

**Planning Advisory Committee  
WebEx Teleconference  
May 20, 2020**

Joe Adadjo	Eversource Energy
Malcolm Ainspan	
Bob Andrew	Eversource Energy
Kate Bashford Epsen	ISO New England Inc.
Peter Bernard	ISO New England Inc.
Patrick Boughan	ISO New England Inc.
Cal Bowie	Eversource Energy
Jon Breard	ISO New England Inc.
Eric Bryant	
David Burnham	Eversource Energy
Erin Camp	Synapse Economics
Dorothy Capra	NESCOE
Dave Cavanaugh	Energy New England
Digaunto Chatterjee	Eversource Energy
Wayne Coste	ISO New England Inc.
Avadhish Dewal	ISO New England Inc.
Vandan Divatia	Eversource Energy
Janny Dong	New England Power Company
Michael Drzewianowski	ISO New England Inc.
Kate Bashford Epsen	ISO New England Inc.
Frank Ettori	VELCO
Amro Farid	Dartmouth University
Jeff Fenn	Emera Maine
Maria Fischer	
Kevin Flynn	ISO New England Inc.
Brian Forshaw	CMEEC
Bill Fowler	Exelon
Jeff Iafrati	Customized Energy Solutions
Steve Judd	ISO New England Inc.
Steve Kaminski	
Tom Kaslow	FirstLight Energy
Shelia Keane	Massachusetts Department of Public Utilities
Richard Kornitsky	ISO New England Inc.
Manasa Kotha	ISO New England Inc.
Rich Kowalski	ISO New England Inc.
Brett Kruse	Calpine
Steve Letendre	Synapse Economics
Joel Liu	
Paul Lopes	Massachusetts DCAM
Xiaochuan Luo	ISO New England Inc.
Marc Lyons	ISO New England Inc.
Chris Malone	Avangrid

Kevin Mankouski	ISO New England Inc.
Jack Martin	New England Power Company
Tim Martin	New England Power Company
Al McBride	ISO New England Inc.
Bruce McKinnon	South Hadley Electric CoOp/Norwood Municipal
Aleks Mitreski	Brookfield Renewable
Shaun Morin	Eversource Energy
Susan Muller	Boreas Renewables
Brent Oberlin	ISO New England Inc.
Theodore Paradise	Anbaric
Dan Phelan	
Hantz Presume	VELCO
Jose Rotger	Cross Sound Cable
Arash Sarmqadi	New England Power Company
Kerry Schlichting	ISO New England Inc.
Dan Schwarting	ISO New England Inc.
Melissa Scott	New England Power Company
Carissa Sedlacek	ISO New England Inc.
Peter Schattuck	Anbaric
Bob Stein	HQUS/PSEG/NRG/Footprint
Brad Swalwell	Tangent Energy
Brian Thompson	MMWEC
Dakota Thompson	
Jody Truswell	ISO New England Inc.
Haizhen Wang	ISO New England Inc.
Lawrence Willick	LS Power
Peter Wong	ISO New England Inc.

### **Item 1.0 – Chairs Remarks**

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

Due to the coronavirus social distancing rules, Mr. Bernard announced that future PAC meetings will be held by teleconference until September 2020 at the earliest.

### **Item 2.0 – Eastern Connecticut (ECT) 2029 Preliminary Preferred Solutions**

Mr. Jon Breard (ISO-NE) reviewed the Eastern Connecticut 2029 Preliminary Preferred Solutions.

*Q – The asset condition project was necessary for solution 1 but not solution 2. Why?*

*A – The 69 kV will be converted to 115 kV in solution 2, which solves the asset condition issue for solution 2.*

*Q – In regards to the Needs Assessment and proposed solutions, what is the status for QP 724, a combined cycle resource interconnecting at the Lake Road substation.*

A - It was added to the base case and assumed to be in service.

*Q – What is the reason for building out to 115 kV but operating it at 69 kV?*

A – Asset conditions and the standards for new lines have changed. They are building to basic standards which is now 115 kV.

### **Item 3.0 – 2019 Economic Study – Offshore Wind Transmission Interconnection Analysis**

Mr. Al McBride (ISO-NE) reviewed the Offshore Wind Transmission Interconnection Analysis as part of the 2019 Economic Study.

*Q – Is there any way to look at the cost of HVDC with the offshore option?*

A – We are looking into that now but we don't have a firm cost at this time.

*Q – What studies were done to get to 7,000 MWs of off shore wind injections?*

A – That will be addressed later in the presentation.

*Q – What do you consider local upgrades?*

A – Examples of local upgrades (such as Cape Cod or Kent County, RI) could be adding or upgrading transmission lines, transformers, substations, etc.

*Q – Could you develop a redacted or non-CEII version of this presentation?*

A – We can take that back and work on developing a non-CEII version of the presentation.

*Q – Has ISO reviewed possible HVDC transmission solutions versus AC and the associated upgrades that AC solutions would require?*

A – We are looking into that now but we haven't determined the cost differential between an HVDC solution versus an AC solution.

*Q – Will there be an allowance for a single source loss of 1600 MW?*

A – No, we only have the ability to cover a single source loss of 1200 MWs.

*Q – Could ISO investigate the possibility of interconnecting a single AC line directly into SW CT?*

A – No, because the distance is too long. Perhaps a direct HVDC into SW CT could be possible.

*Comment – Anbaric contracted with GE to perform a similar offshore wind studies. The GE study analyzed both AC and HVDC solutions with costs estimates. Anbaric will make that study available to ISO as well as the PAC stakeholders.*

*Q – Does conceptual solutions include thermal and stability studies?*

A – Yes, ISO performed thermal, short circuit, right of way studies among other studies, on the existing system to see where the trouble spots were on the system that would need upgrades.

*Q – The study shows significant congestion, would the wind resources or the on shore resource be backed down?*

A – It would depend on the offer costs to determine which unit or units would be backed down.

### **Item 4.0 – NESCOE 2019 Economic Study – Ancillary Services Analysis**

Mr. Patrick Boughan (ISO-NE) reviewed the Ancillary Services Analysis as part of the NESCOE 2019 Economic Study.

*Q – How many MWs of fast start units committed in the study?*

A – We can add that for future presentations.

*Q – Can the regulation amount be adjusted?*

A – It can be adjusted.

**Item 5.0 – NESCOE 2019 Economic Study – Additional Information Regarding Marginal Unit Emissions**

Mr. Patrick Boughan (ISO-NE) reviewed the Additional Information Regarding Marginal Unit Emissions as part of the NESCOE 2019 Economic Study.

*Q – You said there was minimal congestion and spillage. Can you expand on that?*

A – In the NESCOE scenarios the congestion found created interface constraints and any spillage was due to oversupply in the unconstrained cases.

*Q – Would the gas, coal, municipal solid waste and wood operate with less MW hours per year which results in a 30% to 40% reduction in CO2?*

A – Yes, the study shows that result.

*Q – Can marginal emissions studies be included in all future economic studies?*

A – If a marginal emissions study is requested for future economic studies, we can discuss that request as part of the study scope of work. We will take the request back for additional discussion.

**Item 6.0 – Anbaric 2019 Economic Study – Follow Up to the March 2020 PAC Meeting**

Ms. Haizhen Wang (ISO-NE) reviewed the Follow Up to the March 2020 PAC Meeting as part of the Anbaric 2019 Economic Study.

*Q – How did you allocate transmission constrained losses in SEMA/RI?*

A – We based it on a total build out of offshore wind to include the Anbaric portion of the offshore wind project. We then allocated the losses pro rata.

*Q – On slide 14 it looks like pumped storage doesn't operate often but the batteries are running often. Can you provide the underlying assumptions?*

A – Both the pumped storage and batteries are operating almost evenly. We will take your request back and provide the assumption values.

**Item 7.0 – 2020 Economic Study Draft Scope of Work and High Level Assumptions for Production Simulations – Part I of II**

Mr. Peter Wong (ISO-NE) reviewed the 2020 Economic Study Draft Scope of Work and High Level Assumptions for Production Simulations. This presentation is the first of two parts. The second part of the presentation will be presented to PAC in June 2020.

*Q – Have you looked at the strength of the existing interconnection ties for exports? Will the external neighbors be able to accept our exports?*

A – We will look at the current export capabilities as part of the study assumptions using the FERC 715 filings. However, we will not be studying the neighboring control areas ability to accept our exported MWs.

*Comment – NY is performing a similar economic study to the one ISO-NE is performing and their assumptions state they will be able to export their excess intermittent resource power to New England and ISO-NE is assuming we will be able to export our excess power to NY. You should coordinate with NY on expectations and assumptions for future exports in both directions.*

*Q – How will emissions allowance prices be determined?*

A – We do not have an answer at this time but we will have that information in Part II of the presentation to be provided at the June PAC meeting.

*Q – How would the model look at dispatch if all threshold prices were the same for all resource types?*

A – The program would provide a dispatch scenario on a pro rata basis.

*Q – How did you come up with the Surowiec South transfer limit of 2500 MWs?*

A – That value accounts for the NECEC project in service.

*Comment – In regards to the Millstone unit 2 retirement assumption. Dominion has stated that both Millstone 2 and 3 would retire together.*

A – We will be meeting with Millstone representatives to discuss their intent for the resources.

Comments on the Part I of the 2020 Economic Study Scope of Work and Assumptions report will be due in writing ([PACMatters@iso-ne.com](mailto:PACMatters@iso-ne.com)) to ISO by June 5, 2020.

### **Item 8.0 – Short Circuit Pre-Fault Voltage**

Ms. Melissa Scott (NGrid) reviewed the Short Circuit Pre-Fault Voltage used in NGrid short circuit studies.

There were no questions from the committee on this topic.

### **Item 9.0 – Interregional Planning Update – Eastern Interconnection Planning**

#### **Collaborative (EIPC) and Joint ISO/RTO Planning Committee (JIPC)**

Mr. Rich Kowalski and Stephen Judd (ISO-NE) provided an update regarding activities at the Eastern Interconnection Planning Collaborative (EIPC) and Joint ISO/RTO Planning Committee (JIPC)

There were no questions from the committee on this topic.

Planning Advisory Committee meeting adjourned at 4:15 PM

Respectively submitted

Marc Lyons  
Secretary, Planning Advisory Committee