

**Planning Advisory Committee  
WebEx Teleconference  
September 24, 2020**

Joe Adadjo	Eversource Energy
Bob Andrew	Eversource Energy
Denis Bergeron	Maine PUC
Peter Bernard	ISO New England Inc.
Jon Breard	ISO New England Inc.
John Brodbeck	Marble River
Dave Burnham	Eversource Energy
Erin Camp	Synapse Economics
Dorothy Capra	NESCOE
Dave Cavanaugh	Energy New England
Quan Chen	ISO New England Inc.
Reid Collins	ISO New England Inc.
Kelley Csizmesia	National Grid
Ben D'Antonio	NESCOE
Liz Delaney	Borrego Solar
Janny Dong	Eversource Energy
Michael Drzewianowski	ISO New England Inc.
Kate Bashford Epsen	ISO New England Inc.
Frank Etori	VELCO
Dariya Evans	Central Maine Power
Jeff Fenn	Versant Power
Brian Forshaw	CMEEC
Bill Fowler	Exelon
Daryl Hart	NextEra Energy
Julia Grasse	National Grid
Richard Heidorn	RTO Insider
Nicholas Hutchings	ISO New England Inc.
Jeff Iafrazi	Customized Energy Solutions
Bruce Jagolinzer	Central Maine Power
Graham Jesmer	ISO New England Inc.
Steve Judd	ISO New England Inc.
Tom Kaslow	First Light
Andrew Kniska	ISO New England Inc.
Dan Kopin	Utility Services
Rich Kowalski	ISO New England Inc.
Brett Kruse	Calpine
Abby Krich	Boreas Renewables
Kaushal Kumar	ISO New England Inc.
Sarah Lamotte	ISO New England Inc.
Paul Lopes	Massachusetts DCAM
Marc Lyons	ISO New England Inc.
Eva Mailhot	ISO New England Inc.

Chris Malone	Avangrid
Kevin Mankouski	ISO New England Inc.
Jack Martin	New England Power Company
Tim Martin	New England Power
Anne Margolis	Vermont Department of Public Service
Catlin Marquis	Advanced Energy Economy
Al McBride	ISO New England Inc.
Don Nelson	Massachusetts Public Utilities Commission
Brent Oberlin	ISO New England Inc.
Dan Phelan	New Hampshire Public Utilities Commission
Hantz Presume	VELCO
Jose Rotger	Cross Sound Cable
Eric Runge	Day Pitney
Meenakshi Saravanan	ISO New England Inc.
Arash Sarmadi	New England Power Company
Dan Schwarting	ISO New England Inc.
Carissa Sedlacek	ISO New England Inc.
Patricio Silva	ISO New England Inc.
Robert Snook	Connecticut DPU
Kannan Sreenivashachar	ISO New England Inc.
Bob Stein	HQUS/PSEG/NRG/Footprint
Mark Stevens	National Grid
Brad Swalwell	Tangent Energy
Brian Thompson	MMWEC
Pradip Vijayan	ISO New England Inc.
Carol Wendel	ISO New England Inc.
Waine Whittier	RLC Engineering
Mariah Winkler	ISO New England Inc.
Pradip Vijayan	ISO New England Inc.
Peter Wong	ISO New England Inc.
Alex Worsley	Boreas Renewables
Jason York	LS Power
Jinlin Zhang	ISO New England Inc.

### **Item 1.0 – Chairs Remarks**

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

Mr. Bernard informed the committee that updated clean and redlined copies of the 2020 Economic Study presentation given in July have been recently posted to the PAC section of the ISO external website. The updates made to the presentation primarily focus on the resource mix in the study scenarios.

Mr. Steven Judd (ISO-NE) informed the committee that there was an update to the 2020 ISO-NE variable energy resource dataset that was recently posted to the PAC section of the ISO external website.

### **Item 2.0 – Golden Hills #90 Gas Insulated Substation (GIS) Rebuild – Asset Condition Needs and Solution Alternatives**

Ms. Kelley Csizmesia (NGrid) reviewed the Golden Hills #90 Gas Insulated Substation (GIS) Rebuild – Asset Condition Needs and Solution Alternatives.

NGrid commented that the one-line diagram on slide 10 of the presentation is inaccurate. NGrid plans to correct the one line diagram and resubmit the presentation.

*Q – Why was this built as a GIS substation? There is plenty of room for an open-air substation?*

*A – The substation footprint was originally smaller than what it is now. The substation expansion now allows for the open-air substation.*

### **Item 3.0 – Transmission Planning for the Future Grid**

Mr. Dan Schwarting (ISO-NE) reviewed the Transmission Planning process for the Future Grid.

*Q – With the increasing penetration of renewables coming on line, is ISO looking at the potential impacts to the distribution system?*

*A – ISO sees the need to collect better data from the distribution companies and better coordination with them so we have more accurate data on distribution-connected resources and the ability to coordinate transmission and distribution system needs.*

*Q – During N-1-1 testing, is ISO holding the distribution companies to a higher standard by not allowing re-dispatching for distribution system concerns?*

*A – That issue is addressed in the individual project System Impact Studies. The LCC's would need to be more involved with distribution level re-dispatching.*

*Comment – ISO should reconsider their policy in the ISO Source Requirements Document of tripping of renewables because they could be providing regulation and/or VAR regulation in real time which benefits the system.*

*Q – On slide 6, the green line is representing a low load level of 8000 MW. The slide states that there is a possibility of that load level occurring as soon as 2023. That is an immediate need.*

*Will ISO be looking at the 8000 MW threshold as an immediate issue that need to be resolved?*

*A – Yes, ISO will treat needs at this load level as time-sensitive, while other needs associated with load levels expected beyond 2023 may be considered non-time-sensitive.*

*Comment – To better determine the time-sensitivity of future needs associated with minimum load, a minimum load forecast covering the spring and fall periods would be helpful.*

*Q – ISO is unable to control VER assets. Can that be addressed through smart metering?*

*A – That would need to be very closely coordinated with the distribution companies. It would be very challenging to accomplish that goal in the near future with the current technology.*

*Comment – On slide 8, the off shore wind is uncorrelated with load. I believe that statement is incorrect.*

*Comment – In regards to the low inertia conditions, are we missing something that could be improved by strengthening the areas of the grid that are weak in transmission. Perhaps that could be identified in PSCAD testing.*

*Q – In regards to co-located battery and solar, is there a decision on how co-located resources will be dispatched? Could these resources be used to increase load in the springtime mid-day condition, and thus eliminate minimum load needs?*

*A – ISO is still working through that. Assets > 5 MWs will be dispatched based on market price. It is the < 5 MWs resources that are the challenge because ISO has no real time visibility for those resources in real time for dispatching purposes.*

*Q – On slide 20, where did ISO develop the min and max of the wind output?*

*A – These were observed values but the data set was relatively small. As we receive more data we can better refine the min and max wind outputs.*

*Q - How much off shore wind are you assuming by the end of the decade?*

*A – ISO is counting on anything that has a binding contracts or an FCM commitment. We estimate 1600 MWs or maybe a little more.*

*Q – What assumptions will be used for the Lower Maine Study?*

*A – ISO plans on using the existing assumptions. We may start using the new assumptions in studies that begin in 2021, depending on the progress of discussions at PAC.*

*Comment – The CMP local area studies are seeing unusually high voltages that haven't been seen before. We are discussing if we should add in reactive devices to mitigate the issues. ISO and the other TO's should keep this in mind going forward as more renewable resources come into the grid and distribution systems.*

*Comment – Many of the topics covered in this presentation cross the boundaries between planning, operations, and markets. Collaboration between these groups at the ISO is encouraged. Some aspects of the operation of these future resources are still uncertain, and the ISO should be careful about suggesting large capital investments while the system's behavior is rapidly changing.*

#### **Item 4.0 – Lower Maine 2030 Needs Assessment Scope of Work**

Ms. Meenakshi Saravanan (ISO-NE) reviewed the Lower Maine 2030 Needs Assessment Scope of Work.

Q – Is a composite load model used for ADCRs (slide 10)?

In a Needs Assessment, we only perform steady-state analysis at this time. We do not perform stability studies, where a composite load model would be used, as part of a Needs Assessment.

*Q – The Phase II analysis is set at 950 MWs. Isn't that low? It has additional CSO imports and it's normally operated at 1200 MWs or higher? I believe that is a poor assumption.*

A – The 950 MW level is based on the HQICC value in past Forward Capacity Auctions.. Flow on Phase II will not affect the Maine Study Area. Another reason is that the study cases are stressed in a West-East direction, hence it would not make sense to model it at 1400 MW (the maximum value used in past Needs Assessments). We will take your comment back for discussion.

*Q - On slide 17, regarding the New Brunswick/Maine interface, what is the import value base on? The capacity commitment? Why is ISO only modeling it at 700 MWs. Does that capture the full range of operating conditions that could necessitate a need?*

A – We will model what is counted for as capacity. ISO will not go above that value. There could be a need developed at higher interface MW levels. We are bound by what is outlined in Attachment K.

*Q – On slide 23 it says all shunt reactors are on line. Does this include the ones that will come out of the Upper Maine Solutions Study process?*

A –The Upper Maine Solutions Study is still ongoing. Hence, none of the solution components that could come out of the Upper Maine Solutions Study are modeled. Even though projects from Upper Maine are not expected to affect Lower Maine, a quick sensitivity check will be performed once the Upper Maine Solutions Study is presented to PAC and agreed upon to ensure that these solutions do not significantly affect needs in Lower Maine.

#### **Item 5.0 – SWCT Solution Study Close Out**

Mr. Pradip Vijayan (ISO-NE) reviewed the SWCT Solution Study Close Out.

This presentation marks an end to the SWCT 2027 Solution Study process. In June of 2018, the SWCT Needs Assessment was presented to PAC. In July 2018 the final SWCT 2027 Needs Assessment was posted. In August 2018 PAC was noticed regarding the initiation of the SWCT 2027 Solution Study. In September 2018, Eversource informed PAC of the asset conditions issues associated with the two Glenbrook STATCOMs. The resolution to the problem was to eliminate a common mode failure for both of the STATCOMs. That proposed solution was presented to the PAC in July 2020. With the elimination of the issues associated with the

Glenbrook STATCOMs, all time sensitive needs identified in the SWCT 2027 Needs Assessment have been addressed.

There were no questions from the committee on this topic.

**Item 6.0 – Greater Boston Project Cost Update**

Mr. Bob Andrew (Eversource Energy) reviewed the Greater Boston Project Cost Update.

*Q - The original project cost estimate was \$45M and the revised costs are now \$91M due to the change in the project parameters from overhead line to underground cable? Was there any other alternatives looked at?*

A - We looked at another possible overhead solution but it was dismissed because the cost would have been greater than the underground solution.

**Item 7.0 – Closing Remarks**

The next PAC meeting will be Wednesday, October 21, 2020 via WebEx Teleconference.

Planning Advisory Committee meeting adjourned at 12:30 PM

Respectively submitted

Marc Lyons  
Secretary, Planning Advisory Committee