**To:** Chris Geissler, ISO New England, and Dave Cavanaugh, Chair, NEPOOL Participants Committee

**From:** Advanced Energy Economy, Borrego Solar, Enel X North America, E4TheFuture

**Subject:** Feedback on Pathways to the Future Grid Analysis

**Date:** March 3, 2020

Advanced Energy Economy, Borrego Solar, Enel X North America, and E4TheFuture appreciate the opportunity to provide feedback into Phase II of the Pathways to the Future Grid effort as ISO-NE and NEPOOL define a scope for analysis. Our organizations are very support of the Pathways to the Future Grid effort initiated in response to the New England States' memo to ISO-NE in July 2019[1] and subsequent position established as part of the New England States' Energy Vision initiative launched in October 2020[2]. Our feedback is intended to ensure that the analysis provides stakeholders with information needed to assess the pros and cons of the various pathways under consideration, as well as some of the design decisions within the pathways. Specifically, to ensure a thorough exploration of all pathways that have garnered significant interest among stakeholders and the New England states, we ask that the analysis include a full exploration of the Integrated Clean Capacity Market (ICCM).

As explained in prior comments, we view ICCM as a potentially promising solution to meet the clean energy and resource reliability objectives of the New England states while evolving the regional resource adequacy construct to reflect the shifting reliability needs of a cleaner grid.[3] In particular, we believe that analyzing ICCM is important to help states and stakeholders understand:

- **The benefits of co-optimization of forward purchases of clean energy and capacity.** By co-optimizing clean energy and capacity, the ICCM reduces uncertainty and risk to suppliers of clearing in only one auction. This will reduce the risk premium these suppliers factor into their bids, and should result in lower costs and more efficient auction outcomes. These anticipated consumer cost-saving impacts should be considered and quantified.
- **The impact of the proposed forward capacity market reforms included in the ICCM proposal.** The ICCM proposal put forward by Dr. Kathleen Spees on Oct. 1, 2020 outlined a series of recommended reforms to the resource adequacy side of the co-optimized market (see slide 5 from Dr. Spees's presentation, reproduced

[1] http://nescoe.com/resource-center/2020-workplan-jul2019/
[2] http://nescoe.com/resource-center/vision-stmt-oct2020/
[3] https://nepool.com/wp-content/uploads/2021/01/FGP_FRC_-Advanced-energy-stakeholders.pdf

below for reference). In our view, these reforms are central to ensuring that the ICCM results in a resource mix that is not only sufficiently clean to meet the demand of the New England states and other voluntary buyers, but sufficiently reliable to meet the resource adequacy needs of the region as the resource mix shifts. These elements include consideration of a flexible capacity product, separate summer and winter capacity products, and reliance on resource-neutral Effective Load Carrying Capability (ELCC) based accounting, which we interpret to mean that ELCC would apply to all resource types. It is our understanding that these changes were intended to be a non-exclusive list, and we therefore encourage consideration of other resource adequacy reforms that may be beneficial. We believe consideration of these elements will also better align the Pathways analysis with ISO-NE's stated intent to reform the Minimum Offer Price Rule (MOPR) by addressing any concerns that resource adequacy needs may be undermined in the absence of MOPR.

In addition to these items that are specific to ICCM, we urge ISO-NE to study the effects of including dynamic Clean Energy Credits (CEACs) under either the FCEM or the ICCM. A dynamic credit is intended to improve the efficiency of the FCEM/ICCM as a tool to decarbonize the grid, similar to the way that carbon pricing would introduce a preference for cleaner resources in energy market dispatch. The dynamic CEAC would be available to all clean resources and is anticipated to particularly affect participation by clean, flexible balancing resources such as energy storage, electric vehicles, and distributed energy resources. A robust understanding of the financial and operational impacts on these clean, flexible balancing resources under any of the potential pathways is critical for market reform considerations moving forward. These resources are anticipated to play an essential role in the region's reliability needs as the grid decarbonizes and it is unclear if carbon pricing alone would be sufficient to incent their participation at the necessary scale.

Evaluating all of these impacts together would help stakeholders and states as they consider the design of the FCEM/ICCM, and as they weigh these options against a net carbon pricing proposal. Taken holistically, we believe ICCM, if well designed and inclusive of the proposed forward capacity market reforms, offers a viable approach to achieve the New England States' Energy Vision by providing a regional procurement mechanism for the development of new and retention of existing clean energy resources necessary to achieve the various decarbonization mandates while maintaining resource adequacy at the lowest cost. We are looking to the Pathways Analysis to help us and other stakeholders better understand the implications of the various options on the table, and believe a full exploration of ICCM is necessary to achieve that goal.

We appreciate ISO-NE's and NEPOOL's consideration of our input, and look forward to participating in Phase II of the Pathways process.

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**Dr. Kathleen Spees, October 1, 2020 NEPOOL Presentation, Slide 5:**

NEPOOL PARTICIPANTS COMMITTEE
OCT 1, 2020 MEETING, AGENDA ITEM #13

## Key design elements

| Design Element | Resource Adequacy Objectives | Clean Electricity Objectives |
|---|---|---|
| **Responsible Entity for Defining the Need** | • **ISO New England** | • **State policymakers**<br>• **Voluntary buyers** (retailers, companies) |
| **Product Definition** | • Unforced capacity (UCAP MW)<br>• Keep locational specificity (as today)<br>• *Consider also specifying*: separate summer and winter products & "flexible" capacity needs | • Clean energy attribute credit (CEAC)<br>• States would make an effort to align definitions into a uniform product to the extent possible (though multiple products would be accommodated as needed)<br>• *Consider*: "dynamic" CEAC product |
| **Supply Eligibility** | • All clean and fossil resources are eligible<br>• ELCC-based accounting for resource-neutral capacity values (by location, season, and flexibility) | • All clean resources are eligible for a "base" product<br>• All revenues are considered "in market"<br>• States can specify technology (but aim to limit the number and size to maximize competition) |
| **Quantity to Procure** | • Quantity needed to support 1-in-10<br>• Based on advanced reliability modeling that considers resource characteristics & flexibility needs in the clean grid | • States and customers decide the quantity needed<br>• Pre-existing contracts are fully accounted for in this market as self-supply |
| **Willingness to Pay** | • Sloping demand curves for each capacity product<br>• Hierarchy of needs reflected in price formation (e.g. import-constrained and "flexible" capacity prices are equal or greater than system/traditional capacity prices) | • States submit sloping demand curves for state-mandated CEAC demand<br>• Voluntary buyers can submit price-quantity pairs to exceed state mandates |

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**Source:** Dr. Kathleen Spees, "The Integrated Clean Capacity Market A Design Option for New England's Grid Transition" (presented to NEPOOL Oct. 1, 2020), available at https://nepool.com/uploads/FGP_NPC_20201001_Spees_Integrated_Clean_Capacity_Market.pdf, at 5.