Planning Advisory Committee Doubletree Hotel, Westborough, MA. September 16, 2015

Robert Andrew	Eversource Energy
Dwayne Basler	Eversource Energy
Brad Bentley	Eversource Energy
Denis Bergeron	Maine Public Utilities Commission
Peter Bernard	ISO New England Inc.
Curt Beveridge	Central Maine Power Company
Chris Bilcheck	United Illuminating Company
Anthony Blanco	New England Power Company
Roger Borghesani	The Energy Consortium
Alex Boutsioulis	United Illuminating Company
Dave Bradt	United Illuminating Company
Jon Breard	ISO New England Inc.
Peter Brown	Preti Flattery
Dorothy Capra	NESCOE
Ray Coxe	Mosaic Energy for Brookfield
Jim DiLuca	Eversource Energy
Frank Ettori	Vermont Electric Power Company
Lisa Fink	Maine Public Utilities Commission
Kevin Flynn	ISO New England Inc.
Bill Fowler	Exelon Generation
Cecile Fraser	Massachusetts Department of Public Utilities
Don Gates	ISO New England Inc.
Monica Gonzalez	ISO New England Inc.
Bob Gray	JF Gray Associates
Brian Hayduk	New England Power Company
Eric Jacobi	FERC
Jeff Jones	Emera Maine
Mark Kasinkas	Burns & McDonald
Tom Kaslow	GDF Suez
Bill Killgoar	Long Island Power Authority
Steve Kirk	Exelon Generation
Rich Kowalski	ISO New England Inc.
Marc Lyons	ISO New England Inc.
Tim Martin	New England Power Company
Al McBride	ISO New England Inc.
Andrew McCullough	Emera Energy
Bruce McKinnon	CMEEC
John McLaughlin	Eversource Energy
Margaret Noves	Massachusetts Department of Public Utilities
Margaret Neves Brent Oberlin	Power Engineers
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Paul Peterson	Synapse United Illuminating Company
Rich Pinto	United Illuminating Company
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Paul Robertson	New England Power Company
Chris Root	Vermont Electric Power Company
Alex Rost	ISO New England Inc.
Jose Rotger	Emera Energy Services
Patricio Silva	ISO New England Inc.

Michael Simmons	Maine Public Utilities Commission
Phil Smith	Energy New England
Joe Staszowski	Eversource Energy
Robert Stein	HQUS
Gabe Stern	CMEEC/CTMEC
Veronica Szczerkowski	Connecticut DEEP
Jinlin Zhang	ISO New England Inc.

Item 1 - Chair's Remarks

Mr. Don Gates welcomed the committee and reviewed the day's agenda. Mr. Gates reminded TO's that the October PAC meeting will include a TOPAC session reviewing the Local System Plans. Presenters are reminded to get the LSPs to ISO Planning for review well in advance of the meeting.

Item 2 – UI Coastal Substation Flooding Needs Assessment

Mr. Dave Bradt (UI) provided and overview of the UI Coastal Flooding Needs Assessment.

- Q Could you inform the committee of the age of the substations at risk?
- A The substations vary in age from quite new (late 90's to the present) to very old (60's & 70's).
- Q How did you decide to put the substation protections at Storm Sandy levels + 3 feet?
- A That's what the meteorologists predicted the storm surge of Sandy would be.
- Q What was the cost of the short term protections at the various substations?

Α -

- Q Are those costs in your RNS rates?
- A I am not sure. I will check.
- Q How often does FEMA reevaluate their flood maps and did Sand and Irene factor into that?
- A Sandy and Irene were not factored into the flood maps. The thrust of the FEMA evaluation was to factor in wave action and water run up. The last revisions to the maps were performed in the 1980's.
- Q If you raise all the breakers up 5 to 6 feet, will you have the room to do it and not interfere with the 115 kV lines above?
- A Yes we will. This is a very complex problem to resolve.
- Q-How effective are the sealants through the conduits.
- A That is a significant concern. We have plugged the conduits and laid sandbags but we still have strong concerns about how effective that will be in a 100 year storm event.
- Q Can you build a flood proof wall surrounding the substation?

A -

Comment – With a storm of this nature you should assume Millstone is out of service as well in the short term period.

- Q In your modeling is it a reasonable assumption to analyze a 90/10 peak? Did you look at the historical load levels during Irene and Sandy?
- A- We did not use a 90/10 analysis. We analyzed the shoulder period load levels which is typical of the storm season (August through October). We did not model the actual load levels on the event days of Irene and Sandy.
- Q Will this type of review of coastal substations and potential impacts be occurring all throughout coastal New England?
- A This is the first redrawing of the flood maps in recent memory so that is why we are discussing this issue now. We will think through the long term implications in the region going forward.
- Q Is there an economic analysis of the loss of each individual substation?
- A Yes we do have an economic breakdown of each substation but I don't have the numbers at hand.
- *Q* Can you provided each substation's year built, initial cost and significant upgrades since construction?
- A We can provide that.

Comment – I would like to postpone the needs assessment until we discuss this issue further. I would ask ISO to consider development of a regional standard that addresses this type of issue.

Item 3 – New Hampshire 2023 Needs Update

Ms. Jinlin Zhang (ISO) provided an overview of the New Hampshire 2023 Needs Update.

- Q How did we discover this area issue after we had approved a Peaslee area PPA that exacerbated this condition?
- A The PPAs are approved for the year in service and this analysis is on a 10 year look out.
- Q Are energy only resources an option to resolve these problems?
- A We don't have any generation proposals in the queue at this time that could help the area, as such transmission options are being considered.
- Q Regarding the year of need in the study, does it factor in the DG resources such a solar?
- A Anything with an FCA 7 obligation was included in the study.
- Q Does that include EE as well?
- A The forecasted EE as part of the 2013 CELT report was used.
- Q Why are you using CELT 2013 instead of 2014 or 2015 as the base values?
- A We began our study at the end of 2013 so that is the CELT values we used.
- Q Should we be considering the recent trend of flat or declining load values when we perform these types of studies?
- A That is a question that should be considered. We will take that back for discussion.

Item 4 – Eastern Connecticut Needs Update

Mr. Peter Bernard (ISO) provided an overview of the Eastern Connecticut Needs Update.

Minor clarification questions were asked and responded to by Mr. Bernard.

Item 5 – Generator Interconnection Process

Mr. Al McBride (ISO) provided an overview of the Generator Interconnection Process.

Q-In regards to Minimum Interconnection Standards (MIS), is that how the region developed the stress test for transfers?

A - I wouldn't relate the two.

Q – In regards to FERC jurisdictional generators but designated as Qualifying Facilities not participating in the markets, how does ISO treat these units when it comes to MIS?

A – The resources are subject to the MIS standards and overlapping impact deliverability test.

Q – Is there a way for the new resources to perform a feasibility study in conjunction with a system impact study in order to move the queue backlog forward?

A – That is something under review now.

Comment – ISO should consider adding a SPS to long lead wind projects that can trip and isolate the wind generation at a single point.

A – ISO is reluctant to add any additional SPS's in the Maine area but we can discuss this further off line.

Planning Advisory Committee meeting adjourned at 2:45 PM

Respectively submitted

Marc Lyons Secretary, Planning Advisory Committee