

**Connecticut Department of Energy and Environmental Protection
2018 Integrated Resources Plan
Written Comments on Section 2: Policy Assessment of Deregulation**

The New England Power Generators Association (NEPGA)¹ appreciates the opportunity to provide comments on the Department of Energy and Environmental Protection's (DEEP) 2018 Integrated Resources Plan (IRP) Revised Scope and Procedural Schedule. Specifically, NEPGA provides these comments in response to Section 2 of the 2018 IRP's Revised Scope, Policy Assessment of Deregulation, and the questions posed in DEEP's January 8, 2020 Notice of Technical Meeting and Opportunity for Public Comment.

NEPGA is the trade association that represents competitive electric generating companies in New England. NEPGA's member companies account for approximately 25,000 MW – or nearly 90% of all generating capacity throughout New England – and roughly 8,074 MW in Connecticut. NEPGA companies also provide thousands of well-paying, highly skilled jobs to the state's workforce, pay millions of dollars in taxes to the state and its cities and towns and contribute millions of dollars in income taxes paid by employees. NEPGA's mission is to support competitive wholesale electricity markets in New England. NEPGA believes that open markets guided by stable public policies are the best means to provide reliable and competitively priced electricity for consumers. A sensible, market-based approach furthers economic development, jobs and balanced environmental policy for the region.

NEPGA recognizes Connecticut's responsibility of fulfilling important state policies and objectives, such as those laid out in Section 16a-3a of the Connecticut General Statutes regarding reliability and ratepayer impacts of the electricity system in conjunction with Connecticut's environmental mandates and goals.

NEPGA believes that the best path forward for achieving these goals is to work within the regional competitive markets' framework. NEPGA agrees that Connecticut's policy needs are not priced into the competitive wholesale market. It is for that reason that NEPGA supports the development of a long-term, durable wholesale electricity market design, one that accounts for the value of carbon, which is currently absent from the markets. Such a design would support broader electrification and investment in new clean energy technologies, particularly in the transportation and building sectors. In addition, an improved market design would also appropriately value reliability services

¹ The comments expressed herein represent those of NEPGA as an organization, but not necessarily those of any particular member.

provided by resources, particularly in an increasingly variable system with large-scale integration of other renewable and clean resources.

I. What is the long-run compatibility of deregulation of Connecticut's electric energy utilities and associated market rules, administered by ISO New England, Inc. and regulated by the Federal Energy Regulatory Commission, with Connecticut's public policies and goals?

It is important to place the compatibility of the region's competitive markets and Connecticut's public policies and goals into context. Before restructuring of the electricity industry in 1998, utility ownership of generation created limited incentives for innovation or efficiencies, leaving Connecticut's captive ratepayers vulnerable to high electricity supply costs, the risk of poor investments, and higher-emitting power plants. Since restructuring, Connecticut's consumers have realized numerous benefits from a vibrant, competitive marketplace, including:

- Average annual wholesale energy prices in New England have declined roughly 58% since 2008;²
- Forward Capacity Auction clearing prices have been dropping in recent years, from \$9.55/kW month (FCA #9) to \$3.80/kW month (FCA #13), while spurring 3,794 MW of new resource additions during that period;³
- The electricity supply portion of an average Eversource customer monthly bill in Connecticut has lowered from \$71.00 to \$58.39 – an 18% reduction – from 2009 to 2019
- Carbon dioxide (CO₂) emissions from power plants in Connecticut have dropped by 45% since 1990, and have actually come down 50% since the emissions peak in 1997, right before restructuring was passed in Connecticut;⁴

As part of the IRP revised scope, Connecticut is also investigating pathways to obtain a 100% renewable electricity supply by 2040, as directed by Executive Order No. 3. Over the last several years, Connecticut has sought to fulfill this goal primarily through the procurement of additional renewable resources under long-term contracts. However, the carbon reduction value of state-sponsored resources is not reflected in the energy market, which leads to distorted price signals and uncompetitive outcomes. State-supported resources also result in higher energy costs and subject Connecticut's ratepayers to greater risk for any cost overruns or stranded costs, particularly as technologies evolve and some become outdated.

Over the long run, the problem will only increase as more state policy resources are procured over time. Unable to rely on market revenues, existing resources may have no

² https://www.iso-ne.com/static-assets/documents/2019/03/20190312_pr_2018-price-release.pdf

³ <https://www.iso-ne.com/about/key-stats/markets#fcareresults>

⁴ <http://www.eia.gov/environment/emissions/state/>, released October 23, 2019

choice but to permanently retire and exit from the markets. However, a number of these existing resources may be needed for reliability.

Recent comments by Potomac Economics, Ltd., the independent Market Monitoring Unit for the New York Independent System Operator, Inc. (NYISO), illustrate the pitfalls of transitioning from a capacity market to a procurement model that relies on bilateral contracts to meet its resource adequacy needs, similar to the mechanism used in California.⁵ Potomac Economics highlights the competitive markets' ability to attract private investment through transparent price signals to produce the most efficient supply of resources to meet demand where and when it is needed. The market does this while shifting risk away from utility ratepayers who, before restructuring, bore the brunt of decisions made by utilities that had neither the incentive nor the ability to properly value the unique aspects of different resource types and manage long-term risk. As their New York comments note:

“Ultimately, the Procurement Model is much less efficient than the NYISO’s centralized market that provides transparent, non-discriminatory pricing where resources compete to sell a single capacity product. Robust competition between new and existing resources creates opportunities to make low-cost uprates, retrofits, and repowerings of existing generators, encourages timely retirement of units that are no longer economic, and postpones the need to invest in costly new generation resources. Suppliers can profit from such low-cost investment opportunities in a competitive market like the NYISO, while suppliers have little incentive to make such investments under the Procurement Model.”

Citing remarks from California’s electric utilities, Potomac Economics also contrasts the market structure in the Northeast with the bilateral-based market in California, with the competitive markets like those being uniquely suited to help states achieve their greenhouse gas (GHG) emissions targets through a thoughtful approach that avoids costly contracts to retain resources needed for reliability:

“The California IOUs also stated that ‘While retirement of thermal resources should be expected and is necessary to meet the state’s emissions goals, it is important that such retirements occur in an orderly manner. This orderly manner must consider reliability and the attributes of those emitting resources that are retained to meet reliability as the transition to a zero-emitting fleet occurs. The recent increase in proposed reliability must-run (RMR) contracts for gas-fired generators demonstrates the structure of the current RA program is failing to secure the operation of resources the California Independent System Operator (CAISO) deems necessary for reliability during this transition to a cleaner resource fleet.’ The California procurement model cannot efficiently coordinate retirements with new entry. This coordination occurs naturally in a competitive market with transparent price signals to govern decisions by generators

⁵ State of New York Public Service Commission, Reply Comments of Potomac Economics, Ltd., *Proceeding on Motion of the Commission to Consider Resource Adequacy Matters*, Case 19-E-0530 (February 3, 2020)

to invest or retire.”

New England, of course, is different from both California and New York. Here, ISO-NE developed the Competitive Auction for State Policy Resources (CASPR) as a way to reconcile state policy objectives and competitive market outcomes. NEPGA supports CASPR as a compromise solution to accommodate new state-supported resources in the Forward Capacity Market (FCM) while minimizing adverse impacts on competitive market pricing. While some would prefer an even more rapid entry by state-supported resources into the FCM, others are concerned that CASPR only minimizes, and does not eliminate, adverse impacts on competitive price formation. Nonetheless, CASPR offers a pathway into the market today to accommodate state policy resources while preserving competitive market price formation.

NEPGA believes it is important to distinguish the Federal Energy Regulatory Commission’s (FERC) recent Minimum Offer Price Rule (MOPR) directions in PJM from the New England market. Unlike PJM, New England stakeholders pulled together to implement the CASPR mechanism to accommodate state policy resource entry by pairing that entry with retirement of existing generating resources. We remain committed to improve the competitive market design and its alignment with Connecticut’s policy priorities. NEPGA has specifically suggested improvements to carbon pricing to value the carbon reduction benefits of Connecticut policy imperatives.

However, NEPGA believes that integrating a meaningful price on CO₂ emissions offers an even better path for competitive entry of state policy resources into the wholesale market. More discussion on this issue follows under question two.

NEPGA notes that DEEP has previously examined the impact on Connecticut of participation in ISO-NE’s electricity markets and proposed changes to the current system to correct any flaws in the regional market that adversely impact Connecticut’s ratepayers.⁶ That 2012 study’s findings cited a similar 2008 report by the State of Maine’s Public Utilities Commission (Maine PUC) that examined the costs and benefits of Maine’s utilities withdrawing from ISO-NE and the reasonable options for replacing the services provided by ISO-NE.⁷ Although the Maine PUC identified shortcomings in the areas of transmission cost containment, transmission cost allocation, and ISO-NE governance, it nonetheless committed “to participate actively within the ISO-NE stakeholder process to achieve necessary reforms,” rather than exit the ISO-NE markets altogether.

DEEP’s 2012 report arrived at a similar conclusion:

“The Maine study clearly demonstrates that forming a new market structure may expose ratepayers to several risks and may not yield significant savings from a

⁶ Department of Energy and Environmental Protection, *Study of the Independent System Operator-New England (ISO-NE) Pursuant to section 35 of Public Act 11-80* (August 28, 2012)

⁷ Maine Public Utilities Commission, *Investigation of Maine Utilities Continued Participation in ISO-NE*, Docket No. 2008-156 (January 16, 2009)

total retail electricity perspective. If the legislature wishes to move forward with further action around ISO-NE involvement, DEEP believes that a more detailed cost-benefit analysis is required to determine the magnitude of any long-term savings that could be achieved through a withdrawal from ISO-NE. Absent further study, DEEP proposes to work within the current framework to diligently pursue the state's policy priorities and to be more engaged at the regional and federal level."

NEPGA agrees with DEEP's earlier proposal to work within the current regional market framework to identify a long-term market design to help Connecticut achieve its policy goals. The most successful outcome is one where Connecticut articulates its policy objectives and then allows the competitive markets to develop innovative solutions to meet those objectives.

While Connecticut's policy initiatives will increase the extent of energy supplied by renewable resources, it will still be necessary to maintain a reliable set of generation to assure reliable electric service when renewable generation drops off. For this reason, NEPGA continues to support a well-functioning wholesale capacity market to provide the competitive revenues necessary to sustain this fleet. It is in that way that the capacity market remains necessary even if Connecticut continues to purchase energy.

Despite the claim from one commenter in this proceeding that certain state-contracted resources are at cost parity with certain resources that have cleared the wholesale capacity market, the total costs borne by customers remains lower through the capacity market construct than through bilateral contracting. First, the capacity cost at which new resources clear the market are only applicable for at most seven years for that specific resource. Beyond that, they face the same supply and demand fundamentals as all other competing resources, a competition not faced by the 20 to 25-year contracts that support state-contracted resources. After those seven years, capacity prices for new resources revert to the annual market price of capacity, which as noted earlier, has significantly fallen since FCA 9. Second, while the cost of capacity in the market was indeed \$9.55 in FCA 9, in subsequent years, the market cost of capacity dramatically declined, ensuring that the weighted cost of capacity paid by customers in subsequent years is dramatically lower than the amount collected by new resources clearing in that auction over their initial seven-year price lock period. Capacity and long-term energy contracts are quite simply different products; attempting to equate them by comparing their respective costs in their first year is inaccurate and misleading.

II. Are there alternative market designs that would better-align with Connecticut's public policies and goals? If yes, what are the strengths and weaknesses of each alternative

NEPGA proposes two paths to better align the regional markets with Connecticut's public policies and goals: (1) CO₂ pricing; and (2) identify and value those products and services needed to maintain system reliability

- (1) NEPGA supports a meaningful, multi-sector CO₂ price that can be put into the energy market to drive down GHG emissions and send a price signal to incentivize investment in low and zero carbon resources.

A meaningful CO₂ price in the energy market would not only reduce emissions, but it would also spur investment in clean technologies through transparent price signals to consumers to seek low and zero carbon alternatives, while providing investors with the financial incentive to develop increasingly affordable clean energy resources. In addition to attracting new resources, a CO₂ price would also provide Connecticut with greater assurance of continued investments in existing low and zero carbon resources that will be needed to support greater penetrations of wind and solar. It would also reduce the need for Connecticut to rely on long-term contracting and other out-of-market mechanisms to achieve its public policy objectives, including its emissions reduction mandates.

To be truly effective, a carbon price should be applied on a multi-sector basis to support increasing electrification of transportation and building sectors, providing investors, entrepreneurs, and manufacturers with the financial incentive to develop increasingly affordable clean transportation and heating options to meet consumer demand. A multi-sector carbon price would also reduce cost disparities between sectors and the perverse incentives that would discourage a shift toward cleaner technologies. Proceeds from carbon pricing could be used to fund Connecticut's clean energy initiatives, such as EVConnecticut, providing additional support to the state's low and zero carbon programs and policies.

Finally, NEPGA recognizes Connecticut's concern with a CO₂ price subject to FERC jurisdiction. The pursuit of an economy-wide carbon price reflective of the carbon reduction benefits of Connecticut policy initiatives is possible through the Regional Greenhouse Gas Initiative (RGGI). RGGI allowance prices are not subject to FERC jurisdiction but are cost inputs incorporated into a generator's offers in the energy market. A CO₂ price could be treated similarly, providing state control over price levels and avoiding the jurisdictional concerns that have been previously raised. However, in order to achieve that goal, the reach and level of carbon pricing would need to be improved beyond what RGGI currently provides.

- (2) NEPGA supports market improvements to identify and value those products and services needed to maintain system reliability

NEPGA believes that the FCM is an important tool for states to ensure reliability at least cost to consumers. Substantial penalties exist for non-performing resources, ensuring that consumers get the reliability they pay for. However, NEPGA recognizes that the region's resource mix will continue to change and feature more variable resources, such as wind and solar. The electricity market should be designed to adequately recognize and value the energy and ancillary services that will be needed to maintain reliability in an increasingly variable or intermittent system.

ISO-NE's ongoing development of its Energy Security Improvements initiative is a positive first step in this regard. The proposed reforms are largely composed of expanding energy reserve products, co-optimizing day-ahead and real-time reserves, and improving pricing during times of scarcity. These changes are targeted at improving fuel security in the region, but these market improvements may also provide a foundation for the changes needed with the changing resource mix in the region.

As noted in our October 29, 2019 comments on the IRP revised scope and procedural schedule, NEPGA recommends an assessment of state policy impacts on existing resources needed to reliably operate the system (e.g., fuel security, ramping) resources during the transition to a zero-carbon grid. A grid in transition may have different needs along the way as renewable penetration increases. It will be important for the state to understand how the timing of any regulations affecting existing resources may interact with the timing of its clean energy goals and to ensure an orderly transition over the timeline to 2040.

For example, the region's system will likely need to rely on dispatchable resources that can respond quickly when solar and wind technologies are unable to perform because of changing weather conditions. These flexible resources will play an important role to balance the system, ensuring ongoing reliability and stability as new zero carbon resources are added and over time. This is true even as electricity storage systems expand and potentially improve in charge duration, cycle life and cost.

In conclusion, NEPGA remains committed to helping Connecticut achieve its policy objectives through a durable market design that recognizes and values the cost of carbon while maintaining a resilient and reliable power system. We look forward to working with DEEP and other stakeholders in the region to identify and define those products and services that will be needed to achieve a market solution to Connecticut's policy needs.