

**Planning Advisory Committee
WebEx Teleconference
December 16, 2020**

Attendee	Sector	Market Participant
P. Bernard	Chair	ISO New England Inc.
M. Lyons	Secretary	ISO New England Inc.
M. Ainspan	Alternate	NRG
R. Andrew	Transmission	Eversource Energy
D. Cavanaugh	Publicly Owned/ Supplier	Energy New England/Block Island
J. Fenn	Transmission	Versant Power
B. Forshaw	Publicly Owned	CMEEC
B. Fowler	Generation/Supplier / Alternative Resource	Wheelabrator North Andover Inc.; Exelon Generating Company LLC; Nautilus Power; Dynergy Power Marketing, LLC; Entergy Nuclear Power Marketing LLC; Great River Hydro, LLC
J. Iafrati	Supplier	Customized Energy Solutions
B. Jagolinzer	Transmission	Avangrid
S. Kaminski	Publicly Owned	New Hampshire Electric CoOp
T. Kaslow	Generation	First Light Power Resources
A. Krish	Generation	Boreas Renewables
B. Kruse	Alternative Resource	Calpine
J. Martin	Transmission	New England Power Company
T. Martin	Transmission	New England Power Company
B. McKinnon	Publicly Owned/ End User	Norwood Light Department, and New Hampshire Electric CoOp
H. Presume	Transmission	VELCO

E. Roedel	Transmission	Avangrid
J. Rotger	Supplier	Galt Power, Cross Sound Cable, BP Energy, Mercuria Energy and DTE Energy
P. Sousa	Supplier	Marble River
M. Spencer	Alternative Resource	Jericho Power
R. Stein	Generation/Supplier / Alternative Resource	Generation Group Member, NRG Power Marketing, HQ Energy Services, PSEG Energy Resources & Trade, SunEdison
B. Swalwell	Alternative Resource	Tangent Energy Solutions
B. Thomson	Publicly Owned	MMWEC
P. Turner	End User	Conservation Law Foundation
A. Worsley	Generation	Boreas Renewables

Guest		Affiliation
R. Allbrick		National Bio-Diesel Board
E. Annes		Connecticut Department of Public Utilities
B. Anderson		NEPGA
K. Bashford		ISO New England Inc.
D. Bergeron		New Hampshire Public Utilities Commission
J. Black		ISO New England Inc.
P. Boughan		ISO New England Inc.
J. Breard		ISO New England Inc.
D. Burnham		Eversource Energy
E. Camp		Synapse Economics
D. Capra		NESCOE
Q. Chen		ISO New England Inc.
R. Collins		ISO New England Inc.
D. Conroy		RLC Engineering
T. Costa		ISO New England Inc.
W. Coste		ISO New England Inc.
F. Dallorto		ISO New England Inc.
B. D'Antonio		NESCOE
J. Dong		Eversource Energy
M. Drzewianowski		ISO New England Inc.
K. Flynn		ISO New England Inc.
E. Friedman		Moody's Analytics
N. Gangi		Eversource Energy
R. Gibbons		Avangrid

P. Holloway		Massachusetts Department of Public Utilities
S. Judd		ISO New England Inc.
S. Keane		Massachusetts Department of Public Utilities
A. Kniska		ISO New England Inc.
R. Kornitsky		ISO New England Inc.
R. Kowalski		ISO New England Inc.
B. Londo		Avangrid
P. Lopes		Mass DCAM
J. Lucas		Eversource Energy
E. Mailhot		ISO New England Inc.
K. Mankouski		ISO New England Inc.
C. Marquis		AEE
A. McBride		ISO New England Inc.
G. McCluskey		New Hampshire Public Utilities Commission
B. Oberlin		ISO New England Inc.
D. Phelan		New Hampshire Public Utilities Commission
E. Runge		Day Pitney
K. Schlichting		ISO New England Inc.
D. Schwarting		ISO New England Inc.
M. Scott		New England Power Company
C. Sedlacek		ISO New England Inc.
T. Shakespeare		Massachusetts Department of Public Utilities
P. Silva		ISO New England Inc.
R. Snook		Connecticut Department of Public Utilities
C. Soderman		Eversource Energy
P. Sousa		Massachusetts Department of Public Utilities

J. Truswell		ISO New England Inc.
P. Vijayan		ISO New England Inc.
F. Walsh		Avangrid
L. Willick		LS Power
P. Wong		ISO New England Inc.
J. York		LS Power
J. Zhang		ISO New England Inc.

Item 1.0 – Chairs Remarks

Mr. Pete Bernard welcomed the committee and reviewed the days’ agenda.

ISO New England recently received a request for an update on the status of the New Hampshire Solutions Study. ISO New England is currently awaiting cost estimates from one of the area’s transmission owners in order to make a final decision on a set of preferred solutions. ISO New England expects to present the preferred solutions for Western and Central New Hampshire in the first quarter of 2021. The selection of a preferred solution for Southern New Hampshire will be presented in the first half of 2021.

Item 2.0 – Moody’s Analytics – Pandemic Will Shape 2021 Outlook

Mr. Ed Friedman (Moody’s Analytics) reviewed the economic forecast for 2021 and how the pandemic will impact the economy in 2021.

Q – What does the color metric mean on slide 6?

A – We can distribute a detailed paper upon request by the PAC members that can better illustrate the significance of the values on slide 6.

Comment - On slide 7, I believe the state of Rhode Island is missing. The other five New England states seem to have a lower infection rate than the rest of the nation.

A – We will go back and include Rhode Island into the slide.

Q – What signs would Moody’s be looking for if the Fed planned to raise interest rates?

A – The Fed will want to see a decrease in the unemployment rate and significant growth in the GDP. In addition, consumer price inflation will need to increase above 2% before they will start considering an interest rate increase.

Item 3.0 – Competitive Solutions Process: Order 1000/Boston 2020 Request for Proposal Lessons Learned

Mr. Brent Oberlin (ISO-NE) reviewed the lessons learned regarding the Order 1000/Boston 2020 Request for Proposal.

Q – On the first concern in slide 10, does ISO-NE agree with the stakeholder concern?

A – It means we understand the concern and we are investigating it.

Item 4.0 – Transmission Planning for the Clean Energy Transition: System Conditions and Dispatch Assumptions

Mr. Reid Collins (ISO-NE) reviewed the System Conditions and Dispatch Assumptions as part of Transmission Planning for the Clean Energy Transition.

Q – I am concerned that no winter analysis is being performed.

A – We did consider adding a winter peak analysis. However, because of winter peak loads being lower than summer peak and higher thermal transmission ratings, we feel that it is not major concern at this time. The issue that we are most concerned about is the potential system inertia problems, which are more severe under the springtime minimum load conditions that are proposed.

Q – Will ISO be performing stability assumptions for inertia issues outside the New England control area?

A – We will be looking into that.

Comment – It was my understanding that we would have been looking at a study timeframe in excess of the traditional 10 year look-ahead.

A – It may be premature to look at anything beyond the 10 year look-ahead. By 2040 and beyond there could be significant impacts due to electrification of grid heating and transportation. However, it is just too soon to begin that type of analysis due to the amount of unknowns at this time.

Q – I commend not importing or exporting to NY in your studies. On slide 22, where is the wind, solar and NECEC.

A – We would look into dispatching renewables during low load conditions in the spring.

Q – Regarding Millstone 2, the license expires in 2035. You should consider those in your studies.

A – We will consider that sensitivity in the studies.

Any comments on the study, and any future resources that should be included due to state RFP selections or financially binding contracts, should be sent to PACMatters by January 8, 2021.

Item 5.0 – Webster-Beebe River 115 kV Corridor Asset Conditions and OPGW Project: Lines A111, E115, and Z180

Mr. Chris Soderman (Eversource Energy) reviewed the Webster-Beebe River 115 kV Corridor Asset Conditions and OPGW Project for Lines A111, E115, and Z180.

Q – Will the new lines be constructed side by side to the old lines to minimized outages or will there be another method to perform the replacement work.

A - The line will be replaced with “live line” techniques and there will be limited outages as the old structures are replaced. We expect the outages will be no more than a week long with the longest outage period related to the reconductoring.

Q – Will the new conductor be large ACSR?

A – The presentation has a mistake. The conductor will be ACSS.

Item 6.0 – Prior Year Wood Structure Asset Condition Replacements Updated

Assumptions

Mr. David Burnham (Eversource Energy) reviewed the Prior Year Wood Structure Asset Condition Replacements Updated Assumptions.

Q – On slide 7, are the structures H-Frames?

A – They are light duty steel H-Frame structures.

Item 7.0 – 455-507 115 kV Line Wood Pole Asset Conditions Project

Mr. Chris Soderman (Eversource Energy) reviewed the 455-507 115 kV Line Wood Pole Asset Conditions Project.

There were no questions from the committee on this topic.

Item 8.0 - 2020 Economic Study: Feedback on Preliminary Results & Proposed Sensitivities

Mr. Patrick Boughan (ISO-NE) reviewed the provided feedback on Preliminary Results and Proposed Sensitivities of the 2020 Economic Study.

Q – How did you determine the interface export wheeling charge of \$30 MW/hr?

A - It is a trigger amount for exports.

Q – For the three cases on slide 15 through 17, was there a slide that described these different cases?

A – We can add a description to what the various cases are looking at.

Q – On slide 22 and 24, the energy available via imports may not be absorbable due to system conditions. Will the model try to return that energy to the exporter?

A – There are a number of hours where we have significant excess generation. There could be cases where we reject re-importing previous exports in favor of internal renewables.

Q – On slide 20, are the scenarios new or existing sensitivities?

A – The first two cases are existing sensitivities and the last two scenarios are new sensitivities.

Comment – Mr. Boughan responded to a number of minor clarifying questions regarding the individual graphs and charts in the presentation slides.

Item 9.0 - Modeling of Battery Storage in Economic Studies

Mr. Wayne Coste (ISO-NE) reviewed the Modeling of Battery Storage in Economic Studies.

Q – Regarding the technology type of batteries, is ISO currently modeling all types of batteries or just a specific type of battery?

A – We are looking at the MW capability of the battery and not the type of battery technology when ISO models the resources in our system.

Q – How does the model determine when the batteries are charging and discharging?

A – It is calculated by GridView. The batteries will respond to the LMPs so that if they are low, the batteries will store and when the LMPs are higher, they will discharge to the grid.

Q – Are there studies being done with a high fixed and a low variable cost?

A – On slide 18 many entities assumed a \$0 O & M Cost. There is no specific cash outlay as the resource is depreciating due to age and use.

Item 10.0 – Closing Remarks

The next PAC meeting will be Thursday, January 21, 2021 via WebEx Teleconference.

The Planning Advisory Committee meeting adjourned at **3:00 PM**

Respectively submitted

Marc Lyons

Secretary, Planning Advisory Committee