



PO Box 65491
Washington, DC 20035

p 202.580.8284
e info@aem-alliance.org

aem-alliance.org

Submitted via electronic email to DER_Feedback@nyiso.com

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James Pigeon, Manager, Distributed Resource Integration and Staff
New York Independent System Operator
10 Krey Boulevard
Rensselaer, NY 12144

RE: Advanced Energy Management Alliance Comments on NYISO Distributed Energy Resource Market Design

Dear Mr. Pigeon;

The following are comments from Advanced Energy Management Alliance (“AEMA”) regarding the New York Independent System Operator (“NYISO”) Distributed Energy Resource Market Design (“DER Market Design”). AEMA is a trade association under Section 501(c)(6) of the Federal tax code whose members include national distributed energy resource (“DER”), demand response (“DR”), and advanced energy management service and technology providers, as well as some of the nation’s largest consumer resources, who support advanced energy management solutions due to the electricity cost savings those solutions provide to their businesses. These comments

represent the opinions of AEMA as an organization rather than those of any individual association members.

Introduction

In a presentation posted for the December 18, 2018 ICAP/MIWG/PRLWG meeting, the NYISO provided a comprehensive set of slides that brought together all non-capacity market related changes for the DER Market Design. While stakeholders opted not to do a full walk through of the materials during the meeting, several stakeholders agreed to review and provide written feedback to NYISO staff on areas of the market design where there are still concerns to be addressed. The subject areas of these concerns center around aggregation rules for capacity sales, audit requirements, telemetry requirements, and buyer-side mitigation (“BSM”).

Aggregation for Capacity Limited to Transmission Nodes

Earlier in the DER Roadmap process, AEMA and several other stakeholders expressed concerns with the NYISO’s proposal to restrict aggregation to the transmission node level in the energy market.¹ While we still disagree with the NYISO’s position, and note that it is not aligned with other ISOs, we also recognize that this issue is before FERC in the DER Notice of Proposed Rulemaking docket and it is not productive to debate it further in this stakeholder process.

However, NYISO’s reasoning for wanting nodal aggregation in the energy market does not extend to the capacity market. Regarding the energy market, NYISO is

¹ See comments from March 9, 2017 titled “Comments of DER Providers and Supporters to the NYISO Regarding DER Aggregation”.

concerned that dispatching across transmission nodes could have the potential to exacerbate transmission constraints. Capacity resources are not dispatched in the DER model, however, so the same reliability concerns do not exist.

Depriving aggregators the ability to aggregate more broadly for capacity resources will reduce the amount of megawatts (“MW”) participating in the market and negatively impact competition and reliability. Consider an example of two customers located at two different but adjacent transmission nodes. Customer A is an office building and can reduce 1 MW of load from 8 a.m. – 6 p.m. and 500 kilowatts (“kW”) of load from 6 p.m. - 8 a.m. Customer B is a multi-family building and can reduce 500 kW of load from 8 a.m. – 6 p.m. and 1 MW of load from 6 p.m. - 8 a.m.. Let us assume that this is for the summer and the customers are served by the same aggregator. At any one time, the customers can combine to provide 1.5 MW of available capacity that is deliverable throughout the entire capacity zone. But if the capacity resource is limited to the aggregation node, then each customer can only be enrolled for 500 kW each, or 1 MW of total capacity. In this case, 500 kW is stranded that could be available to the NYISO control room during peak or emergency conditions and customers are highly unlikely to enroll those kW in the energy market if they are not in the capacity market.

We recognize that the NYISO will want to know where capacity is located and what specific resources and kW are available for dispatch at any point in time. But that will need to be done regardless of how the capacity resource is aggregated; when bidding into the energy market, resources will need to accurately state their availability by each

transmission node, as it is the energy resource aggregated at the transmission node that will need to be bid into the energy market.

Capacity is a planning tool procured at a zonal, not nodal, level. If NYISO needed to plan capacity down to the transmission node, then it would run nodal auctions.

Therefore, we recommend that the NYISO allow capacity resources to be aggregated at the load zone level.

To the extent that the NYISO believes the DER participation model will provide a more useful resource to the NYISO than the current Special Case Resource (“SCR”) product, it does not make sense to limit the aggregation of capacity for the DER model relative to SCR, in which load zone aggregation is allowed.

Auditing Requirements

AEMA strongly objects to the NYISOs proposal to require DERs to audit for their full duration in which they are enrolled. Such a proposal would be a major market barrier for curtailment-based DER, cost the state economy tens of millions of dollars per year, and raise capacity prices with no demonstrable reliability benefit. Curtailment-based DER customers have high opportunity costs for reducing their energy usage, as it often requires interrupting the customer’s primary revenue source. When the reliability of the grid is threatened or energy prices are at their highest levels, these customers understand the need to curtail for the full length of the dispatch, and want to contribute to stabilizing the grid and reducing prices. These customers are analogous to peaking power plants and many can also provide reserves since they can respond in 30 minutes or less; as such,

they are strong candidates for the DER model even though they have high opportunity costs.

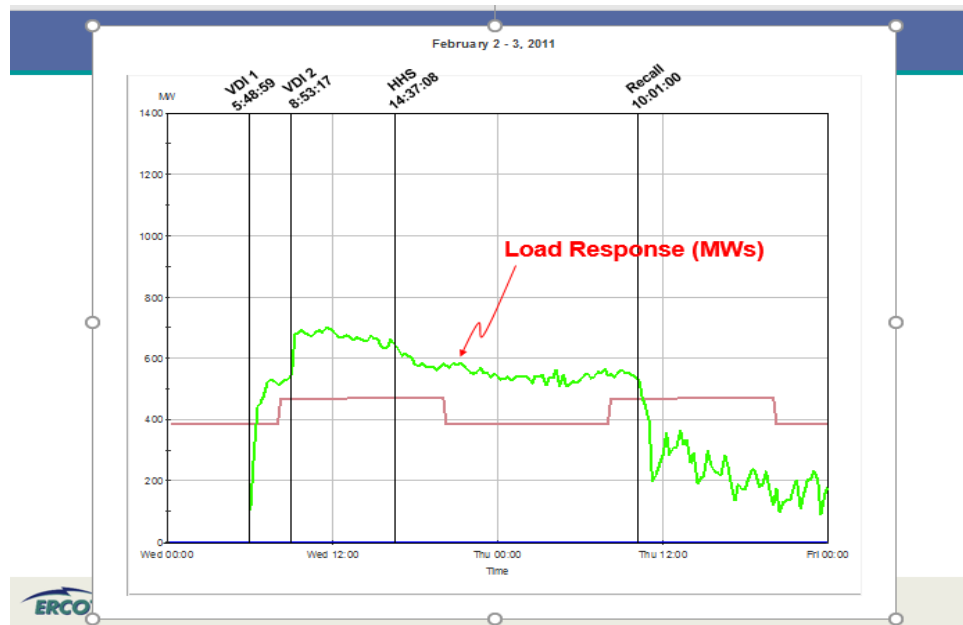
But these customers will not tolerate auditing for a lengthy period of time, such as four, six, or eight hours, if the curtailment is not stabilizing reliability or prices. The interruption to their business can cost them thousands of dollars per MWh, and reduce economic output that is damaging to the local economy. Indeed, Value of Lost Load studies have estimated the value of electricity at as high as \$25,000/MWh.² Even at \$3,000/MWh, if 1,000 MW of curtailment-based DER were to participate in the DER program and audits lasted for six hours, the cost to the New York economy would be \$30 million per year compared to a one-hour audit. Moreover, certain customers factor their likely hours of dispatch into participation costs, and for customers with opportunity costs of \$3,000/MWh, adding 10 hours of dispatch per year could increase their costs of participation by \$30,000/MW-yr. This would unnecessarily raise capacity costs for all New York customers.

It would be a different situation if there were a demonstrable reliability benefit, but none exists. No ISO currently requires longer than one-hour audits, even though dispatches can and do last far longer. There is no evidence to suggest that having a shorter audit window than event dispatch window impacts the ability for customers to perform when dispatched for an actual event. Nor is there evidence to suggest from

² See Michael J. Sullivan, Ph.D., Matthew Mercurio, Ph.D., Josh Schellenberg, M.A, "Estimated Value of Service Reliability for Electric Utility Customers in the United States", Prepared for the Office of Electric Deliverability and Energy Reliability, United States Department of Energy, June 2009, available at <http://certs.lbl.gov/pdf/lbnl-2132e.pdf> at xxi, Table ES-1.

NYISO or other markets that DR customers cannot sustain performance over a longer period.

Take for example an ERCOT dispatch (see table below) during a winter cold snap in February 2011, when DR was dispatched for over 24 hours to mitigate the impact of rolling blackouts.³ The red line is DR's market obligation, and the green line is the performance. One can see that DR performed above its committed level for the full duration of the dispatch, even though the audit requirement was less than an hour. As stated above, customers are invested in the reliability of the grid, and when that is threatened, they will perform as needed.



³ <http://www.ercot.com/calendar/2011/4/29/34201-DSWG>.

During an ISO-New England (“ISO-NE”) event in summer of 2013 that lasted for 7 hours, performance remained above 92% for the first five hours.⁴ In the last two full hours, performance remained above 80%, with customers fully maintaining their load reduction. The only reason for the small drop in performance was that the customer baseline load (“CBL”) was lower in the evening hours (6-8 p.m.). But this is not a duration or reliability issue, as customers sustained performance and did not restore load throughout the entirety of the event. In NYISO, if a customer had less availability in evening hours, that would be reflected in the resource’s EFORd if there were no other customers in that aggregation that could balance out availability in the evening hours.

Finally, in PJM dispatches from 2012 and 2013, there is no evidence of customer performance falling off as duration increases.⁵

Moreover, the NYISO does not require generators to audit for the full duration in which they could be dispatched, with certain generators also having one-hour audits. It would be discriminatory for the NYISO to allow these generators to audit for an hour, and for curtailment based DERs to audit for the full duration in which they are enrolled.

As such, we urge the NYISO to maintain the one-hour auditing requirement for SCRs and DERs.

⁴ https://www.iso-ne.com/committees/comm_wkgrps/reלבlty_comm/pwrsuppln_comm/mtrls/2014/may222014/pspc_52214_dr_performance_revised.pdf

⁵ 2013 summer performance: <https://www.pjm.com/-/media/markets-ops/dsr/2013-2014-dsr-activity-report-20140417.ashx?la=en>, pages 15-17 shows reduction MW largely following committed MW exactly for all dispatch hours, even as duration increases. 2012 summer performance: <https://www.pjm.com/-/media/markets-ops/dsr/emergency-dr-load-management-performance-report-2012-2013.ashx?la=en> – only 2 events (pages 16-17) but the 7/17/2012 event for 3 hours at the bottom of page 16 actually shows performance increasing as the event went on.

Telemetry Requirements

While AEMA does not oppose telemetry requirements, our members have significant concerns about the potential requirement to have a telemetry connection to every individual utility area in which the DER Aggregator operates. The cost of each individual connection is significant, and scales linearly. For smaller aggregations, a high fixed cost such as this could be cost prohibitive. We are encouraged by preliminary discussions with NYISO to find an appropriate balance that complies with reliability requirements for having necessary sources of backup data with the need for a cost-efficient solution. A centralized backup system, where DER Aggregators could send data to and all utilities could pull data from, would be a solution that could benefit all parties. Although this will not be voted as part of the DER Roadmap, and could be accomplished through manual changes, we appreciate the NYISO focusing on this issue, and are willing to assist as needed.

Regarding changes that we expect to be voted as part of the Roadmap, we continue to believe the telemetry requirements proposed by the NYISO to require aggregators to obtain 6-second data on each individual resource within an aggregation is excessive. We disagree with the cost estimates noted by the NYISO in their October 10th presentation⁶ of obtaining and transmitting this data. The cost of providing this data, especially when smaller DER resources are located at customer sites where both injection

⁶ See *DER Real-Time Telemetry and Alternate Telemetry Approach for Small DER* presentation from the October 10, 2018 MIWG/ICAP/PRLWG Meeting: <https://www.nyiso.com/documents/20142/3698285/DER%206-Second%20Telemetry%20-%20MIWG%2020180928%20MIWG.pdf/8142cc85-5e9f-345d-8c40-6532b1aac38f> at p.10.

and curtailment may occur where multiple meters and telemetry points would be required, will result in higher costs to the market and ultimately the ratepayers.

In our members' experience in other regions, telemetered data requirements of 5 minutes (in the case of ISO-NE for energy market participation) and one-minute data (in the case of PJM for resources providing spinning reserves) has sufficiently met the operational needs of grid operators. We recognize that there are reliability requirements that are specific to New York that the NYISO must abide by, but we do not feel that it is appropriate to erect a barrier that will lead to smaller resources from being able to participate in the wholesale markets.

The NYISO has proposed an alternative telemetry approach⁷ for resources able to inject or curtail less than 100kW. We think this approach is a viable alternative to the direct metering requirement for telemetry purposes, however, we think the issues discussed above could be addressed by raising the threshold for being eligible to utilize the proposed alternative telemetry approach from to 500kW or less of curtailment or injection capability. Through adopting a higher threshold, more small DERs will have the ability to participate in the NYISO markets. *We urge the NYISO to increase the limit for eligibility to utilize the alternative telemetry approach to 500kW of curtailment or injection per resource if the resource is aggregated with other resources.*

Buyer-Side Mitigation

While AEMA has concerns around buyer-side mitigation ("BSM") measures that

⁷ Id. at pp. 12-14

may be imposed on DERs and note the comments⁸ that were previously submitted on this subject, we realize that this issue will be addressed in other forums, such as in the FERC Order 841 compliance filings and reply comments. As such, we do not feel the need to comment further here but reserve the right to do so at a future date.

Conclusion

AEMA appreciates the opportunity to provide comments to NYISO and looks forward to engaging further on this issue. Please do not hesitate to reach out should you have questions regarding our position.

Sincerely,



Katherine Hamilton
Executive Director
Advanced Energy Management Alliance
Katherine@aem-alliance.org
202-524-8832

⁸ See *Advanced Energy Management Alliance Comments on Buyer Side Mitigation for Distributed Energy Resources in New York Independent System Operator*, June 18, 2018 posted under Agenda Item 2 in the June 25, 2018 MIWG Meeting Materials:
<https://www.nyiso.com/documents/20142/1403297/AEMA%20Comments%20on%20NYISO%20BSMfinal.pdf/ba9e898f-21e6-0b99-32cb-e8a78450c2a0>.