

**MINUTES OF THE
RELIABILITY COMMITTEE (RC) MEETING
HELD ON THURSDAY, JULY 12, 2016
IN WESTBOROUGH, MASSACHUSETTS**

Attendee	Sector	Market Participant
D. Gates	Chair	ISO New England Inc.
	Vice Chair	
	Generation	Generation Group Member, NRG Power Marketing.
	Supplier	HQ Energy Services, PSEG Energy Resources & Trade
	Alternative Resource	SunEdison
R. Stein	Secretary	ISO New England Inc.
M. Lyons	Alternative Resource	Swift River Trading Company
E. Abend*	End User	The Energy Consortium
R. Borghesani*	Transmission	United Illuminating Company
A. Boutsoulis	Transmission	Eversource Energy
C. Bowie*	Transmission	United Illuminating
D. Bradt	Generation	NRG Power Marketing
D. Cavanaugh*	Supplier	Galt Power Inc.
N. Chafetz*		Repsol Energy North America Corporation
		Customized Energy Solutions for BP Energy Company, DTE Energy Trading, Inc., Energy America, LLC and Mercuria Energy, Inc.
J. Davis*	Generation	Dominion Energy Marketing
F. Ettori	Transmission	Vermont Electric Power Company
W. Fowler*	Generation	Entergy Nuclear Power Marketing LLC, Essential Power LLC
	Supplier	Dynegy Power Marketing and Trade, Exelon Generation Company, Calpine Energy Services
J. Gordon*	Supplier	PSEG Energy Resource & Trade
D. Hurley	Alternative Resource and End User	Synapse
T. Kaslow*	Generation	ENGIE Resources
S. Kirk*	Supplier	Exelon Generation Company
A. Krich*	Generation	Boreas Renewables
J. Liu	Generation	Invenergy Energy Management
C. Liu	Publicly Owned	MMWEC
J. Martin	Transmission	New England Power Company
B. McKinnon	Publicly Owned	Connecticut Municipal Electric Energy Cooperative, South Hadley Electric Light Department, New Hampshire Electric CoOp
F. Plett*	End User	Massachusetts Attorney General Office
H. Presume*	Transmission	Vermont Electric Power Company
M.Q. Riding*	Generation	Essential Power
J. Rotger	Transmission	Emera Energy Services

A. Scarfone	Transmission	Eversource Energy
B. Swalwell*	Alternative Resources	Tangent Energy Solutions, Inc.
Guest		Affiliation
P. Bernard		ISO New England Inc.
D. Capra		NESCOE
D. Carberry		Eversource Energy
S. Dave		TDI
A. DiGrande		ISO New England Inc.
M. Drzewianowski		ISO New England Inc.
J. Elliott		ISO New England Inc.
K. Flynn		ISO New England Inc.
M. Gonzalez		ISO New England Inc.
E. Jacobi		FERC
P. Krawczyk*		Eversource Energy
E. Leonard		Eversource Energy
A. McBride		ISO New England Inc.
G. McCluskey		New Hampshire Public Utilities Commission
M. Menino*		Massachusetts Department of Public Utilities
J. Miller		ISO New England Inc.
B. Oberlin		ISO New England Inc.
R. Paine*		RLC Engineering
E. Runge		Day Pitney
C. Simonelli		ISO New England Inc.
M. Stevens*		New England Power Company
M. Winkler		ISO New England Inc.
C. Zhu		New England Power Company

* -- Indicates participated by telephone

After determining that a quorum was present, the meeting was called to order.

Item 1.0 – Chair’s Remarks

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

Item 2.0 – Meeting Minutes

A review was performed of the June 9, 2016 RC Meeting Minutes.

There were no questions from the committee on this topic.

The following motion was moved and seconded by the Reliability Committee:

Resolved, the Reliability Committee recommends that ISO New England Inc. approve the previously distributed minutes of the following RC meeting:

- June 9, 2016

The motion was then voted. Based on a show of hands, the motion passed with none opposed and no abstentions. Motion passes.

Item 3.0 - Level II/III Proposed Plan Applications

Item 3.1 – Clear River Energy Center Generation and Transmission Project – Level III PPA – INV-16-G01, INV-16-T01, NEP-16-T07, NEP-16-T08, and ES-16-T42

Ms. Jenny Liu (Invenergy) provided an overview of the Clean River Energy Center Generation and Transmission Project.

Mr. Frank Etori (VELCO) asked if this is a dual fuel resource.

Ms. Liu replied that it is dual fuel running primarily on natural gas and the backup fuel is ultra-low sulfur diesel.

Mr. Bruce McKinnon (CMEEC) stated that the system impact study states has a .85 power factor rating and the other has a .9 power factor rating, however the PPA states identical power factor ratings for both generators.

Ms. Liu replied that that it is a typo in the SIS. The power factor of .85 is identical for both generators and we will address that.

Mr. Bob Stein (HQ US) asked if the line upgrades are a reconductoring.

Mr. Al Scarfone (Eversource) replied that it is a line reconductoring into the Sherman Road substation.

Mr. Doug Hurley (Synapse) asked why the RC being asked to vote the project in one meeting.

Mr. Al McBride (ISO) replied that we were asked for expedited treatment due to the permitting and construction schedule to meet the projected in service date.

Mr. Bill Fowler (Exelon) asked about the Delta P for the resource for the loss of a line. Mr. Fowler has concerns regarding Lake Road in an N-1 condition.

Mr. McBride replied that we did not conduct a Delta P analysis as part of the system impact study. We performed an analysis yesterday but we do not have those values for you today.

Mr. Fowler stated if there are Delta P issues we may need to activate the area SPS.

Mr. McBride replied that we do not anticipate any adverse problems associated with Delta P but if there are, it would be incumbent on the project sponsor to resolve the issues and they would be responsible for the costs of the upgrades.

Mr. Fowler asked how long it will be to complete the Delta P study.

Mr. McBride replied that he believes it will only be a number of days to a week to complete the analysis. We can provide the results to the committee as part of a teleconference.

Mr. Jose Rotger (Emera Energy) agreed that the vote should be deferred until the next RC meeting.

Mr. Chung Liu (CMEEC) asked if one or both units be will be considered for FCA 10.

Mr. McBride replied that we do not discuss their FCA participation at this meeting.

Mr. Hurley also supports a deferral of the vote for the project.

Mr. Gates stated that we will postpone the vote until the results for the Delta P analysis are complete and communicated to the committee.

Item 3.2 – Northern Pass Transmission Project – Level III PPA – ES-16-T31 through ES-16-T37

Mr. Dennis Carberry (Eversource) provided an overview of the Northern Pass Transmission Project.

Mr. Doug Hurley (Synapse) asked what the colors represent on the geographical map.

Mr. Carberry replied that the blue lines represent overhead lines and the green lines represent underground lines.

Mr. Frank Etori (VELCO) asked how the capacitor values compare to the initial Northern Pass project.

Mr. Carberry replied that the values are almost identical to the initial project.

Mr. Bruce McKinnon (CMEEC) asked why the #7 is not a double breaker.

Mr. Carberry replied that the study did not call for a double breaker.

Mr. Fred Plett (MA AG) stated that the NH siting may result in addition pressure to place more of the line underground. How will that be handled?

Mr. Carberry replied that if that is the case, we will consult with ISO on how to address that.

Mr. McKinnon asked on the Y-151Line, if the Greater Boston upgrades are adequate for the project proposal.

Mr. Carberry replied that it is more than adequate.

Mr. McKinnon requested additional one line details for the AC portion of the project.

Mr. Etori asked if the biggest change to the project is the underground component.

Mr. Carberry replied that is the major difference from the initial project is the underground transmission line aspect.

Mr. Bill Fowler (Exelon) expressed concerns regarding the SSTI study affecting the area generators.

Mr. Fowler requested final approval from the area generators regarding the final SSTI study.

Ms. MQ Riding (Essential Power) also expressed concerns regarding the SSTI study and specifically the levels of ramping. We are requesting more time to perform additional studies and come to agreement with Eversource on the results and any necessary protections that need to be added for the area generators.

Mr. Al Scarfone (Eversource) commented that Eversource is committed to work with the area generators to resolve any outstanding issues or concerns.

The following motion was moved and seconded by the Reliability Committee:

Resolved, the Reliability Committee recommends that ISO New England Inc. determine that implementation of the Northern Pass Transmission Project described in Proposed Plan Applications (“PPAs”) ES-16-T31 through ES-16-T37 from Eversource Energy (“ES”), as detailed in Mr. Dennis Carberry’s June 16, 2016 transmittal to Mr. Donald Gates, Chair, Reliability Committee, will not have a significant adverse effect on the stability, reliability or operating characteristics of the transmission facilities of the applicant, the transmission facilities of another Transmission Owner or the system of a Market Participant.

The motion was then voted. Based on a show of hands, the motion failed with one opposed (Generation Sector) and 32 abstentions (4 Generation Sector, 4 Supplier Sector, 23 Publicly Owned Sector, 1 End User Sector).

Item 3.3 – Seafood Way Substation Project – Level III PPA – ES-16-T43

Ms. Elizabeth Leonard (Eversource) provided an overview of the Seafood Way Substation Project.

Mr. Bruce McKinnon (CMEEC) asked if the underground cables will be opened.

Ms. Leonard replied that they will as part of the Greater Boston project.

Mr. Doug Hurley (Synapse) asked what is the need for the project.

Ms. Leonard replied that the driver is area capacity needs.

The following motion was moved and seconded by the Reliability Committee:

Resolved, the Reliability Committee recommends that ISO New England Inc. determine that implementation of the Seafood Way Substation Project described in Proposed Plan Application (“PPA”) ES-16-T43 from Eversource Energy (“ES”), as detailed in Ms. Elizabeth Leonard’s June 29, 2016 transmittal to Mr. Donald Gates, Chair, Reliability Committee, will not have a significant adverse effect on the stability, reliability or operating characteristics of the transmission facilities of the applicant, the transmission facilities of another Transmission Owner or the system of a Market Participant.

The motion was then voted. Based on a show of hands, the motion passed with none opposed and no abstentions. Motion passes.

Item 3.4 – Bluewave Capital French River Oxford Solar Project – Level III PPA – NEP-16-G02

Ms. Chelsea Zhu (NEP) provided an overview of the Bluewave Capital French River Oxford Solar Project.

There were no questions from the committee on this topic.

The following motion was moved and seconded by the Reliability Committee:

Resolved, the Reliability Committee recommends that ISO New England Inc. determine that implementation of the BlueWave Capital French River Oxford Solar Project described in Proposed Plan Application (“PPA”) NEP-16-G02 from New England Power Company (“NEP”) on behalf of BlueWave Capital, as detailed in Ms. Chuanjiang Zhu’s June 20, 2016 transmittal to Mr. Donald Gates, Chair, Reliability Committee, will not have a significant adverse effect on the stability,

reliability or operating characteristics of the transmission facilities of the applicant, the transmission facilities of another Transmission Owner or the system of a Market Participant.

The motion was then voted. Based on a show of hands, the motion passed with none opposed and no abstentions. Motion passes.

Item 3.5 – Yale University Generator Project – Level III PPA – UI-16-G02

Mr. Alex Boutsoulis (UI) provided an overview of the Yale University Generator Project.

There were no questions from the committee on this topic.

The following motion was moved and seconded by the Reliability Committee:

Resolved, the Reliability Committee recommends that ISO New England Inc. determine that implementation of the Yale University Generator Project described in Proposed Plan Application (“PPA”) UI-16-G02 from United Illuminating Company (“UI”) on behalf of Yale University, as detailed in Mr. Alex Boutsoulis’s June 20, 2016 transmittal to Mr. Donald Gates, Chair, Reliability Committee, will not have a significant adverse effect on the stability, reliability or operating characteristics of the transmission facilities of the applicant, the transmission facilities of another Transmission Owner or the system of a Market Participant.

The motion was then voted. Based on a show of hands, the motion passed with none opposed and no abstentions. Motion passes.

Item 3.6 – Moore Hydro Excitation System Upgrade and PSS Addition Project – Level III PPA – TCPM-16-X01

Mr. John Miller (ISO) provided an overview of the Moore Hydro Excitation System Upgrade and PSS Addition Project.

There were no questions from the committee on this topic.

The following motion was moved and seconded by the Reliability Committee:

Resolved, the Reliability Committee recommends that ISO New England Inc. determine that implementation of the Moore Hydro Excitation System Upgrade and PSS Addition Project described in Proposed Plan Application (“PPA”) TCPM-16-X01 from TransCanada Power Marketing (“TCPM”), as detailed in Mr. Glenn Griffin’s June 14, 2016 transmittal to Mr. Donald Gates, Chair, Reliability Committee, will not have a significant adverse effect on the stability, reliability or operating characteristics of the transmission facilities of the applicant, the transmission facilities of another Transmission Owner or the system of a Market Participant.

The motion was then voted. Based on a show of hands, the motion passed with none opposed and no abstentions. Motion passes.

Item 3.7 – Kendall 3 Steam AVR Replacement and Turbine Upgrade Project – Level III PPA - KGE-16-G01

Mr. Scott McBurney (Kendall Green Energy) provided an overview of the Kendall 3 Steam AVR Replacement and Turbine Upgrade Project.

There were no questions from the committee on this topic.

The following motion was moved and seconded by the Reliability Committee:

Resolved, the Reliability Committee recommends that ISO New England Inc. determine that implementation of the Kendall 3 Steam Turbine Generator AVR Replacement and Steam Turbine Upgrade Project described in Proposed Plan Application (“PPA”) KGE-16-G01 from Kendall Green Energy (“KGE”), as detailed in Mr. R. Scott McBurney’s June 23, 2016 transmittal to Mr. Donald Gates, Chair, Reliability Committee, will not have a significant adverse effect on the stability, reliability or operating characteristics of the transmission facilities of the applicant, the transmission facilities of another Transmission Owner or the system of a Market Participant.

The motion was then voted. Based on a show of hands, the motion passed with none opposed and no abstentions. Motion passes.

Item 4.0 – Level 0/I Proposed Plan Notifications

Item 4.1 – LSE Centaurus Ashland Solar Project – Level 0 PPA – ES-16-G19

Mr. Al Scarfone (Eversource) provided an overview of the LSE Centaurus Ashland Solar Project.

There were no questions from the committee on this project and no objections to the Level 0 classification.

Item 4.2 – East Shore 345 kV Circuit Switcher Replacement Project – Level I PPA – UI-16-T02

Mr. Alex Boutsioulis (UI) provided an overview of the East Shore 345 kV Circuit Switcher Replacement Project.

Mr. Jose Rotger (Emera Energy) asked what will be the impact of the 345 kV outages.

Mr. Boutsioulis relied that UI will coordinate with Cross Sound Cable on any outages that affect that resource. We anticipate minimal outage time associated with this project.

There were no additional questions from the committee on this project and no objections to the Level I classification.

Item 4.3 – Big Y Foods Southwick Solar Project – Level 0 PPA – ES-16-G18

Mr. Al Scarfone (Eversource) provided an overview of the Big Y Foods Southwick Solar Project.

There were no questions from the committee on this project and no objections to the Level 0 classification.

Item 4.4 – Citizens Agawam Landfill Solar Project – Level 0 PPA – NEP-16-G20

Mr. Al Scarfone (Eversource) provided an overview of the Citizens Agawam Landfill Solar Project.

There were no questions from the committee on this project and no objections to the Level 0 classification.

Item 4.5 – NextAmp Peak Hancock Solar Project – Rev.1 – Level 0 PPA – NEP-15-GNF-17-Rev.1

Mr. Jack Martin (NEP) provided an overview of the NextAmp Peak Hancock Solar Project.

Mr. Chung Liu (MMWEC) asked if the project is already in service.

Mr. Martin replied that the resource is increasing in size from 1.5 MWs to 2 MWs. I am not sure if the project is already in service.

There were no questions from the committee on this project and no objections to the Level 0 classification.

Item 4.6 – WED Portsmouth I Wind Project – Level 0 PPA – NEP-15-GNF15

Mr. Jack Martin (NEP) provided an overview of the WED Portsmouth I Wind Project.

There were no questions from the committee on this project and no objections to the Level 0 classification.

Item 4.7 – Westport 1 Solar Project – Level 0 PPA – ES-16-G11

Mr. Al Scarfone (Eversource) provided an overview of the Westport 1 Solar Project.

There were no questions from the committee on this project and no objections to the Level 0 classification.

Item 4.8 – NRG Freeman Sandwich Solar Project – Level 0 PPA – ES-16-G09

Mr. Al Scarfone (Eversource) provided an overview of the NRG Freeman Sandwich Solar Project.

There were no questions from the committee on this project and no objections to the Level 0 classification.

Item 4.9 – Falmouth Landfill Solar Project – Level 0 PPA – ES-16-G17

Mr. Al Scarfone (Eversource) provided an overview of the Falmouth Landfill Solar Project.

There were no questions from the committee on this project and no objections to the Level 0 classification.

Item 4.10 – Webster Transformer Replacement Project – Level I PPA – ES-16-T44

Mr. Al Scarfone (Eversource) provided an overview of the Webster Transformer Replacement Project.

There were no questions from the committee on this project and no objections to the Level I classification.

Item 4.11 – Clean Energy Collective Carver Solar Project – Level 0 PPA – ES-16-G25

Mr. Al Scarfone (Eversource) provided an overview of the Clean Energy Collective Carver Solar Project.

There were no questions from the committee on this project and no objections to the Level 0 classification.

Item 4.12 – TJA Carver Solar Project PPA Withdrawal Notification – NU-14-G11

Mr. Al Scarfone (Eversource) provided an overview of the TJA Carver Solar Project PPA Withdrawal Notification.

There were no questions from the committee on this submission and no objections PPA withdrawal request.

Item 5.0 – Planning Procedures

Item 5.1 – Planning Procedure 10 – Planning Procedure to Support the Forward Capacity Market

Ms. Mariah Winkler (ISO) provided an overview of the revisions to PP 10 to support Resource Retirement Reforms.

Minor clarification questions were asked and responded to by Ms. Winkler.

The following motion was moved and seconded by the Reliability Committee:

Resolved, the Reliability Committee recommends Participants Committee support for revision of ISO New England Planning Procedure 10 – Planning Procedure to Support the Forward Capacity Market, together with such other changes as discussed and agreed to at the meeting and such other non-material changes as may be approved by the Chair and Vice-Chair of the Reliability Committee following the meeting.

The motion was then voted. Based on a show of hands, the motion passed with none opposed and no abstentions. Motion passes.

Item 6.0 – Transmission Cost Allocations

Item 6.1 – Baird to Congress 8809A-8909B 115 kV Line Upgrade Project TCA – UI-16-TCA-01

Mr. Alex Boutsioulis (UI) provided an overview of the Baird to Congress 8809A-8909B 115 kV Line Upgrade Project TCA for pool supported costs of \$73.3M (2018 Estimated Costs).

Mr. Doug Hurley (Synapse) asked if the line faults you are receiving associated with area load growth.

Mr. Dave Bradt (UI) replied that there are several reasons for the faults other than load growth, but the driver of the project is age, structure condition, and compliance with NERC criteria.

Mr. Bruce McKinnon (CMEEC) asked if Eversource have anything similar to the UI line configuration farther up the MN line.

Mr. Al Scarfone (Eversource) replied that he does not know.

The following motion was moved and seconded by the Reliability Committee:

Resolved, the Reliability Committee recommends that ISO New England approve, as consistent with the criteria set forth in Section 12C of the ISO New England Open Access Transmission Tariff for receiving regional support and inclusion in Pool-Supported PTF Rates, the Pool-Supported PTF costs of \$73.3M (2018 Estimated Costs) for work associated with the installation of monopoles and 1590 kmil ACSS conductor and the removal of existing 795 kmil ACSR conductor, hardware and bonnets currently located on top of the railroad catenary structures between Baird and Congress Substations associated with TCA Application UI-16-TCA-01, submitted June 15, 2016 by United Illuminating.

The motion was then voted. Based on a show of hands, the motion passed with none opposed and no abstentions. Motion passes.

Item 6.2 – Blair Pond Substation TCA – ES-16-TCA-18

Mr. Edward Fallon (CEG Consulting for Belmont Light) provided an overview of the Blair Pond Substation TCA for pool supported costs of \$71.103M (2015 Estimated Costs).

Mr. Frank Ettori (VELCO) asked what are the costs of the two project options?

Mr. Fallon replied that option 2 (the chosen option) is \$84.4 M. Option 1 was \$88M.

Mr. Michael Drzewianowski (ISO) asked if these are updated costs.

Mr. Fallon replied that they are and have been updated since the initial PAC project presentation of October 2013.

Mr. Ettori asked how much load is at risk if the solution is not implemented.

Mr. Fallon replied 34.8 MWs of area load could be lost if there was a total failure at the aging substation.

Mr. Doug Hurley (Synapse) asked what is the need for the project?

Mr. Fallon replied the age of the system prevents in-place upgrades and any equipment failure would necessitate load shedding for Belmont.

Mr. Hurley commented that Belmont should ensure they are using an updated area load forecast as load growth is flat or even decreasing in some areas. He wants to ensure there is not overbuilding of the station based on use of an outdated load forecast.

Mr. Bob Stein (HQ US) asked if this is an asset condition issue or a system enhancement/reliability issue.

Mr. Fallon replied that the issues are both asset condition and system reliability.

Ms. Dorothy Capra (NESCOE) commented she is troubled by the dramatic miscalculation and escalation of the project costs. Is there a way to tie this into the Eversource system to avoid this project.

Mr. Al Scarfone (Eversource) replied that he does not know if it is possible without a thorough review of the area transmission topology.

A vote on this topic will be taken at a future Reliability Committee meeting.

Item 7.0 – Operating Procedures

Item 7.1 – OP 16 – Transmission System Data and Appendices OP 16A, OP 16C, OP 16D, and OP 16G through OP 16K

Mr. Jerry Elliott (ISO) provide an overview of the revisions to OP 16, OP 16A, OP 16C, OP 16D, and OP16G through OP 16K.

Mr. Jack Martin asked in OP 16K, if generators less than 5 MWs exempt from this requirement

Mr. Brent Oberlin (ISO) replied that the requirement should state and apply to generators 5 MWs or greater. We will edit the document to reflect that change.

Mr. Gates also agreed to investigate the change of the word “lumped” to “equivalent”. If necessary, the Chair and Vice-Chair will approve the edit as a non-substantive change.

The following motion was moved and seconded by the Reliability Committee:

Resolved, the Reliability Committee recommends Participants Committee support for revision of ISO New England Operating Procedure No. 16 – Transmission System Data and Appendices OP 16A, OP 16C, OP 16D, and OP 16G through OP16K, together with such other changes as discussed and agreed to at the meeting, and such other non-material changes as may be approved by the Chair and Vice-Chair of the Reliability Committee following the meeting.

The motion was then voted. Based on a show of hands, the motion passed with none opposed and no abstentions. Motion passes.

Item 7.2 – OP 5 – Generator, Dispatchable Asset Related Demand and Alternative Technology Regulation Resource Maintenance and Outage Scheduling and Appendices OP 5A and OP 5B

Mr. Jerry Elliott (ISO) provided an overview of the revisions to OP 5, OP 5A and OP 5B.

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

A vote on this topic will be taken at a future Reliability Committee meeting.

The Meeting was adjourned 1:50 PM

NEXT MEETING

The next meeting of the Reliability Committee is scheduled to be held on August 9 & 10, 2016 at the Hyatt Regency Newport Hotel and Spa in Newport, RI.

Respectfully submitted,

_____/s/_____

Marc Lyons

Secretary

Reliability Committee