

INITIAL AGENDA

1. To approve the draft minutes of the January 5, 2023 Participants Committee teleconference meeting. Please provide us with any comments on these draft minutes no later than noon, on **Thursday, January 26, 2023**.
2. [There is no Consent Agenda for this meeting.]
3. To receive an ISO Chief Executive Officer report. The February CEO report will be circulated and posted in advance of the meeting.
4. To receive a report from the ISO Chief Operating Officer. The February COO report will be circulated and posted in advance of the meeting.
5. To receive a report on current contested matters before the FERC and the Federal Courts. The litigation report will be circulated and posted in advance of the meeting.
6. To receive reports from Committees, Subcommittees, and other working groups:
 - Markets Committee
 - Reliability Committee
 - Transmission Committee
 - Budget & Finance Subcommittee
 - Membership Subcommittee
 - Joint Nominating Committee
 - Others
7. Administrative matters
8. To transact such other business as may properly come before the meeting.

PRELIMINARY

Pursuant to notice duly given, a meeting of the NEPOOL Participants Committee was held via teleconference on Thursday, January 5, 2023, at 10:00 a.m. A quorum determined in accordance with the Second Restated NEPOOL Agreement was present and acting throughout the meeting. Attachment 1 identifies the members, alternates, and temporary alternates who participated in the meeting.

Mr. David Cavanaugh, Chair, presided, and Mr. Sebastian Lombardi, Secretary, recorded. Mr. Cavanaugh welcomed the members, alternates, and guests who were present, including Mr. George Twigg, the newly-appointed Executive Director of the New England Conference of Public Utilities Commissioners (NECPUC).

APPROVAL OF THE DECEMBER 1, 2022 MEETING MINUTES

Mr. Cavanaugh referred the Committee to the preliminary minutes of the December 1, 2022 meeting, as circulated and posted in advance of the meeting. Following motion duly made and seconded, the preliminary minutes of that meeting were unanimously approved as circulated, with an abstention by Mr. Sam Mintz noted.

CONSENT AGENDA

Mr. Cavanaugh then referred the Committee to the Consent Agenda that was circulated and posted in advance of the meeting. Following motion duly made and seconded, the Consent Agenda was unanimously approved as circulated, with an abstention by Mr. Sam Mintz noted.

ISO CEO REPORT

Mr. Gordon van Welie, ISO Chief Executive Officer (CEO), offered his well-wishes for the New Year and then referred the Committee to the summary of the Information Technology

and Cyber Security Board Committee meeting, the one Board Committee that had met since the December Participants Committee meeting, which had been circulated and posted with the materials for this meeting. There were no questions or comments on that summary.

ISO COO REPORT

Operations Highlights Report

Dr. Vamsi Chadalavada, ISO Chief Operating Officer (COO), began by referring the Committee to his December operations report, which had been circulated and posted in advance of the meeting. Dr. Chadalavada noted that the data in the report was through December 27, 2022, unless otherwise noted. The report highlighted: (i) Energy Market value for December 2022 was \$1.2 billion, up \$530 million from the updated November 2022 value and up \$459 million from December 2021; (ii) December 2022 average natural gas prices were 157% higher than November average prices; (iii) average Real-Time Hub Locational Marginal Prices (LMPs) for December (\$126.19/MWh) were 87% higher than November averages; (iv) average December 2022 natural gas prices and Real-Time Hub LMPs over the period were up 77% and 112%, respectively, from December 2021 average prices; (v) average Day-Ahead cleared physical energy during the peak hours as percent of forecasted load was 97.4% during December (up from 97% reported for November), with the minimum value for the month of 91% on Friday, December 23; (vi) Daily Net Commitment Period Compensation (NCPC) payments for December totaled \$6.2 million, which was up \$2.5 million from November 2022 and up \$0.8 million from December 2021. December NCPC payments, which were 0.5% of total Energy Market value, were comprised of (a) \$6.1 million in first contingency payments (up to \$2.5 million from November); and (b) \$78,000 in second contingency payments (up \$38,000 from November) (there were no voltage or distribution payments in December).

Commenting on the operational highlights, Dr. Chadalavada noted that the annual Energy Market value for 2022 was approximately \$11.7 billion, the second most expensive value recorded by the ISO (the highest, \$12.1 billion, was recorded in 2008, when average hourly natural gas prices for the year averaged \$10 MMBtu/hr). He also noted that December 2022's average Real-Time Hub LMP (\$126.19/MWh) was the highest ever recorded for the month of December. Turning to NCPC payments, he noted that \$1.5 million of the total \$6.1 million in December NCPC payments were made on December 24. In general, 2022 NCPC payments represented 0.5% of the total annual Energy Market value, which was the lowest percentage ever recorded for NCPC as a percentage of the overall annual Energy Market value.

In response to questions, Dr. Chadalavada explained that the most of the NCPC payments made for December 24 were make-whole payments. Looking ahead, he confirmed that there were no scheduled transmission outages through the end of February 2023, and would report closer in time on the projected impacts of transmission outages scheduled for March and April 2023. When asked to comment on the potential impact that additional natural gas pipeline infrastructure/capacity might have had on 2022's Energy Market value, Dr. Chadalavada said that he did not have specific information or data to rely on, but he thought it reasonable to presume that additional natural gas pipeline infrastructure/capacity would likely have had a material impact on overall Energy market value.

OP-4 Event and Capacity Scarcity Condition Report

Referring to an additional presentation that was circulated and posted in advance of the meeting, Dr. Chadalavada summarized the factors leading up to, and conditions during, the December 24, 2022 Capacity Scarcity Condition and OP-4 (Action During a Capacity Deficiency) Event. He identified two primary contributing factors: (i) generator outages and

reductions throughout the operating day (totaling 2,150 MW on the supply side) and (ii) net imports being 1,100 MW less than scheduled in the Day-Ahead Energy Market. He reported that the 30-minute Reserve Constraint Penalty Factor (\$1,000/MWh) was violated during 17 intervals and the 10-Minute Reserve Constraint Penalty Factor (\$1,500/MWh) was violated during 1 interval. System conditions required the implementation of M/LCC 2, Abnormal Conditions Alert, and OP-4, Actions 1, 3 and 5.

Elaborating, Dr. Chadalavada noted preliminary settlement reports were released on Friday, December 30, 2022 and a final settlement report was estimated for release on January 9, 2023. Estimated Pay-for-Performance (PFP) penalties (based on preliminary data) totaled \$39 million, which was roughly similar to the \$36 million in PFP penalties incurred during the previous Capacity Scarcity Condition event (September 3 (Labor Day), 2018). Final settlement, he stated, would be adjusted for any Capacity Performance Bilateral Contracts. He highlighted that lower-than-forecasted temperatures contributed to higher-than-expected Energy demand throughout the daylight hours, though the ISO's peak hour morning load forecast was highly accurate. Based upon its peak load forecast of 17,510 MW, the ISO projected a capacity surplus of 950 MW above requirements, but the projected surplus did not materialize given the unplanned generator outages and reductions that occurred throughout the operating day. While the causes for the outages and reductions varied, many of them were mechanical or cold-weather related, and not fuel-related.

Turning to energy production by resource type, Dr. Chadalavada said wind resources performed above their capacity supply obligation for the peak hour. There was heavy oil burn on the days preceding and on December 24, but the impacted oil inventory had been adequately replenished. He said, in response to questions, that the Saint John and Everett LNG terminals

had the capacity to inject natural gas into the pipeline system. ISO called upon available resources during this event; however, many resources could not be dispatched promptly due to longer start up times. There were no transmission outages in New England on December 24, but there were two major outages in Quebec, CA. Dr. Chadalavada further noted that the ISO Control Room lacked sufficient certainty on transmission schedules during the event, but moving forward, the ISO planned to work towards obtaining better and more concrete schedule information. He also committed to have prepared and to present at a later meeting, aggregated, but more granular information, with respect to performance and outages by resource type.

In response to a question regarding the impact of curtailed export transactions with NYISO, Dr. Chadalavada noted that there were curtailments of Real-Time exports, but not scheduled exports, resulting in little material impact to New York. One member noted that imports from New York increased over the operating day. Another member noted that the December 24 event and the previous OP-4 event on the system both occurred on a holiday weekend, and questioned whether the most recent event would have occurred or would have been as severe if it had not occurred on a holiday weekend. Dr. Chadalavada noted that the last scarcity event occurred due to outages and a load forecast issue, but the ISO planned to consider further any correlation with holidays.

Following questions and comments on the role of load forecasting, Dr. Chadalavada stated that the December 24 scarcity event did not occur as a result of the day's forecast, but acknowledged the potential for, and the ISO's commitment generally to pursue all reasonable, forecasting model and process improvements. Mr. van Welie, referring to a recent discussion among organized market chief executives in which he had participated, explained the common

theme that, as the weather becomes more volatile and extreme, the ability to forecast load during low probability extreme events, is exponentially more challenging than it has been historically. He affirmed the ISO's commitment to explore and invest in modeling improvements, but opined that the forecasting challenges presented by extreme weather would continue for the foreseeable future and potentially become more acute.

PP 5-1 REVISIONS

Ms. Amy Crowley, the Acting Chair of the Reliability Committee (RC), introduced proposed changes to ISO Planning Procedure 5-1 (PP 5-1) which were designed to clarify the timing and requirements for model and data submissions associated with Proposed Plan Application (PPA) submittals under Section I.3.9 of the Tariff. She reported that the ISO had modified the proposed changes several times based on RC feedback, and at its December 14 meeting, the RC recommended Participants Committee support for the PP 5-1 Revisions, with three oppositions and several abstentions registered. Mr. Cavanaugh noted this PP 5-1 item would have been on the Consent Agenda but for the request by certain Transmission Owners. A representative of one of those Transmission Owners referred members to the materials they prepared, and that were circulated with the meeting materials, that explained their concerns with the proposed PP 5-1 revisions and their desire to have the changes considered and voted separately.

Mr. Lombardi reminded members that FERC review and approval was not necessary for the PP 5-1 revisions to be implemented. Some members expressed their appreciation for the ISO's work and collaboration in refining the planning study process, with others encouraging additional work to address the remaining concerns raised.

The following motion was then duly made and seconded, and approved, with oppositions expressed by Avangrid, Eversource, National Grid, and Rhode Island Energy, and abstentions by AIM, Brookfield, Calpine, Clearway, Competitive Energy Services, FirstLight, Great River Hydro, Harvard, Jupiter Power, Nautilus, New Leaf Energy, VELCO, Versant Power, and Wheelabrator:

RESOLVED, that the Participants Committee supports the PP 5-1 Revisions, as recommended by the Reliability Committee at its December 14, 2022 meeting, together with such non-substantive changes as may be agreed to after the meeting by the Chair and Vice-Chair of the Reliability Committee.

LITIGATION REPORT

Mr. Lombardi referred the Committee to the January 4 Litigation Report that had been circulated and posted before the meeting. He highlighted the following:

(i) *FERC Administrative Matters*. Commissioner Richard Glick's departure from the FERC on January 3, leaving the FERC with four Commissioners, and designation of Commissioner Willie Phillips as Acting Chairman.

(ii) *RENEW Network Upgrades O&M Cost Allocation Complaint (EL23-16)*. RENEW Northeast's complaint, filed December 13, 2022, seeking changes to Schedules 11 and 21 of Tariff that would eliminate the direct assignment of the Network Upgrade Operating and Maintenance (O&M) costs to Interconnection Customers. Comments on the RENEW complaint were due on or before January 23, 2023.

(iii) *ISO's FCA17 Qualification Informational Filing (ER23-690)*. ISO's submission of its required FCA17 informational filing on December 21, 2022. Comments on this filing were due at the end of the day (January 5).

(iv) *IEP Remand Proceeding (ER19-1428-006)*. Mr. Lombardi reported that NEPOOL submitted comments explaining the history and process leading up to the Participants Committee's approval of both the Tariff changes proposed by the ISO that would exclude hydroelectric resources from participating in the Inventoried Energy Program (IEP), as well as the alternative changes proposed by Brookfield that would expressly permit pumped-storage hydro resources operating as Electric Storage Facilities (ESFs) to participate in the IEP. This matter was pending before the FERC.

Mr. Lombardi then noted for the Committee that the proposal to amend § 9.2.3(a) of the Participants Agreement, to raise the age cap prohibiting the election or re-election of any candidate to the ISO-NE Board of Directors from 70 to 75, was approved after two rounds of balloting. The supported changes to the Participant Agreement would be jointly filed by NEPOOL and the ISO for FERC approval later in January.

COMMITTEE REPORTS

Markets Committee (MC). Mr. William Fowler, the MC Vice-Chair, reported that the next MC meeting was scheduled from January 10-12, 2023 in Westborough, MA. The agenda and materials for that meeting had been posted to the ISO website.

Reliability Committee (RC). Mr. Robert Stein, the RC Vice-Chair, reported that the next RC meeting was scheduled for January 18 and discussions would focus on the extreme weather modeling completed by the Electric Power Research Institute and the ISO.

Transmission Committee (TC). Mr. David Burnham, nominated to be the 2023 TC Vice-Chair, reported that the next and annual TC meeting was scheduled for January 24 via teleconference. A confirmation vote for Vice-Chair will be conducted. All committee members are encouraged to attend, for a quorum, or vote by proxy.

Budget and Finance Subcommittee (B&F). Mr. Tom Kaslow, the B&F Subcommittee Chair, reported that the next B&F Subcommittee meeting was scheduled for January 17 and would be confirmed later in the month.

Membership Subcommittee. Ms. Sarah Bresolin, the Membership Subcommittee Chair, reported that the next Membership Subcommittee meeting was scheduled for January 9 via Zoom.

ADMINISTRATIVE MATTERS

Mr. Lombardi reminded members that the next Participants Committee meeting was scheduled for February 2, 2023 and likely to be held virtually. Mr. Cavanaugh noted that the Joint Nominating Committee's first meeting was scheduled to be held on January 13 via teleconference. He confirmed that Messrs. Mark Vannoy and Brook Colangelo had been invited to join a future Participants Committee meeting to discuss their experiences serving on the ISO Board, and Participant feedback on those Board members would be solicited following that discussion.

Mr. Twigg reminded members of NECPUC's Annual Symposium, to be held in 2023 from May 22 through 25 in Stowe, Vermont. He said that more detailed information would follow in the next few months, and encouraged all those interested to register and attend.

There being no other business, the meeting adjourned at 12:03 p.m.

Respectfully submitted,

Sebastian Lombardi, Secretary

**PARTICIPANTS COMMITTEE MEMBERS AND ALTERNATES
PARTICIPATING IN JANUARY 5, 2023 TELECONFERENCE MEETING**

PARTICIPANT NAME	SECTOR/ GROUP	MEMBER NAME	ALTERNATE NAME	PROXY
Advanced Energy United	Associate Non-Voting	Caitlin Marquis		
AR Large Renewable Gen. (RG) Group Member	AR-RG	Abby Krich		
AR Small Load Response (LR) Group Member	AR-LR	Brad Swalwell		
Ashburnham Municipal Light Plant	Publicly Owned Entity		Matt Ide	
Associated Industries of Massachusetts (AIM)	End User			Mary Smith
AVANGRID: CMP/UI	Transmission	Alan Trotta	Jason Rauch	Alex Novicki; Zach Teti
Bath Iron Works Corporation	End User			Bill Short
Belmont Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Block Island Utility District	Publicly Owned Entity	Dave Cavanaugh		
Boylston Municipal Light Department	Publicly Owned Entity	Matt Ide		
BP Energy Company	Supplier			José Rotger
Braintree Electric Light Department	Publicly Owned Entity		Dave Cavanaugh	
Brookfield Renewable Trading and Marketing	Supplier	Aleks Mitreski		
Castleton Commodities Merchant Trading	Supplier			Bob Stein
Pawtucket Power Holding Company	Generation		Dan Allegretti	
Chester Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Chicopee Municipal Lighting Plant	Publicly Owned Entity		Matt Ide	
Clearway Power Marketing LLC	Supplier			Pete Fuller
Competitive Energy Services	Supplier		Eben Perkins	
Concord Municipal Light Plant	Publicly Owned Entity		Dave Cavanaugh	
Connecticut Municipal Electric Energy Coop.	Publicly Owned Entity	Brian Forshaw		
Connecticut Office of Consumer Counsel	End User			J.R. Viglione
Conservation Law Foundation (CLF)	End User	Phelps Turner		
Consolidated Edison Energy, Inc.	Supplier	Grant Flagler		
Constellation Energy Generation	Supplier	Steve Kirk	Bill Fowler	
CPV Towantic, LLC	Generation	Joel Gordon		
Cross-Sound Cable Company (CSC)	Supplier		José Rotger	
Danvers Electric Division	Publicly Owned Entity		Dave Cavanaugh	
DFC-ERG CT, LLC	AR-RG	Lauren Mix		
Dominion Energy Generation Marketing	Generation	Wes Walker	Weezie Nuara	
DTE Energy Trading, Inc.	Supplier			José Rotger
Durgin and Crowell Lumber Co., Inc.	End User			Bill Short
Dynegy Marketing and Trade, Inc.	Supplier		Andy Weinstein	Bill Fowler
ECP Companies Calpine Energy Services, LP New Leaf Energy	Generation	Brett Kruse Liz Delaney		Bill Fowler, John Flumerfelt
Emera Energy Services	Supplier			Bill Fowler
Enel X North America, Inc.	AR-LR	Alex Worsley	Sarah Griffiths	
ENGIE Energy Marketing NA, Inc.	AR-RG	Sarah Bresolin		
Eversource Energy	Transmission	James Daly	Dave Burnham	Vandan Divatia
FirstLight Power Management, LLC	Generation	Tom Kaslow		
Galt Power, Inc.	Supplier	José Rotger		
Garland Manufacturing Company	End User			Bill Short
Generation Group Member	Generation	Dennis Duffy	Abby Krich	
Georgetown Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Granite Shore Power Companies	Generation			Bob Stein

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PARTICIPANT NAME	SECTOR/ GROUP	MEMBER NAME	ALTERNATE NAME	PROXY
Great River Hydro	AR-RG			Bill Fowler
Groton Electric Light Department	Publicly Owned Entity		Matt Ide	
Groveland Electric Light Department	Publicly Owned Entity		Dave Cavanaugh	
H.Q. Energy Services (U.S.) Inc. (HQUS)	Supplier	Louis Guilbault	Bob Stein	
Hammond Lumber Company	End User			Bill Short
Harvard Dedicated Energy Limited	End User			Jason Frost
High Liner Foods (USA) Incorporated	End User		William P. Short III	
Hingham Municipal Lighting Plant	Publicly Owned Entity		Dave Cavanaugh	
Holden Municipal Light Department	Publicly Owned Entity		Matt Ide	
Holyoke Gas & Electric Department	Publicly Owned Entity		Matt Ide	
Hull Municipal Lighting Plant	Publicly Owned Entity		Matt Ide	
Icetek Energy Services, Inc.	AR-LR	Doug Hurley		
Industrial Energy Consumer Group	End User	Dan Collins		
Ipswich Municipal Light Department	Publicly Owned Entity		Matt Ide	
Jericho Power LLC (Jericho)	AR-RG	Ben Griffiths	Nancy Chafetz	
Jupiter Power	AR-RG			Ron Carrier
Littleton (MA) Electric Light and Water Department	Publicly Owned Entity		Dave Cavanaugh	
Littleton (NH) Water & Light Department	Publicly Owned Entity	Craig Kiency		
Long Island Power Authority (LIPA)	Supplier	Bill Kilgoar		José Rotger
Maine Power LLC	Supplier	Jeff Jones		
Maine Public Advocate's Office	End User	Drew Landry		
Maine Skiing, Inc.	End User	Dan Collins		
Mansfield Municipal Electric Department	Publicly Owned Entity		Matt Ide	
Maple Energy LLC	AR-LR			Doug Hurley
Marblehead Municipal Light Department	Publicly Owned Entity		Matt Ide	
Mass. Attorney General's Office (MA AG)	End User	Ashley Gagnon	Jaimie Donovan	
Mass. Bay Transportation Authority	Publicly Owned Entity		Dave Cavanaugh	
Mass. Dept. Capital Asset Management	End User		Paul Lopes	Nancy Chafetz
Mass. Municipal Wholesale Electric Company	Publicly Owned Entity	Matt Ide		
Mercuria Energy America, LLC	Supplier			José Rotger
Merrimac Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Middleborough Gas & Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Middleton Municipal Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Mintz, Sam	End User	Sam Mintz		
Moore Company	End User			Bill Short
Narragansett Electric Co. (d/b/a RI Energy)	Transmission	Brian Thomson		Lindsay Orphanides
Nautilus Power, LLC	Generation	Dan Pierpont	Bill Fowler	
New England Power (d/b/a National Grid)	Transmission	Tim Brennan	Tim Martin	
New England Power Generators Assoc. (NEPGA)	Associate Non-Voting	Bruce Anderson	Dan Dolan	
New Hampshire Electric Cooperative	Publicly Owned Entity		Brian Callnan	Brian Forshaw
New Hampshire Office of Consumer Advocate	End User		Jason Frost	
NextEra Energy Resources, LLC	Generation	Michelle Gardner		
North Attleborough Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Norwood Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
NRG Power Marketing LLC	Supplier		Pete Fuller	
Nylon Corporation of America	End User			Bill Short

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PARTICIPANT NAME	SECTOR/ GROUP	MEMBER NAME	ALTERNATE NAME	PROXY
Pascoag Utility District	Publicly Owned Entity		Dave Cavanaugh	
Paxton Municipal Light Department	Publicly Owned Entity		Matt Ide	
Peabody Municipal Light Department	Publicly Owned Entity		Matt Ide	
Princeton Municipal Light Department	Publicly Owned Entity	Matt Ide		
Reading Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
RI Division of Public Utilities Carriers	End User	Paul Roberti		
Rowley Municipal Lighting Plant	Publicly Owned Entity		Dave Cavanaugh	
Russell Municipal Light Dept.	Publicly Owned Entity		Matt Ide	
Shell Energy North America (US), L.P.	Supplier	Jeff Dannels		
Shipyard Brewing LLC	End User			Bill Short
Shrewsbury Electric & Cable Operations	Publicly Owned Entity		Matt Ide	
South Hadley Electric Light Department	Publicly Owned Entity		Matt Ide	
Sterling Municipal Electric Light Department	Publicly Owned Entity		Matt Ide	
Stowe Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Sunnova Energy Corporation	AR-DG			David Skillman
Sunrun Inc.	AR-DG			Peter Fuller
Taunton Municipal Lighting Plant	Publicly Owned Entity	Devon Tremont	Dave Cavanaugh	
Templeton Municipal Lighting Plant	Publicly Owned Entity		Matt Ide	
The Energy Consortium	End User	Bob Espindola	Mary Smith	
Union of Concerned Scientists	End User		Francis Pullaro	
Vermont Electric Cooperative	Publicly Owned Entity	Craig Kieny		
Vermont Electric Power Company (VELCO)	Transmission	Frank Etori	Karin Stamy	
Vermont Energy Investment Corp (VEIC)	AR-LR		Jason Frost	
Vermont Public Power Supply Authority	Publicly Owned Entity			Brian Forshaw
Versant Power	Transmission	Lisa Martin	Dave Norman	
Village of Hyde Park (VT) Electric Department	Publicly Owned Entity	Dave Cavanaugh		
Wakefield Municipal Gas & Light Department	Publicly Owned Entity		Matt Ide	
Wallingford DPU Electric Division	Publicly Owned Entity		Dave Cavanaugh	
Wellesley Municipal Light Plant	Publicly Owned Entity		Dave Cavanaugh	
West Boylston Municipal Lighting Plant	Publicly Owned Entity		Matt Ide	
Westfield Gas & Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Wheelabrator North Andover Inc.	AR-RG		Bill Fowler	