



Pathways to the Future Grid

Evaluating clean energy and carbon pricing frameworks as alternative market approaches to advance the region's clean energy transition

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Pathways work will evaluate two potential market approaches to decarbonization

- ISO is working with stakeholders and the Analysis Group (AGI) to evaluate two market approaches that have been discussed as potential pathways to the future grid
 - Forward clean energy market (FCEM)
 - Net carbon pricing
- ISO plans to study both frameworks simultaneously and issue a final report in the first quarter of 2022 that discusses the market impacts of both approaches



Today's discussion provides final details regarding the central cases

- Review of work so far and a brief discussion of the draft “Final Scoping Report”
- Update on the proposed approach for Imports
- Offer thoughts on how the “Hybrid” approach might be modeled as part of this effort
- Analysis Group will continue discussion of the modeling approach and assumptions it will employ to evaluate the FCEM and net carbon pricing frameworks



Appreciate continued stakeholder engagement and feedback

- ISO welcomes feedback and questions relating to the details in the draft “Final Scoping Report”
 - Comments can be provided during committee discussions or in writing to Steven Otto (sotto@iso-ne.com) and the Chair of the Participants Committee (or designee) for posting
- Ongoing evaluation of comments and feedback
 - Continued consideration of interaction with existing state programs, model output requests, treatment of storage resources etc.
 - Today’s discussion will consider some of these topics
 - Discussion of these topics will continue at future meetings

DRAFT FINAL SCOPING REPORT



ISO and stakeholders have been working towards the final scoping report since March

- In March, ISO presented scoping documents for the two designs
 - Straw FCEM framework document is located [here](#)
 - Straw net carbon pricing document is located [here](#)
- The ISO provided thoughts and potential answers to some of the outstanding questions over the next few months as we worked towards a final scoping report, including:
 - An evaluation of a potential integrated clean capacity market (ICCM) design, located [here](#)
 - Consideration of how storage should be treated in the FCEM, located [here](#)
 - Discussion on the potential interaction between the FCEM and existing state programs, located [here](#)
 - Discussion on the modeling equivalence between the FCEM and the ICCM, located [here](#)
- ISO welcomes feedback on this report as we move to finalize it in the coming weeks



ELIGIBILITY OF IMPORTS IN A FCEM



Update on the sale of CECs from Imports

- In April, the ISO proposed that AGI's model allow the sale of CECs into New England from resources outside the region if the resource provides both CECs and RECs to the New England region
- ISO received thoughtful feedback from stakeholders during and since the April meeting
- The ISO seeks to balance two concerns:
 1. Allowing resources from outside of New England to contribute to the region's goals can reduce costs for consumers
 2. Other regions may not have clean energy requirements and so "double-counting" of clean energy may occur
 - For example, clean energy produced in New York could be accounted for by New York to meet its decarbonization goal while the same clean energy is sold to New England to meet New England's clean energy requirement



Update on the sale of CECs from Imports, cont.

- The ISO proposes the following:
 1. Clean and renewable resources in Canada will qualify for CECs
 2. Resources in New York that sell RECs into New England will qualify for CECs
 3. Clean but non-renewable resources in New York will not be eligible to sell CECs into New England
- This approach helps to reduce costs by allowing some Imports to sell CECs while avoiding “double-counting” issues by requiring that resources in New York to sell both RECs and CECs into New England
- Consistent with existing state policies, such as the [Massachusetts CES-E](#) requirement



UPDATE ON THE “HYBRID” APPROACH



Request to Model a Hybrid Approach

- In March 2021, a question was asked whether a “hybrid model” should be studied, which combines net carbon pricing and a FCEM
 - Net carbon pricing would be set at a level to ensure revenue adequacy for *existing* clean energy resources
 - *Existing* being defined as any resource with low- or zero-carbon emissions in commercial operation as of 12/31/2020
 - The FCEM mechanism would be designed to ensure financing and market participation of new clean energy resources
- In April 2021, the hybrid model was further modified/clarified
 - FCEM eligibility would include only those resources that qualify as “new” under the current FCM rules (or that cleared in a prior FCEM)
 - Net carbon pricing would be set at a level to ensure revenue adequacy for the largest existing clean energy resource, believed to be the Millstone facility

Proposed Hybrid Modeling Plan

- The ISO plans to develop the hybrid model in a staged fashion
 - The ISO/AGI would complete analysis of the FCEM/ICCM and net carbon pricing approaches in the previously committed timeframe
 - The FCEM/ICCM and net carbon pricing frameworks need to be completed first since the hybrid model builds upon those frameworks
 - If this effort is completed earlier than targeted, work could begin to build out the model of the hybrid framework
 - The ISO/AGI would then complete analysis of and report on the hybrid model thereafter
- We see the hybrid approach not as a scenario, but as a separate, additional framework
 - Staging model development as described here would make the process manageable
 - While the modeling of FCEM/ICCM and net carbon pricing frameworks is underway, stakeholders can begin to scope out necessary assumptions for the hybrid model

ISO looks forward to working with stakeholders to evaluate pathways to the future grid

- With the help of stakeholders and the Analysis Group, ISO will evaluate market outcomes under the forward clean energy market and net carbon pricing frameworks
- Welcome stakeholder feedback today on these efforts, including the two frameworks to be studied, the ISO's proposed plan to model a "Hybrid" approach, and modeling assumptions discussed next by AGI
- Share final report on modeled market outcomes with stakeholders in the first quarter of 2022
 - Plan to share draft results before the end of 2021



QUESTIONS?

