Planning Advisory Committee Doubletree Hotel, Westborough, MA June 10, 2016

Bruce Anderson	New England Power Generators Association
Bob Andrew	Eversource Energy
Eric Annes	Connecticut DEEP
Dwayne Basler	Eversource Energy
Denis Bergeron	Maine Public Utilities Commission
Peter Bernard	ISO New England Inc.
Cal Bowie	Eversource Energy
Dave Bradt	United Illuminating Company
John Brodbeck	EDP renewables
Dorothy Capra	NESCOE
Wayne Coste	ISO New England Inc.
Ray Coxe	Mosaic Energy Insights for Brookfield
Greg Cunningham	Conservation Law Foundation
lames Davis	Dominion Energy Marketing
Vandan Divatia	Eversource Energy
Paul Dumais	Central Maine Power Company
Frank Ettori	Vermont Electric Power Company
Amro Farid	Dartmouth
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Spencer Fields	Synapse Energy Economics
Kevin Fougere	Quanta Technologies
Bill Fowler	Exelon
Don Gates	ISO New England Inc.
Brian Haydek	New England Power Company
Mike Henderson	ISO New England Inc.
Jeff lafrati	Customized Energy Solutions
Sarah Jackson	Synapse Energy Economics
Tom Kaslow	GDF Suez
Robin Lafayette	ISO New England Inc.
Henry Lam	New England Power Company
Marc Lyons	ISO New England Inc.
Tim Martin	New England Power Company
Andrew Matta	Eversource Energy
Al McBride	ISO New England Inc.
Bruce McKinnon	CMEEC
Ed McNamara	Vermont Public Utilities Commission
Mary Menino	Massachusetts Department of Public Utilities
Raynold Paine	RLC Engineering
Theodore Paradise	ISO New England Inc.
Paul Peterson	Synapse Energy Economics
Fred Plett	Massachusetts Attorney General Office
Alex Rost	ISO New England Inc.
Jose Rotger	Emera Energy
Steve Rourke	ISO New England Inc.
Eric Runge	Day Pitney
Carissa Sedlacek	ISO New England Inc.
Patricio Silva	
	ISO New England Inc. HQUS/PSEG/NRG/Footprint
Bob Stein	
Brad Swalwell	Tangent Energy
Brian Thomson	Massachusetts Wholesale Electric Company
Greg Wade	ISO New England Inc.
Helen Wang	ISO New England Inc.
Peter Wong	ISO New England Inc.

Item 1 – Chair's Remarks

Mr. Don Gates welcomed the committee and reviewed the day's agenda.

<u>Item 2 – RSP 16 Project List and Asset Conditions Update</u>

Ms. Barbara Lynch (ISO) provided an update of the RSP 16 Project List and Asset Conditions List.

Q – Is the \$185M for the VELCO transmission structure project annual costs or total costs? A – It is total costs for the project.

<u>Item 3 – Transmission Transfer Capabilities Update</u>

Mr. Al McBride (ISO) provided an update of the Transmission Transfer Capabilities.

- Q What was the import limit for SWCT summer FRM?
- A I don't know what the number that was used in FRM.
- Q Why does the NERC change not have an impact on the FRM requirements for SWCT?
- A We will take that back for further discussion.
- Q What was period of analysis?
- A Commitment period 11 (Summer 2020 peak load).

There were several questions and comments regarding SPS's. As they were detailed questions, they fall under the CEII classification and no formal questions and responses are being annotated in the minute.

Item 4 – Medway Control House Asset Conditions

Mr. Andrew Matta (Eversource) provided an overview of the Medway Control House Asset Conditions.

Q – *What is the physical location of the Medway Control House to the West Medway station?* A – They are very close by and we plan on expanding the fence line to construct the new control house.

<u>Item 5 – Wilder #16 Asset Replacement/Asset Separation</u>

Mr. Henry Lam (NGrid) provided an overview of the Wilder #16 Asset Replacement/Asset Separation.

- Q *Is the control house a separate facility from High Grove?*
- A On slide 5, the control house is within the High Grove hydro generator house.
- Q Will the control house control all the 115 kV, 46 kV and 13.8 kV voltages?
- A They will.

- *Q Has the area flood plains been looked at?*
- A They have and we will construct to comply with the 100 year flood condition.

<u>Item 6 – Moore #20 Substation Asset Replacement</u>

Mr. Henry Lam (NGrid) provided an overview of the Moore #20 Substation Asset Replacement.

There were no questions from committee on this topic.

<u>Item 7 – SEMA/RI Minimum Load Scope of Work</u>

Mr. Robin Lafayette (ISO) provided an overview of the SEMA/RI Minimum Load Scope of Work.

- Q Why wasn't the minimum load analysis part of the final SEMA/RI Needs Assessment?
- A We had momentum going with some of the other SEMA/RI studies and we didn't want to hold those up. As such, the minimum load scope of work analysis was deferred temporarily. This is not normal ISO practice for regional studies of a similar nature.
- Q What is the timeframe to present a SEMA/RI Solutions report?
- A At the July PAC we will come with high level solutions.
- *Q* What do you anticipate the issues will be with this study?
- A High voltages on the 345 kV network and then address those needs.
- Q The assumptions will be based on a 2026 case with all Boston and SEMA/RI, and the Seabrook unit. Do you expect the analysis will be softened by taking these units out of service?
- A Possibly, but I do not believe there will be a dramatic impact in the study results.
- Q Will the Load Power factors being used in the study be consistent with the values provided in the Load Power Factory surveys?
- A I believe so but I will take that back for confirmation.

<u>Item 8 – ISO-NE Net Loads with Increasing Behind the Meter PV</u>

Mr. Jon Black (ISO) provided an overview of the ISO-NE Net Loads with Increasing Behind the Meter PV.

- *Q Is anyone in the utilities monitoring the output of the PV resources?*
- $\rm A-They$ are on some of the larger scale PV sites. However, they are making an effort to expand the monitoring to some of the smaller residential or retail locations.
- Q What is the size threshold of the behind the meter PV where the monitoring begins? We will need that value to calculate regional network load.
- A We can take that back for discussion and research.
- Q Currently the PV ratings are based on the peak hour of the day. As PV penetration increases, it will shift out the peak hour. Is ISO planning on reevaluating the PV rating methodology?

- A That is one of several questions regarding PV we are currently researching. We have not made a determination on how that will be done at this time.
- Q Can you make similar slide to slide 17 and break it out zonally versus regionally?
- A We can take that back.
- Q Have you looked at the ramping aspect as it pertains to PV penetration?
- A I have and the frequency and magnitude of the ramps increases with more PV penetration.

<u>Item 9 – 2016 Economic Study – Discussion of Assumptions</u>

Mr. Mike Henderson (ISO) and Mr. Wayne Coste (ISO) provided an overview and discussion of assumptions as part of the 2016 Economic Study – Scenario Analysis.

- *Q Will you include assumption on charging times for plug in vehicles?*
- A Per the Governor's Study, we will use an assumption of a 1 to 4 hour staggered charge time.
- Q Have there been testing examples of when the plug-in vehicles are charging? I would expect it would be starting when most people go to bed.
- A We created a simple profile that simulates a reasonable time of day that we expect charging to occur.
- *Q What is the year chosen for the load shape?*
- A 2006 scaled up loads for 2030.

Planning Advisory Committee meeting adjourned at 3:30 PM

Respectively submitted

Marc Lyons Secretary, Planning Advisory Committee