October 2, 2024

NECPUC Demand Response and Load Flexibility Working Group
P.O. Box 9111
Essex, VT 05451

Re: Wholesale Market Design and Other Considerations that would facilitate greater adoption of demand response and address winter energy adequacy challenges

Dear Chairman Phil Bartlett and the NECPUC Demand Response and Load Flexibility Working Group,

CPower appreciates the opportunity to provide comments on wholesale market program and other design considerations that will enable more widespread adoption of demand response (DR) and help mitigate New England winter energy adequacy issues.

CPower believes the best approach to spur adoption of more DR and mitigate winter energy adequacy issues is through a combination of capacity cost allocation change and retail program expansion. Wholesale market changes alone are unlikely to achieve these goals because certain challenges inherent in the ISO-NE market design make it a poor fit for many potential DR customers. These challenges are likely to remain for the foreseeable future, particularly in light of the recent resolution on Order 2222 compliance.[1] As a result, it will be critical to strengthen retail programs to achieve greater deployment of DR. We discuss this in more detail below.

Comments

1. **The current structure of the wholesale market is not conducive to widespread adoption of demand response and flexible load.**

[1] See Docket No. ER22-983, FERC issued Orders accepting all material aspects of ISO-NE's compliance filing on May 23, 2024; November 2, 2023, October 6, 2023, and March 1, 2023. See also Advanced Energy United's May 30, 2024 protest and December 4, 2023 rehearing request outlining the infirmities in ISO-NE's compliance plan.

The current demand response participation model in ISO-NE enables only a small segment of potential customers to provide load reductions in the wholesale market – specifically customers who can afford the required telemetry and deal with the complexity and risk inherent in the market. This pool of eligible customers has remained virtually unchanged over the last several years, as illustrated by the static amount of dispatchable demand response ("active DR") clearing the capacity market. Roughly 500 MW or so of active DR – about 2% of the peak load[2] - clears the ISO-NE capacity market every year. Nearby regions have achieved DR adoption in amounts that are at least twice as high as this. In PJM's most recent capacity auction, 8,234 MW of DR cleared,[3] which represents roughly 5.6% of the most recent peak load of 146,843 MW.[4] In NYISO, there was 1,281 MW of DR on the system as of late 2023,[5] which represents 4.5% of the most recent peak load of 28,735 MW[6].

Many more potential DR customers in New England could be accessed by providing an avenue for participation that removes identified barriers and improves incentives. This avenue likely isn't through the wholesale market.

a. *The complexity of the ISO-NE market is off-putting to many potential DR customers*

One need only review the hundreds of pages of Tariff rules underlying the ISO-NE market to get a sense of its complexity.[7] As CPower noted in its August 30, 2024

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[2] See ISO-NE September 2024 NEPOOL Participants Committee Report, slides 51 – 55 https://www.iso-ne.com/static-assets/documents/100015/september-2024-coo-report.pdf for DR values; slide 5 shows the most recent peak load value of 24,816 MW

[3] See PJM 2025/2026 Base Residual Auction Report, page 9 https://www.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/2025-2026/2025-2026-base-residual-auction-report.ashx

[4] See PJM Interconnection Summer 2023 Coincident Peak, By Zone, page 2 https://www.pjm.com/-/media/planning/res-adeq/load-forecast/summer-2023-peaks-and-5cps.ashx

[5] See NYISO 2023 Annual Report on Demand Response Programs, page 6 https://www.nyiso.com/documents/20142/43322405/NYISO-2023-Annual-Report-on-Demand-Response-Programs.pdf/7db01a72-f317-380e-ded1-3f7d8bf88a96#:~:text=NYISO%202023%20Annual%20Report%20on%20Demand%20Response%20Programs.%20I.%20Program

[6] See NYISO "2023 Peak Dates & Times", slide 3 https://www.nyiso.com/documents/20142/39672768/2024_IRM_ICAP_Schedules_V2.pdf/f917e470-abf3-4629-987f-6fa917d3f975

[7] See ISO New England Inc. Transmission, Market, and Services Tariff, Market Rule 1 https://www.iso-ne.com/participate/rules-procedures/tariff/market-rule-1

comments on retail program considerations, customers are less likely to participate in programs/markets with complex rules that make it difficult for them to determine the costs and benefits. In addition, overly complex rules create administrative burdens that generally translate to a higher cost of participation.

CPower is not suggesting that ISO-NE consider changes to reduce the complexity of its market; many of the complicated aspects of the market are deeply ingrained features that serve a purpose. CPower is suggesting instead that some customers are simply not good candidates for participation in the ISO-NE market and therefore alternative avenues for incenting them to provide demand response must be pursued.

b. ISO-NE's Pay for Performance (PFP) penalty construct creates risk is that is unacceptable to some DR customers

The ISO-NE PFP construct penalizes capacity resources that do not provide their share of system needs during scarcity events. For many potential DR customers, this creates unacceptable risk. Unlike other types of resources that participate in the ISO-NE market, DR customers are, by definition, not in the business of providing services to the ISO-NE market. Their main focus is, by necessity, their primary business or their home and family; providing DR is a way to help the grid and earn an incentive for doing this. When this incentive comes with a potential penalty that could result in the customer losing its entire incentive and then some, this is simply too risky for many customers.

CPower is not suggesting that ISO-NE provide a lower risk option for demand response. Rather it is suggesting that for some customers, wholesale market participation will never be a good fit and therefore other alternatives should be pursued to incent load reductions from these customers.

c. Current capacity prices, especially coupled with PFP risk, are not sufficient to incent DR participation for many customers

While low capacity prices are good for ratepayers, these prices are not sufficient, in many cases, to incent demand response. More importantly, ISO-NE has acknowledged that solutions outside of the capacity market are needed to address energy adequacy issues.[8] Commercial customers providing DR often have to halt business processes in order to curtail demand; this results in loss of productivity and financial damages. These costs are unique to each customer, but for many, these costs are quite high. Given this, it will be difficult to grow DR in the region without providing incentives that are more attractive and targeted than what the current ISO-NE market provides.

CPower recommends extending value-based incentives similar to those in the ConnectedSolutions program – to the winter months. (These value-based incentives are often called "pay for performance" incentives; to avoid confusing these incentives with ISO-NE's PFP construct, we will refer to them as "value-based" incentives herein). Value-based incentives have been effective in incenting performance in retail programs throughout New England. In Massachusetts alone, the ConnectedSolutions Program achieved a peak load reduction 171 MW last year.[9]

d. *Order 2222 compliance changes failed to remove known barriers to participation*

Order 2222 was intended to remove barriers to wholesale market participation for distributed energy resources (DERs).[10] As outlined by Advanced Energy United (AEU) in its comments in the Order 2222 proceeding,[11] these barriers include among other things, metering costs and baseline limitations. Specifically, it is cost-prohibitive for most small customers to install the type of metering required by the ISO-NE market. FERC's final decision on Order 2222 left the current metering requirements intact.[12]

Additionally, the current baseline methodology is unworkable for customers who curtail relatively frequently. For example, it may be economic for a customer with onsite battery storage to provide a load reduction fairly often. Due to the current

[8] See ISO-NE's April 15, 2020 compliance filing, Docket No. ER07-476, Section 2.4 "Why Doesn't Pay-for-Performance Solve This?" https://www.iso-ne.com/static-assets/documents/2020/04/energy_security_improvements_filing.pdf

[9] MassSave Connected Solutions 2024 Preseason Update, slide 5 (slides have not been posted publicly but are available upon request)

[10] See FERC Explainer on Order 2222 https://www.ferc.gov/ferc-order-no-2222-explainer-facilitating-participation-electricity-markets-distributed-energy

[11] Docket No. ER22-983. See Advanced Energy United's May 30, 2023 protest, Section B on issues related to proposed metering configurations

[12] Docket No. ER22-983, See FERC's November 2, 2023 Order on Compliance Filing, paragraph 75 which accepts ISO-NE's proposal to allow metering only at the retail delivery point.

baseline construct, however, this customer would soon find that even though they are deploying their battery, they would not be getting credit for providing a load reduction.

Given these shortcomings, we expect that it will be challenging for many types of behind the meter distributed energy resources (DERs) to participate in ISO-NE's market. While these issues may be revisited at some point in the future, we believe they are unlikely to be addressed any time soon. As a result, it is critical that other avenues for capturing the value from DR and DERs be developed in order to fully realize the benefits that these resources can provide to the system.

2. **CPower believes the best approach to spur adoption of more DR and mitigate winter energy adequacy issues is through a combination of capacity cost allocation change and retail program expansion.**

   a. ***Adopting retail programs that reduce winter peak loads would help preserve scarce fuel inventory and address winter energy adequacy challenges***

Today, all of the New England states have put in place retail programs or pilots aimed at reducing summer peak loads. These programs include, among others, ConnectedSolutions in Massachusetts, Connecticut, Rhode Island, and New Hampshire, Energy Storage Solutions (Connecticut), and the Demand Management Program (Maine). All of these Programs have been successful in reducing peak demand in New England which has resulted in lower capacity, transmission, and other costs, as well as emissions reductions.[13]

Similar programs, aimed at reducing winter peak loads, could help ISO-NE address energy adequacy challenges while reducing costs to ratepayer and delivering emissions reductions. The primary challenge that ISO-NE faces in the winter is the potential for running short of energy because during periods of peak demand it is highly dependent on stored fuels (i.e. oil and LNG) which may be in short supply.[14] Moreover, roughly 5,000 MW of "fuel secure" resources are at risk of retirement in the

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[13] See Avoided Energy Supply Components in New England: 2024 Report which documents the costs that are avoided by reducing load https://www.synapse-energy.com/aesc-2024-materials

[14] See ISO-NE presentation submitted on September 2, 2022 in Docket No. AD22-9, slide 8

coming years[15] and winter peak demand is forecast to rise.[16] Reducing demand during periods of time when ISO-NE is relying on stored fuels (i.e. high load winter days) would help reduce the risk of running short of energy during a cold snap.

CPower suggests a two-pronged approach to incenting winter peak load reductions: 1) put in place value-based retail programs that reward customers who curtail load in response to dispatch instructions during the winter months, and 2) reform capacity cost allocation so that a portion of capacity costs are allocated based on winter peak loads.

b. Allocating winter and summer capacity costs separately based on the respective season's peak hour from the prior year would strengthen incentives for providing demand reductions during winter peak hours.

Today, capacity costs are allocated to loads based on their contribution to the peak load hour from the prior year. This means that customers in current peak load reduction programs like ConnectedSolutions realize a "double benefit" when they curtail in response to a program dispatch instruction: 1) they earn the value based incentive, and 2) they reduce their capacity costs by curtailing during the peak hour. This double benefit creates a powerful incentive to curtail and allows retail programs to pay a lower incentive rate than they would need to otherwise to incent the same behavior.

Similarly, if a winter peak load reduction program was adopted, and customers could reduce their capacity costs by following the dispatch instructions from that program, this would create a strong incentive to curtail during winter peaks and would lower the incentive rate that customers need.

As the Working Group knows, ISO-NE is considering significant changes to the capacity market for implementation with the 2028/29 commitment period. These changes include shifting from annual capacity auctions to prompt, seasonal auctions. This is likely the natural time to implement a change to capacity cost allocation, however, this does not mean that it makes sense to wait until 2028 to implement new retail programs. Winter energy adequacy risks exist today and should be addressed as

[15] Id
[16] Id, slide 9

soon as practicable. Notably, incentive rates for such programs would need to be higher in the near-term since customers would not be realizing a double-benefit, but the rate could be lowered once a seasonal capacity cost allocation was put in place.

Conclusion

CPower appreciates the opportunity to provide these comments on wholesale market program and other design considerations that will enable more widespread adoption of DR and help mitigate winter energy adequacy issues. CPower looks forward to continuing to work with the Working Group to develop a framework that will aid state regulators in developing programs that can most effectively address challenges related to winter energy adequacy and peak demand growth.

Sincerely,

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