evaluate, and incorporate the many and varied system changes

Some milestone dates for RSP 19 are:

- July 8th - Post complete draft RSP19 for PAC review
- July 24th – Receive comments from PAC
- August 6th – Post summary of PAC comments with preliminary ISO response
- August 8th – RSP19 page turn at PAC
- August 29th – Post public meeting draft RSP19
- September 6th – Receive stakeholder comments and questions
- September 12th – Public Meeting
- There were several requests by stakeholders to add or expand on topics within the RSP such as the level of contribution of imports as well as their environmental impacts.
- The impact of the off-shore wind and how will that impact the grid as a whole.
- The overall capacity factor of the grid as a whole.
- A refreshed Resources at Risk (Retirements Report) that was developed a few years ago that is updated to include current regional conditions.
- The improvements and benefits resulting from grid transformation.

Item 7.0 – Environmental Regulatory Update

Mr. Patricio Silva (ISO-NE) provided an Environmental Regulatory Update. Key findings for New England as a whole are that air pollution emissions, water use and wastewater discharges from native electric power generation have declined since 2000. National trends are CO₂ emissions have increase 2.8% in 2018 while NO_x and SO₂ emissions continue to decrease. Mr. Silva reviewed a number of Federal Environmental Rules and the impact to various types of generation. The Regional Greenhouse Gas Initiative (RGGI) performance was also reviewed. RGGI comprises 9 separate State CO₂ Budget Trading Programs, which individually issue CO₂ allowances that are consigned to regional quarterly auctions and limit CO₂ emissions of fossil electric generating facilities (RGGI CO₂ budget sources). The most recent RGGI Auction (12/05/2018) resulted in all 13.36 million CO₂ allowances offered purchased at clearing price of \$5.35/ton. A stakeholder asked if there is a way to identify (with metrics) if gas generators are reducing their emissions output due to the penetration of renewables. Mr. Silva replied that while it was not included as part of this presentation, ISO is conducting a preliminary analysis of those metrics.

Planning Advisory Committee meeting adjourned at 12:20 PM

Respectively submitted

Marc Lyons
Secretary, Planning Advisory Committee