

FINAL

Pursuant to notice duly given, a meeting of the NEPOOL Participants Committee was held via teleconference beginning at 9:30 a.m. on Thursday, March 18, 2021. Attachment 1 identifies the members, alternates and temporary alternates who participated in the teleconference meeting.

Mr. David Cavanaugh, Chair, presided and Mr. Sebastian Lombardi, Acting Secretary, recorded. Mr. Cavanaugh welcomed everyone to the second meeting of Pathways to the Future Grid evaluation process. He provided an overview of the agenda. He thanked those who provided written comments following the February 18 meeting.

ISO Presentation

On behalf of the ISO, Dr. Chris Geissler reviewed materials that had been circulated and posted in advance of the meeting that discussed the ISO's plans for evaluating, by early in 2022, a forward clean energy market construct and a net carbon pricing framework. He reviewed the slides summarizing stakeholder comments on each of the pathways and the ISO's planned responses.

Forward Clean Energy Market (FCEM)

Beginning with the FCEM construct, he reviewed slides covering planned assumptions concerning market design, settlements, and three alternative approaches to address the interaction between clean energy certificates (CECs) under FCEM and existing state renewable energy certificate (RECs) programs (separate attributes tracked by CECs and RECs; CECs account for all environmental attributes for resources that receive them, with RECs received only by resources that do not receive CECs; and FCEM replaces all existing REC programs). In response to questions during his presentation, Dr. Geisler confirmed that the ISO's evaluation would include a base case with existing Market Rules that achieves the states' decarbonization goals, however implemented. He acknowledged the need to define in detail how energy storage

might be treated in both the FCEM and net carbon pricing frameworks. He committed to further analyze the implications of assuming a static value for clean energy certificates versus dynamic values that vary up and down depending on the intensity of the emissions. On this same topic, it was noted that the dynamic attribute credit issue ties directly into the carbon accounting issue. Dr. Geissler highlighted for the Committee the ISO's current view that evaluating dynamic certificates instead of static values would be far more complicated to design and model. He noted that the role of offshore wind would be explored further throughout the ISO's evaluation.

Further responding to questions and comments during his presentation, Dr. Geissler acknowledged the importance of assessing how each type of resource might fare under FCEM. He agreed that demand for CECs would certainly be affected by how RECs would be treated. He indicated that the study would seek to provide comparative data across the various approaches, acknowledging that outcomes could vary depending on assumptions made about the continuation of the REC program(s). He opined that he did not expect any modeling scenario to assume separate compensation through RECs and CECs for the very same attributes, noting however the need for further review of this issue in designing the study.

Integrated Clean Capacity Market (ICCM)

Dr. Geissler proceeded to review the portion of the presentation regarding an ICCM and how that framework would integrate with the Forward Capacity Market (FCM). Under ICCM resources would submit a single offer for two products: capacity and clean energy. A single auction would be conducted and produce integrated prices for capacity and clean energy, with the auction designed to acquire the most capacity and clean energy possible at the lowest combined prices for those two products. He explained that many details remained to be worked out with this framework, which would be more complex than FCEM because of the need for integrating the capacity and clean energy markets. He reviewed the design concept, referencing written materials previously circulated, and then turned to Mr. Steven Otto, who reviewed slides

that provided a numerical example and key observations of the potential ICCM construct, which included supply and demand parameters, clearing and awards, determination of prices, and resource compensation. He explained that the numerical example presumed that offers were fully rationable (meaning the auction could award a resource forward positions for less than that resource's maximum capacity capability). He concluded explaining that, because resources would receive two prices in the auction, one for capacity and one for clean energy, resources would receive different payment rates per MW of capacity sold, based on their quantity of clean energy that clears in the auction.

Following the presentation on ICCM, some members commented that the market design should include some degree of non-rationable offers (where a resource's award would be all-or-nothing). Commenters agreed that ICCM and FCM needed to be considered in an integrated matter. The ISO encouraged stakeholders to provide as much additional feedback as possible on this potential framework, noting that, at present, the ISO has not evaluated the implementation challenges that may arise when considering whether the ICCM framework could be sensibly translated into a more fully developed market design.

Net Carbon Pricing

Dr. Geissler continued the presentation by reviewing the straw net carbon pricing framework module, referring to additional material included within an ISO memo circulated with the meeting materials, that provided additional detail on this framework. Those materials defined the product in the market as carbon emissions, with either the price or the quantities in the market fixed. He explained that suppliers would be charged to emit and collections from those charges would be redistributed to load. He noted that, like FCEM, a decision had to be made about whether existing REC programs continue or are replaced by this new framework.

Dr. Geissler concluded his presentation noting that the ISO will evaluate market outcomes under the FCEM and the net carbon pricing frameworks with the assistance of

stakeholders and the Analysis Group. Plans called for the final report on modeled market outcomes associated with these frameworks to be shared with stakeholders in February 2022. He noted that the ISO was in the preliminary stages of determining modeling constraints and mechanical implementation, with modeling to reflect both price and quantity caps. He explained that the ISO is proposing for stakeholder consideration that the revenue collected from a net carbon price would be rebated to all Real-Time Load Obligation (RTLO) in New England, and would not vary between states. He did note, though, that payments by resources would be in direct proportion to the intensity of their carbon emissions. Further, he indicated that the ISO is still working to define how imports and exports would be handled under this framework. He indicated that it was not necessary for near-term modeling to choose between a carbon tax versus a cap-and-trade design, but that the design differences could matter later in the study process.

In discussions, Dr. Geissler acknowledged that more information needed to be assembled to identify the extent to which the net carbon pricing framework would help to meet state goals and initiatives. He said, further, that the ISO had not yet determined whether or how the Regional Greenhouse Gas Initiative (RGGI) might be included in the model.

Mr. Cavanaugh ended the meeting by noting that the next working session was scheduled for April 15. He urged that written comments be e-mailed to him and Dr. Geissler on or before March 29.

There being no further business, the meeting adjourned at 2:40 p.m.

Respectfully submitted,

Sebastian Lombardi, Acting Secretary

**PARTICIPANTS COMMITTEE MEMBERS AND ALTERNATES
PARTICIPATING IN MARCH 18, 2021 TELECONFERENCE MEETING**

PARTICIPANT NAME	SECTOR/ GROUP	MEMBER NAME	ALTERNATE NAME	PROXY
Advanced Energy Economy	Fuels Industry Participant	Caitlin Marquis		
American Petroleum Institute	Fuels Industry Participant	Paul Powers		
AR Large Renewable Generation (RG) Group Member	AR-RG	Alex Worsley		
AR Small Distributed Generation (DG) Group Member	AR-DG	Any Karetsky		
AR Small Load Response (LR) Group Member	AR-LR	Brad Swalwell		
AR Small RG Group Member	AR-RG	Erik Abend		
Ashburnham Municipal Light Plant	Publicly Owned Entity		Brian Thomson	
Associated Industries of Massachusetts (AIM)	End User			Roger Borghesani
AVANGRID: CMP/UI	Transmission		Alan Trotta	
Belmont Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Block Island Utility District	Publicly Owned Entity	Dave Cavanaugh		
Borrego Solar Systems Inc.	AR-DG	Liz Delaney		
Boylston Municipal Light Department	Publicly Owned Entity		Brian Thomson	
BP Energy Company	Supplier			José Rotger
Braintree Electric Light Department	Publicly Owned Entity			Dave Cavanaugh
Brookfield Renewable Trading and Marketing	Supplier	Aleks Mitreski		
Calpine Energy Services, LP	Supplier	Brett Kruse		Bill Fowler
Castleton Commodities Merchant Trading	Supplier			Bob Stein
Central Rivers Power	AR-RG		Dan Allegretti	
Chester Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Chicopee Municipal Lighting Plant	Publicly Owned Entity		Brian Thomson	
CLEARresult Consulting, Inc.	AR-DG	Tamera Oldfield		
Concord Municipal Light Plant	Publicly Owned Entity		Dave Cavanaugh	
Connecticut Municipal Electric Energy Coop.	Publicly Owned Entity	Brian Forshaw		
Conservation Law Foundation (CLF)	End User	Phelps Turner		
Consolidated Edison Energy, Inc.	Supplier	Norman Mah		
CPV Towantic, LLC	Generation	Joel Gordon		
Cross-Sound Cable Company (CSC)	Supplier		José Rotger	
Danvers Electric Division	Publicly Owned Entity		Dave Cavanaugh	
Dominion Energy Generation Marketing, Inc.	Generation		Weezie Nuara	
DTE Energy Trading, Inc.	Supplier			José Rotger
Dynergy Marketing and Trade, LLC	Supplier	Andy Weinstein		Bill Fowler
Emera Energy Services	Supplier			Bill Fowler
Enel X North America, Inc.	AR-LR	Michael Macrae		
Environmental Defense Fund	End User	Jollette Westbrook		
Eversource Energy	Transmission	James Daly		Parker Littlehale; Jason Stark
Exelon Generation Company	Supplier	Steve Kirk	Bill Fowler	
FirstLight Power Management, LLC	Generation	Tom Kaslow		
Galt Power, Inc.	Supplier	José Rotger		
Generation Group Member	Generation	Dennis Duffy	Abby Krich	Alex Worsley
Georgetown Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Great River Hydro	AR-RG			Bill Fowler
Groton Electric Light Department	Publicly Owned Entity		Brian Thomson	
Groveland Electric Light Department	Publicly Owned Entity		Dave Cavanaugh	
H.Q. Energy Services (U.S.) Inc. (HQUS)	Supplier	Louis Guilbault	Bob Stein	
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		Brian Thomson	

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Holyoke Gas & Electric Department	Publicly Owned Entity		Brian Thomson	
Hull Municipal Lighting Plant	Publicly Owned Entity		Brian Thomson	
Ipswich Municipal Light Department	Publicly Owned Entity		Brian Thomson	
Jericho Power LLC (Jericho)	AR-RG	Mark Spencer	Nancy Chafetz	Marji Philips
Littleton (MA) Electric Light and Water Department	Publicly Owned Entity		Dave Cavanaugh	
Long Island Power Authority (LIPA)	Supplier		Bill Killgoar	
Maine Power	Supplier	Jeff Jones		
Mansfield Municipal Electric Department	Publicly Owned Entity		Brian Thomson	
Maple Energy LLC	AR-LR			Doug Hurley
Marble River, LLC	Supplier		John Brodbeck	
Marblehead Municipal Light Department	Publicly Owned Entity		Brian Thomson	
Mass. Attorney General's Office (MA AG)	End User	Tina Belew	Ben Griffiths	
Mass. Bay Transportation Authority	Publicly Owned Entity		Dave Cavanaugh	
Mass. Municipal Wholesale Electric Company	Publicly Owned Entity	Brian Thomson		
Mercuria Energy America, LLC	Supplier			José Rotger
Merrimac Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Michael Kuser	End User		Jason York	
Middleborough Gas & Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Middleton Municipal Electric Department	Publicly Owned Entity		Dave Cavanaugh	
National Grid	Transmission	Tim Brennan	Tim Martin	
Natural Resources Defense Council	End User	Bruce Ho		
Nautilus Power, LLC	Generation		Bill Fowler	
New Hampshire Electric Cooperative	Publicly Owned Entity	Steve Kaminski		Brian. Forshaw; Dave Cavanaugh; Brian Thomson
New Hampshire Office of Consumer Advocate (NHOCA)	End User			Jason Frost
North Attleborough Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Norwood Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
NRG Power Marketing LLC	Generation		Pete Fuller	
Pascoag Utility District	Publicly Owned Entity		Dave Cavanaugh	
Paxton Municipal Light Department	Publicly Owned Entity		Brian Thomson	
Peabody Municipal Light Department	Publicly Owned Entity		Brian Thomson	
PowerOptions, Inc.	End User			Jason Frost
Princeton Municipal Light Department	Publicly Owned Entity		Brian Thomson	
PSEG Energy Resources & Trade LLC	Supplier		Eric Stallings	
Reading Municipal Light Department	Publicly Owned Entity		Dave Cavanaugh	
Repsol Energy North America	Fuels Industry Participant		Karen Iampen	
Rodan Energy Solutions (USA) Inc.	Provisional	Aaron Breidenbaugh		
Rowley Municipal Lighting Plant	Publicly Owned Entity		Dave Cavanaugh	
Russell Municipal Light Dept.	Publicly Owned Entity		Brian Thomson	
Shrewsbury Electric & Cable Operations	Publicly Owned Entity		Brian Thomson	
South Hadley Electric Light Department	Publicly Owned Entity		Brian Thomson	
Sterling Municipal Electric Light Department	Publicly Owned Entity		Brian Thomson	
Stowe Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Sunrun Inc.	AR-DG			Pete Fuller
Taunton Municipal Lighting Plant	Publicly Owned Entity		Dave Cavanaugh	
Templeton Municipal Lighting Plant	Publicly Owned Entity		Brian Thomson	
The Energy Consortium	End User	Roger Borghesani	Mary Smith	Joyceline Chow
Vermont Electric Power Company (VELCO)	Transmission	Frank Etori		
Vermont Energy Investment Corp (VEIC)	AR-LR		Doug Hurley	

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Vermont Public Power Supply Authority	Publicly Owned Entity			Brian Forshaw
Versant Power	Transmission	Lisa Martin		
Village of Hyde Park (VT) Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Wakefield Municipal Gas & Light Department	Publicly Owned Entity		Brian Thomson	
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		Brian Thomson	
Westfield Gas & Electric Department	Publicly Owned Entity		Dave Cavanaugh	
Wheelabrator North Andover Inc.	AR-RG		Bill Fowler	