

FINAL

Pursuant to notice duly given, a meeting of the NEPOOL Participants Committee was held beginning at 9:30 a.m. on Tuesday, April 26, 2022, at the AC Hotel in Worcester, Massachusetts. 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, Acting Secretary, recorded.

APPROVAL OF MARCH 1, 2022 PATHWAYS STUDY MEETING MINUTES

Mr. Cavanaugh referred the Committee to the preliminary minutes of the March 1, 2022 Pathways Study meeting, as circulated and posted in advance of the meeting. Following motion duly made and seconded, the Committee unanimously approved those minutes.

ANALYSIS GROUP (AGI) PRESENTATION ON FINAL PATHWAYS STUDY REPORT

Mr. Cavanaugh then introduced Mr. Todd Schatzki of AGI, who reviewed materials circulated and posted in advance of the meeting. Mr. Schatzki stated that the purpose of his presentation was to review comments received on the draft Pathways Study (Draft Report), to summarize the responses to those questions and to identify any changes made to the Draft Report.

At highest level, Mr. Schatzki reported that the comments received on the Draft Report generally were qualitative in nature, sought additional clarification or expansion on identified issues, and were for the most part reflected in the Final Report. The presentation grouped the comments by common policy theme and by technical question or comment. The Final Report also reflected clean-up changes identified by AGI. There were no material quantitative changes made to the Draft Report.

Common Policy Themes

Dr. Schatzki reported that many of the comments provided sought further clarification on the Study's scope and limits. The Report, which was largely focused on overall economic issues, had been revised to reflect that it was *not* intended to evaluate several of the other important dimensions of decarbonization policy, including legal and regulatory issues with alternative policy approaches, or reliability issues or transmission system needs (both of which were being addressed separately via the Future Grid Reliability Study and the 2050 Transmission Study, respectively). The Report was also revised to more directly acknowledge the assumptions being made. Other clarifications addressed the sources and significance of differences in impacts between the alternative policy approaches, challenges associated with those policy approaches, assumptions made with respect to investment incentives, and expected renewable portfolio standard (RPS) outcomes.

Technical Questions and Comments

Turning to more technical questions and comments, Dr. Schatzki provided additional information regarding storage “churning” (when batteries consume otherwise-curtailed variable renewable energy and earn net revenues through energy losses), particularly the circumstances and development of alternative technologies under which churning would be likely. In response to questions and comments in discussion and received since the release of the Draft Report, Dr. Schatzki expanded on the assumed drivers of capacity market prices. He noted that relative prices differed across the Central Case and scenarios.

With respect to social costs and payments, Dr. Schatzki explained why an estimate of *total* social costs and payments associated with decarbonization achieved over the 20-year study period could not be determined from the cases analyzed in the Pathways Study, which was designed to

illustrate relative differences and inform choices among policy approaches rather than forecast the overall economic consequences of decarbonization. He also explained why incremental social costs and payments were compared to the Reference Case (which provided a baseline against the economic costs of undertaking each pathway), rather than against a particular pathway/approach.

Dr. Schatzki then reviewed AGI presentation material that highlighted and explained new exhibits added to the Final Report that provided additional information on the distribution of price impacts associated with net carbon pricing. The new exhibits illustrated that carbon pricing would increase LMP revenues to all supply resources, with a small incremental gain but decreasing share to fossil resources, and nearly all of the net payments going to non-carbon emitting resources (variable renewable, nuclear and storage resources). Additional discussion that addressed questions related to natural gas-fired generation, transmission and the relative magnitude of curtailments between variable renewable resources followed.

Next Steps

Dr. Schatzki concluded his presentation by stating that the Final Report (which would be updated to reflect a few corrections identified during the meeting) represented the end of a phase, but not the end point, in the Future Grid Pathways process. He noted that the ISO would continue to work on dimensions of the future grid efforts, and hoped that the Final Report provided stakeholders with useful information to support the necessary determinations yet to be made relevant to the transition to a decarbonized New England electric grid. He expressed his appreciation and thanks for the even-handed and balanced Participant feedback and collaboration during the process. Mr. Cavanaugh similarly expressed appreciation for AGI's and the ISO's efforts getting to this point.

Looking forward, Dr. Chris Geissler, Principal Economist, ISO, identified other areas where the Future Grid efforts were continuing, including the work on the Future Grid Reliability Study and the 2050 Transmission Study. He said that the ISO would continue to think of ways to leverage the work completed to date and to connect the Pathways work to the other Future Grid efforts underway. He requested preliminary written feedback by May 17, 2022 on stakeholders' preferences with respect to an approach or pathway forward – those studied or variants thereof (and not additional feedback on the analysis or qualitative elements of the Report), and reviewed the details for submission of that desired feedback. The ISO hoped for some preliminary feedback from the New England States in the late May/June timeframe (coinciding with the NECPUC symposium and the Participants Committee Summer Meeting). Members again thanked the ISO and Dr. Schatzki and the AGI team for their work and presentation.

NRG STRAW PROPOSAL FOR A MARKET-BASED APPROACH TO NEW ENGLAND'S FUTURE GRID

Mr. Peter Fuller referred the Committee to the NRG-sponsored paper circulated and posted to the NEPOOL and ISO websites earlier that day which presented a straw proposal for a market-based approach to achieving the clean energy and de-carbonization objectives of the New England States (Straw Proposal). The Straw Proposal, which reflected the efforts by NRG and a group of stakeholders convened by NRG, as well as other regional conversations, was intended to facilitate the dialogue, negotiation and the consensus building that would be needed to enable the creation and implementation of an alternative market framework. He explained that the Straw Proposal proposed a hybrid approach – a combination of a Forward Clean Energy Market and some form of carbon pricing – intended to address many of the issues associated with the region's expected transition to a cleaner future grid. The Straw Proposal, Mr. Fuller clarified, was offered not as a suggested end point, but as a starting point for the discussions that would follow the completion of

AGI's efforts, as well as to support a focus on the forums and mechanisms that could help to guide those discussions. Mr. Cavanaugh encouraged members to review the Straw Proposal and engage directly with Mr. Fuller with any questions or follow-up.

There being no further business, the meeting adjourned at 2:15 p.m.

Respectfully submitted,

Sebastian Lombardi, Acting Secretary

**PARTICIPANTS COMMITTEE MEMBERS AND ALTERNATES
PARTICIPATING IN APRIL 26, 2022 MEETING**

PARTICIPANT NAME	SECTOR/ GROUP	MEMBER NAME	ALTERNATE NAME	PROXY
Acadia Center	End User	Melissa Birchard (tel)		
Advanced Energy Economy	Associate Non-Voting	Caitlin Marquis (tel)		
Ampersand Energy Partners LLC	Supplier			Hannah Braun (tel)
AR Large Renewable Generation (RG) Group Member	AR-RG	Alex Worsley		
AR Small RG Group Member	AR-RG	Erik Abend (tel)		
AR Small Load Response (LR) Group Member	AR-LR	Brad Swalwell (tel)		
AVANGRID: CMP/UI	Transmission		Jason Rauch (tel)	Zach Teti (tel)
Belmont Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Block Island Utility District	Publicly Owned Entity	Dave Cavanaugh		
BP Energy Company	Supplier			José Rotger
Braintree Electric Light Department	Publicly Owned Entity			Dave Cavanaugh
Brookfield Renewable Trading and Marketing LP	Supplier	Aleks Mitreski		
Calpine Energy Services, LP	Supplier	Brett Kruse (tel)		Bill Fowler (tel)
Castleton Commodities Merchant Trading	Supplier			Bob Stein (tel)
Centrica Business Solutions Optimize, LLC	AR-LR		Aaron Breidenbaugh (tel)	
Chester Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
CLEARresult Consulting, Inc.	AR-DG	Tamera Oldfield (tel)		
Clearway Power Marketing LLC	Supplier			Pete Fuller
Concord Municipal Light Plant	Publicly Owned Entity		Dave Cavanaugh	
Connecticut Municipal Electric Energy Coop.	Publicly Owned Entity	Brian Forshaw (tel)		
Connecticut Officer of Consumer Counsel	End User	Dave Thompson (tel)		
Consolidated Edison Energy, Inc.	Supplier	Grant Flagler (tel)	Matt Napoli (tel)	
Constellation Energy Generation, LLC	Supplier	Steve Kirk (tel)	Bill Fowler (tel)	
Cross-Sound Cable Company (CSC)	Supplier		José Rotger	
Danvers Electric Division	Publicly Owned Entity		Dave Cavanaugh	
Dominion Energy Generation Marketing	Generation		Weezie Nuara (tel)	
DTE Energy Trading, Inc.	Supplier			José Rotger
Dynergy Marketing and Trade, LLC	Supplier	Andy Weinstein (tel)		Bill Fowler (tel)
Emera Energy Services	Supplier	Drew Turner (tel)		Bill Fowler (tel)
Environmental Defense Fund	End User	Jollette Westbrook (tel)		
Eversource Energy	Transmission		Dave Burnham (tel)	Parker Littlehale
FirstLight Power Management	Generation	Tom Kaslow		
Galt Power, Inc.	Supplier	José Rotger	Jeff Iafrati (tel)	
Generation Group Member	Generation		Abby Krich (tel)	Alex Worsley (tel)
Georgetown Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Granite Shore Companies	Generation			Bob Stein (tel)
Great River Hydro	AR-RG			Bill Fowler (tel)
Groveland Electric Light Department	Publicly Owned Entity		Dave Cavanaugh	
H.Q. Energy Services (U.S.) Inc. (HQUS)	Supplier	Louis Guibault (tel)	Bob Stein (tel)	
Harvard Dedicated Energy Limited	End User			Jason Frost
Hingham Municipal Lighting Plant	Publicly Owned Entity		Dave Cavanaugh	
Jericho Power, LLC	AR-RG	Ben Griffiths		
Jupiter Power LLC	Provisional			Ron Carrier (tel)
Littleton (MA) Electric Light and Water Department	Publicly Owned Entity		Dave Cavanaugh	
Mass. Attorney General's Office (MA AG)	End User	Tina Belew (tel)		
Mass. Bay Transportation Authority	Publicly Owned Entity		Dave Cavanaugh	
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	

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PARTICIPANT NAME	SECTOR/ GROUP	MEMBER NAME	ALTERNATE NAME	PROXY
Middleton Municipal Electric Department	Publicly Owned Entity		Dave Cavanaugh	
National Grid	Transmission		Tim Martin (tel)	
Natural Resource Defense Council	End User	Bruce Ho (tel)		
Nautilus Power, LLC	Generation		Bill Fowler (tel)	
New England Power Generators Association (NEPGA)	Associate Non-Voting			Molly Connors
New Hampshire Electric Cooperative	Publicly Owned Entity			Brian Forshaw (tel); Dave Cavanaugh
NextEra Energy Resources, LLC	Generation	Michelle Gardner (tel)		
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	
Pascoag Utility District	Publicly Owned Entity		Dave Cavanaugh	
Reading Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Rowley Municipal Lighting Plant	Publicly Owned Entity		Dave Cavanaugh	
Shell Energy North America	Supplier	Jeff Dannels		
Stowe Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Sunrun Inc.	AR-DG			Pete Fuller
Taunton Municipal Lighting Plant	Publicly Owned Entity		Dave Cavanaugh	
Union of Concerned Scientists	End User		Francis Pullaro (tel)	
Vermont Public Power Supply Authority	Publicly Owned Entity			Brian Forshaw (tel)
Versant Power	Transmission	Lisa Martin (tel)		
Village of Hyde Park (VT) Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Vitol Inc.	Supplier	Joe Wadsworth (tel)		
Walden Renewables Development LLC	Generation			Abby Krich (tel)
Wallingford DPU Electric Division	Publicly Owned Entity		Dave Cavanaugh	
Wellesley Municipal Light Plant	Publicly Owned Entity		Dave Cavanaugh	
Westfield Gas & Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Wheelabrator North Andover Inc.	AR-RG		Bill Fowler (tel)	