UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Modernizing Electricity Market Design	)	Docket No. AD21-10-000

COMMENTS OF NRG ENERGY, INC.

NRG Energy, Inc. ("NRG") welcomes the opportunity to provide comments in response to the May 25, 2021 Technical Conference ("Technical Conference") on resource adequacy, state policies, and ISO New England Inc.'s ("ISO-NE") markets and the Notice inviting post-technical conference comments.[1]

I. Introduction

NRG is a major competitive retailer and producer of electricity in the United States, and is a market participant in many of the independent system operators and regional transmission organizations ("ISO/RTOs") that are subject to this proceeding, including ISO-NE.

II. Summary

The Technical Conference, focused on ISO-NE, occasioned the most robust endorsements by state representatives of a market-based approach to clean energy procurements in many years. State representatives at the Technical Conference expressed that, even despite challenges in the relationship, they view ISO-NE as an important vehicle to house a regional market that could clear demand for clean energy in the form of the tradeable certificates associated with those energy resources' environmental attributes. The trade in clean energy attributes, though it has many permutations, has become

[1] Notice Inviting Post-Technical Comments, *Modernizing Electricity Market Design*, Docket No. AD21-10 (dated June 4, 2021) ("Notice").

widespread, and in New England, the tracking and registry function for these certificates is housed in NEPOOL and already coterminous with the ISO-NE's physical marketplace.[2] NRG respectfully submits that FERC should tentatively accept and further encourage development of details around the States' offer of a partnership in the vein of cooperative federalism, especially since New England likely offers the most fertile ground for such an approach of any region in the country.

In particular, commentators at the Technical Conference supported using a Forward Clean Energy Market ("FCEM") or some close variant of it. FCEM is uniquely structured to incorporate state policy objectives for clean energy resources into the wholesale markets to i) create a sustainable platform for decarbonizing the grid in a cost-effective and non-discriminatory manner, and ii) substantially reduce, if not eliminate altogether, the tensions between state policy procurements and wholesale markets.

NRG suggests that the Federal Energy Regulatory Commission ("Commission" or "FERC") issue a policy statement regarding the adaptability of FERC-jurisdictional markets to accommodate such a market design, encouraging at least ISO-NE to make a tariff filing. Issuing a policy statement would be in keeping with the encouragement the Commission has given to carbon-pricing policies adopted by the states. However, doing so in this situation would indeed be more productive because an FCEM is readily translatable to states' enacted policy designs, which lately have focused around mandating the purchase of clean energy and its attributes. Such state standards often are formulated in terms of compliance through load-serving entities' mandatory purchase obligation, subject to penalty, of tradeable credits representing the environmental attributes of megawatt-

[2] Namely through the NEPOOL Generation Information System. https://www.nepoolgis.com/about/.

hours of clean energy. On other occasions, states have directly engaged in procurements, using regulated distribution utilities' balance sheets as a conduit for this contracting. Regardless of the precise form of these state policies, facilitating a regional trade in these credits, which are closely linked to and directly affect the price of energy, is at the heart of FCEM's purpose.[3]

As Massachusetts Undersecretary of Energy Judy Chang noted at the May Technical Conference, "We do need to improve the markets as we know it today to cost effectively procure clean energy for the future. The risk of not doing so, and risk of taking a different approach is quite high, and therefore we need to get started in getting that done."[4]

III. The Technical Conference and the 'Forward Clean Energy Market' Design

Three broad themes emerged from the Technical Conference with respect to aligning ISO-NE with state policy. The first theme is the quality of the discussion and dialogue at the Technical Conference itself, which reflects the length and depth of the regional conversations on these topics over the past several years. ISO-NE in this regard is substantially more advanced than PJM, the subject of the Commission's first technical conference in this proceeding. The second is the broad support for the FCEM construct as the most viable option for regional market reform to meet States' clean energy and emissions objectives while acting as a complement to existing markets for reliability. Lastly, the third theme is the need to move with some urgency to further develop the

[3] An even more direct link between the trade that currently exists in ISO-NE for capacity and such compliance credits for clean energy standards is contemplated by a variant of FCEM, which would co-optimize the procurement of capacity and clean energy credits.

[4] Transcript of the May 25, 2021 Technical Conference in Docket No. AD21-10 ("Transcript") at 187:19-23.

FCEM concept for implementation.

The general consensus by the commissioners who led the Technical Conference was that the proceeding was a highly productive offering. Chairman Glick noted directly, "I think this was the best technical conference I've actually sat through."[5] Commissioner Danly succinctly concurred that the Technical Conference was "very good."[6] Commissioner Clements noted that three states represented at the technical conference had expressed if not an outright endorsement of "an FCEM-like construct," then a clear "openness" to it. She suggested using "where the states are as the starting point for the next iteration of the stakeholder process and conversation."[7]

Stakeholders in New England have been down this path before, seriously considering an FCEM before settling on the competitive auction for state policy resources ("CASPR"). The extent of the region's consideration of FCEM and the challenges that it addresses were highlighted by Undersecretary Chang:

> The forward clean energy market is not a new concept. We were here at the technical conference in May of 2017, and a group of people have already made this presentation. At that time it was already discussed at ISO New England and the NEPOOL process through an [Integrating Markets and Public Policy] process, and many of the states have heard about that. Four years later we're here again. This is not a design for the future. This is actually a design for what we need now going forward, and therefore we need urgent attention to ensure that we understand all of these benefits and limitations, so that we can refine the design to ensure that it meets the [States'] objectives while keeping the wholesale market as competitive as possible.[8]

Commissioner Kate Bailey of New Hampshire's Public Utilities Commission echoed the

[5] Transcript at 246:9-14.

[6] Transcript at 247:22.

[7] Transcript at 232:22-233:7.

[8] Transcript at 191:2-15.

view that FCEM is a solution for a variety of problems that States in the region have faced:

> We strongly believe a market-based solution is a better way to address the issue. The New England states, and NEPOOL stakeholders have spent considerable time on the initial conceptual development of one such market approach, a forward clean energy market. An organized market approach such as an FCEM would not only remove barriers to market entry for state-sponsored resources, but would also reduce, or possibly eliminate the uncertainty associated with timing and quantity of supported resources entering the capacity market.[9]

Similarly, Chairman Matt Nelson of the Massachusetts Department of Public Utilities argued a regional mechanism could meet the needs of multiple states, noting, a preference for FCEM over carbon pricing, because it is capable of respecting States' differing policies to procure clean energy with certain quantity and price parameters.[10]

This widespread support for moving forward with an FCEM model is based on a recognition that the current approach is neither optimal, nor scaled to the level of the New England States' ambitions. As Undersecretary Chang observed, FCEM would increase the use of competition to discipline the cost of clean-energy procurements, maximize resource diversity across the footprint, increase transparency in the market for clean energy, and decrease transaction costs.[11] A lack of willingness by FERC or others to accept an FCEM-like design itself is a choice, to relegate clean energy policy to a status quo largely defined by *ad hoc* state procurements.

Commissioner Katie Dykes of the Connecticut Department of Energy and Environmental Protection, "adopt[ing] those" views of Undersecretary Chang, also noted

[9] Transcript at 44:10-20.

[10] Transcript at 53:16-20.

[11] Transcript at 188:3-190:5.

that an FCEM would dovetail with initiatives associated with cost-sharing associated with transmission. Such a centralized procurement mechanism "also has the ability to insulate against any potential for a utility self-dealing," Commissioner Dykes noted.[12]

In short, numerous state representatives spoke positively about FCEM, going so far as to wholeheartedly embrace the concept. By the end of the conference, the discussion seemed to have moved on from presenting and offering views on the idea, to how to make efficient work toward its implementation.[13] The Commission has a role to play in this process, beyond its illuminating and valuable technical conference.

IV. FERC Should Issue a Policy Statement on Market-Based Procurement of Clean Energy Attributes

FERC recently issued a policy statement regarding carbon pricing in its jurisdictional markets.[14] The policy statement clarifies "how the Commission will approach filings submitted pursuant to Federal Power Act ("FPA") section 205 that propose RTO/ISO market rules that incorporate a state-determined carbon price," based on FERC's observation that "[p]lacing a value on GHG emissions has emerged as an important market-based tool in state efforts to reduce GHG emissions, including efforts to reduce GHG emissions from the electricity sector."[15]

[12] Transcript at 194:9-195:7.

[13] For example, Tim Brennan of National Grid suggested a design basis document be prepared for FCEM even as the ongoing stakeholder process evaluated different pathways, of which FCEM is one. Transcript at 242:17-24. However, ISO-NE still characterized themselves as in the "early stages of determining how an FCEM may work in practice." Transcript at 221:9-12. In NRG's view, that must be expedited.

[14] Carbon Pricing in the Organized Wholesale Markets, Docket No. AD20-14 (Issued April 15, 2021), (the "Carbon Policy Statement"). https://www.ferc.gov/media/ad20-14-000-041521.

[15] Carbon Policy Statement at 7.

Given the strong interest in the forward clean energy market concept in New England and other regions,[16] NRG encourages the Commission to issue a policy statement similar to that which it issued for carbon pricing. In this instance, such a statement would address "how the Commission will approach rate filings submitted under FPA section 205 to establish market rules for incorporating" state-directed demand for clean energy "into RTO/ISO markets" to achieve States' clean energy and decarbonization objectives.[17] As with the Carbon Policy Statement, such a statement would "help RTOs/ISOs and stakeholders considering the value of establishing wholesale market rules that incorporate" a forward clean energy market or similar structure "and help RTOs/ISOs to make appropriate filings with the Commission if they seek to implement such rules."[18]

In the language of the NEPOOL Integrating Markets and Public Policy ("IMAPP") process from several years ago, there were two paths being considered for aligning markets and public policies. One path was for markets to adapt and conform in order to "accommodate" State policies, and the other path was for markets to go farther and be used as a platform to "achieve" the objectives of the State policies. In today's context, eliminating or substantially narrowing the Minimum Offer Price Rule ("MOPR") is an example of "accommodating" State generation choices by lowering or eliminating barriers to the participation of State-preferred resources in the capacity market. On the other hand,

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[16] For example, New Jersey BPU Staff Report, Alternative Resource Adequacy Structures for New Jersey, June 2021, at 3, 4, 35-44, https://nj.gov/bpu/pdf/reports/NJ%20BPU%20RA%20Investigation%20(Final).pdf; Brattle Group for NYSERDA and New York Department of Public Service, Qualitative Analysis of Resource Adequacy Structures for New York, May 2020, at 18-26, http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={CF8F6FCA-AB52-492A-A089-C5C94B0B62E9}.

[17] Carbon Policy Statement at 4.

[18] *Id.*

FCEM is an example of a market structure that would be designed to "achieve" the states' clean energy objectives by explicitly incorporating their desired amounts of clean energy attributes into an annual ISO-NE auction process.

The Commission should take a concrete step to encourage work on FCEM to continue and accelerate. Given state policies, FCEM is a logical extension of the ISO's marketplace, but is a novel undertaking in terms of market design. FCEM risks either being continually shuffled to the "next phase" of market design reforms or being thought of as implausible or uncertain in its reception at the Commission. The Commission can signal that it heard the aspirations of States and stakeholders by issuing a policy statement noting the adaptability of its markets to such design proposals.

Beyond encouragement, stakeholder discussions would benefit from FERC guidance regarding design elements, features, jurisdictional questions, and key considerations that the Commission may wish to offer after listening and participating in the technical conference and familiarizing itself with the conceptual details of FCEM.[19] In particular, as Undersecretary Chang noted at the Technical Conference, "[W]e need clear guidance and clarity along the jurisdictional question because no matter what design we use as soon as the states talk about clean energy or zero emitting attributes, we want to obtain more clarity about can the states give the ISO authority to price those attributes?"[20]

Chairman Glick acknowledged the need for action to move the market reform

[19] *See* Spees et. al, *How States, Cities and Customers Can Harness Competitive Markets to Meet Ambitious Carbon Goals Through a Forward Market for Clean Energy Attributes*, September 2019, https://www.brattle.com/news-and-knowledge/publications/how-states-cities-and-customers-can-harness-competitive-markets-to-meet-ambitious-carbon-goals-through-a-forward-market-for-clean-energy-attributes-expanded-report.

[20] Transcript at 192:3-8.

process forward: "I think Undersecretary Chang and Commissioner Dykes, and maybe others have mentioned the sense of urgency, that it's nice that we're talking about these issues. We need to act."[21]

V. Responses to Post-Technical Conference Questions

NRG offers comments below in response to specific questions provided by the Commission in the Notice that bear most directly on the need for a significant transformation of the electricity system and the role of a FCEM in achieving that transformation.

1. Relationship between State Policies and ISO New England Inc.'s Markets

d. Many New England states have established long-term policy goals and/or statutory requirements to reduce greenhouse gas emissions and increase clean energy generation. Consistent with these goals, several states have instituted programs to promote the development of renewable energy resources and to retain existing zero-emitting generation resources. How do the current ISO-NE market rules affect implementation of existing or proposed state policies? If states have differing policy goals, how should these be accommodated in the ISO-NE capacity market? How do one state's actions to shape the resource mix affect other states? Should such effects be addressed, and if so, how?

Response:

ISO markets were designed to provide reliability at least cost and have never had any explicit objective to incorporate or achieve state policies regarding environmental attributes.[22] States have added these new objectives and markets have not kept up. To provide the benefits of competitive investment and innovation to the decarbonization effort that is at the core of these state policies, the state-led demand for clean energy needs to be incorporated into the ISO markets.

[21] Transcript at 236:19-22.

[22] Other than emissions that have an explicit economic cost, such as NOx, SO2 allowances and CO2 emissions under the Regional Greenhouse Gas Initiative ("RGGI").

As developed and proposed by the Brattle Group,[23] an FCEM could be implemented to be a platform to accept bids from individual states (and others) to purchase the clean energy attributes. Costs for these attributes would be allocated to parties in the states that submitted and cleared bids, and so would not flow to states that chose not to participate. This mechanism is well-suited to accommodating different policies and preferences among the states.

3. Long-Term Options and Centralized Procurement of Clean Energy

a. What benefits would a centralized clean procurement mechanism in ISO-NE provide to the ISO-NE states and the ISO-NE markets? What would be the goals of such approaches and what are important design considerations in developing any potential market mechanism? What are the downsides of pursuing such constructs? What concerns regarding potential undue discrimination may arise from implementing such new market constructs, if any?

Response:

NRG has long been an advocate of FCEM as a means to explicitly value the carbon emission attribute in the RTO markets. While NRG also supports a carbon pricing mechanism implemented on a broad geographic and economy-wide basis, that does not appear likely in the foreseeable future. An FCEM construct also has the beneficial feature of securing revenues for projects several years in advance of delivery, which can enable financing and construction of new projects. Additionally, FCEM could include an explicit multi-year price lock that can further enhance the financing of new projects, especially as many segments of the renewable energy industry are weaned off reliance on twenty-year

[23] *See* Spees et. al, *How States, Cities and Customers Can Harness Competitive Markets to Meet Ambitious Carbon Goals Through a Forward Market for Clean Energy Attributes*, September 2019, https://www.brattle.com/news-and-knowledge/publications/how-states-cities-and-customers-can-harness-competitive-markets-to-meet-ambitious-carbon-goals-through-a-forward-market-for-clean-energy-attributes-expanded-report.

purchase power agreements.

An FCEM with a uniform, technology-neutral product based on energy produced with no direct carbon emissions would also ensure that the region is securing non-emitting energy at the lowest cost and would drive innovation and cost reductions as providers and developers of all technologies strive to compete in the annual procurements. Making existing non-emitting generation eligible to supply in FCEM would also enhance the sustainability of these existing sources of clean energy and satisfy a basic economic principle of non-discrimination among providers of comparable products and services. Speakers at the Technical Conference noted this important feature of a market-based clean energy framework:

> I just want to echo that ultimately we would like to have a market that has a consistent definition of a product. And as maximum amount of competition from all resources. And I would say the broadest definition for a clean resource is a non-emitting resource, or emission free resource.[24]

> I think one of the biggest features is that transparent price signal, that allows the states to collectively compare both new and existing clean energy resources, and make the right decisions about whether we built new or reinvest in our old. That's not insignificant, and it's not insignificant for New England given difficulties in siting, permitting, across the region, taking environmental considerations into account as well as rising network upgrade costs. It's important that we fully utilize these assets, the resources, the transmission grid that we have here. We're not going to reach our greenhouse gas goals otherwise. And as others have noted, we don't want renewables simply replacing other renewables.[25]

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[24] Chang (Massachusetts), Transcript at 233:19-24.

[25] Gardner (NextEra), Transcript at 209:7-21.

b. What are potential challenges to developing the new market constructs discussed in this panel (e.g., would interstate compacts be required)? How could those challenges be overcome? For example, New England states have policies that support different types of resources (e.g., offshore wind). Could a standard product be developed and centrally procured in ISO-NE-administered markets to meet these diverse state policy goals? Given the differences in state policies, is it possible to define products that resources could provide (e.g., zero-emission generation) and incorporate the procurement of those products into Commission-jurisdictional markets?

Response:

An interstate compact would not be required. Demand in FCEM is informed by the legal requirements of each state. Certain states may have a direct-procurement regime associated with clean energy; in that case, states would voluntarily bid their demand for clean energy attributes through volume-and-price bids. Elsewhere, states may choose to impose a clean energy standard's compliance obligation on load-serving entities, which can then choose to meet that standard by bidding their demand into the FCEM. In any case, there is no need for a formally coordinated procurement by states expressed through an interstate compact. FCEM is consciously adaptive to the different points of compliance, stringency, and price ceilings that any given state may adopt (including states that do not adopt such policies).

However, this is not to say that a governance framework that includes states is unimportant. On the contrary, if ISO-NE subject to FERC jurisdiction is to become a vehicle for the accomplishment for state policy, it will be necessary to involve states in either the governance or regulation of that market. NRG has published a white paper on this topic giving extensive views of how such a federally jurisdictional market design that implicates state policies could be overseen.[26]

[26] Travis Kavulla, "Moving Forward: Approaches for State-Federal Cooperation in a Decarbonizing Electricity Sector," (Jan. 2021). https://www.nrg.com/assets/documents/white-papers/moving-forward-

One large challenge is, as the question suggests, the strong allure—and existing policies—for state policymakers to favor specific technologies or otherwise seek to limit the range of competition to meet the state's clean energy and decarbonization objectives. As is well understood in economics and mathematics, every constraint added to a problem makes it likely to produce higher cost or otherwise sub-optimal results.

At base, however, all of the state policies are rooted in securing a low-carbon energy mix that also maintains reliability, at the lowest cost for their consumers. Ultimately, the most recent turn in state policy, especially for those jurisdictions with highly ambitious goals, is to scope all sources of clean energy within the ambit of their policies. That augurs well for a market in clean energy that would work most efficiently around a uniform product definition.

c. Stakeholder discussions to date have focused on the Forward Clean Energy Market and Integrated Clean Capacity Market as potential frameworks. What are the key design features of these proposals? What are the advantages and disadvantages of these approaches?

Response:

The FCEM and ICCM frameworks rely on the same underlying framework, a centralized forward procurement of a uniform, technology-neutral clean energy attribute to be delivered several years in the future. States (and other permitted demand-side entities, such as competitive retailers, municipalities, large consumers and consumer aggregations) would submit price-and-quantity demand bids indicating their desired quantities of clean energy credits and their willingness to pay for them. The costs of cleared energy credits would be allocated to load-serving entities in the states whose demand bids cleared in the

approaches-for-state-federal-cooperation-in-a-decarbonizing-electricity-sector.pdf.

forward auction, and to individual buyers with cleared demand bids.

The ICCM is a specialized version of the FCEM in which the FCEM is conducted as a co-optimized part of the Forward Capacity Market ("FCM"), rather than as a sequential auction, most likely before or perhaps after the FCM auction. In the sequential approach, one of the challenges will be to develop rules for reflecting the results of the first auction in the second. For example, would securing a FCEM obligation automatically entitle a resource to a cleared position in the FCM auction? Or would the FCEM result be factored in, either administratively or at the option of the resource owner, in price offers into the subsequent FCM auction? Or would there be some other rule?

On the other hand, the ICCM would integrate and consciously link the trades in capacity and clean energy attributes. ICCM proponents argue that the greater efficiency would come from explicitly trading off, at the margin, the cost of adding another non-emitting resource and its associated clean energy credits against adding a resource that can provide capacity but no clean energy, to produce the two objectives of the system—reliability and clean energy—at the lowest overall cost. A sequential approach, requiring an administrative rule for coordinating results, would not have the means to make this type of trade-off on a centralized basis. Instead, in the sequential FCEM, clean energy owners are in the position of making offers consistent with their view of the premium their clean-energy production needs above expected capacity, energy, and ancillary services revenue to bring a new project online or to have an existing but uneconomic project retained. Fundamentally, this sequential approach is not unlike what offerors into FCM do today in estimating the likely amount of incremental revenue they will need beyond energy and ancillary services revenue they expect to earn, which informs their capacity offers.

d. Given that many state policy goals target electricity generation (e.g., Renewable Portfolio Standards that target a percentage of electric loads), would it be more effective to develop such a construct within the energy and ancillary services markets?

Response:

Better recognition of the value of non-emitting generation sources in the energy markets, such as through the 'Net Carbon Pricing' mechanism being evaluated in the NEPOOL Pathways process would certainly be helpful in the overall decarbonization effort. A trade in MWh-denominated clean energy credits already is substantially linked to the energy markets. Just like an external carbon price on emissions produced by certain MWhs, which will increase certain generators' costs and thus offers into the energy market, a state-level purchase obligation for clean energy credits will similarly affect energy-market offers, albeit in the opposite direction of carbon pricing, by reducing the cost of clean resources must be recovered in the energy market.

The Commission should recognize that the tradeable certificates used both to demonstrate compliance with state clean energy policies and to reflect voluntary customer commitments to procure a certain type of energy have become an important, widely commercialized aspect of the energy markets. The Commission can acknowledge the link and affects that a trade in energy, capacity, and these certificates have on one another without insisting that the latter to be fully subsumed within the price of energy.

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VI. Conclusion

NRG respectfully requests that the Commission accept these comments and issue a policy statement regarding the adaptability of FERC jurisdictional markets to accommodate such a market design, encouraging at least ISO-NE to make a tariff filing.

Respectfully submitted,

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