

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

State Policies and Wholesale Markets) Docket No. AD17-11-000
Operated by ISO New England, Inc., New York)
Independent System Operator, Inc., and PJM)
Interconnection, LLC.)

**COMMENTS OF ADVANCED ENERGY MANAGEMENT ALLIANCE
IN RESPONSE TO NOTICE INVITING POST-TECHNICAL CONFERENCE
COMMENTS**

Pursuant to 18 CFR Part 35, Advanced Energy Management Alliance (“AEMA”)¹ submits these comments regarding the Federal Energy Regulatory Commission (“Commission” or “FERC”) Docket No. AD17-11-000, Notice Inviting Post-Technical Conference Comments, May 23, 2017.²

AEMA is a trade association under Section 501(c)(6) of the Federal tax code whose members include national distributed energy resource companies and advanced energy management service and technology providers, including demand response (“DR”) providers, as well as some of the nation’s largest demand response and distributed energy resources. AEMA members support the beneficial incorporation of distributed energy resources (“DER” or “DERs”), including advanced energy management solutions, into wholesale markets as a means to achieving electricity cost savings for consumers, to contributing to system reliability, and to ensuring balanced price formation. This filing represents the collective consensus of AEMA as an organization, although it does not necessarily represent the individual positions of the full diversity of AEMA member companies.

¹ Advanced Energy Management Alliance website: <http://aem-alliance.org>.

² <https://www.ferc.gov/CalendarFiles/20170523170542-AD17-11-000PostTC.pdf>

I. Executive Summary

AEMA appreciates the opportunity to comment in this docket. Competitive wholesale markets are at a crossroads, and the status quo is no longer sustainable. Recently, two states have adopted nuclear subsidies, with an additional state contemplating coal bailouts. In upcoming years, there will be a significant increase in the amount of resources, mostly renewables, receiving out-of-market state subsidies.³ All of these resources will seek to participate in wholesale markets and can offer into the market below their true cost, creating an uneven playing field amongst resource types. If current capacity market designs stay in place, the unsubsidized supply resources will be reluctant to incur the costs of developing new resources and/or maintain existing resources given the likelihood of capacity price suppression from subsidized resources. For distributed energy resources--especially demand response--that rely heavily on wholesale capacity market revenues for commercialization, this is a significant problem. AEMA commends the Commission for recognizing the urgency of taking action to avoid the negative outcome outlined above that could result in harm to the ongoing and future success of DR and DER resources.

AEMA supports the rights of states to control their own energy policy and to procure carbon-free resources that wholesale markets can integrate cost-effectively. It is imperative, however, that such policies not distort competitive market outcomes, and that markets accommodate these policies in a sustainable manner. The Commission should direct ISO-New England ("ISO-NE"), New York Independent System Operator ("NYISO"), and PJM to develop and file **capacity** market proposals that seek to balance these objectives in line with Path Two as set forward by Commission Staff. As evidenced by recent capacity market proposals in ISO-NE

³ AEMA recognizes the challenges associated with identifying where to draw the line with defining what should be considered an out-of-market state subsidy.

and PJM, there are market-based paths forward, even if they are in need of improvement.⁴ While the Commission should allow ISOs and stakeholders to pursue solutions that price state policy goals into **energy and ancillary** markets, we recommend that the Commission not *direct* ISOs/RTOs to develop and file such proposals. Pricing state policy into energy and ancillary markets, through mechanisms such as carbon adders, raises several controversial issues. Capacity market solutions are not plagued with such controversial questions, and if the Commission were to direct ISOs to pursue both capacity and energy market solutions simultaneously, it would slow the progress of the capacity market solution. As stated above, capacity market solutions are of the utmost importance to resources such as DR and other forms of DER.

In this document, AEMA will:

- Highlight the benefits of DERs, focusing on DR in capacity markets;
- Illustrate how state policy goals for increased DR and competitive wholesale market outcomes have already been successfully harmonized and yielded more resilient markets and systems;
- Underscore the importance of competitive market outcomes for unleashing the full potential of DERs, which in turn will increase the competitiveness and reliability of wholesale markets; and
- Outline its support for Path Two, or the “Accommodate” path, and explain why the Commission should direct ISOs/RTOs to develop and file capacity market solutions.

⁴ AEMA is not taking a position in favor or in opposition to these proposals at this time, as they are still early in the development process. However, AEMA believes that these frameworks demonstrate that there are market-based solutions to solve these challenges.

II. The Benefits of Distributed Energy Resources and Harmonization Between State Policy and Competitive Markets

As recognized by the Commission in its recent Notice of Proposed Rulemaking to “remove barriers to the participation of electric storage resources and distributed energy resource aggregations in the capacity, energy, and ancillary service markets operated by regional transmission organizations,”⁵ DER participation in wholesale markets enhances competition, and, in turn, helps to ensure that these markets produce just and reasonable rates. DR is the form of DER with the most established record of participation in wholesale markets, and best illustrates the potential for DERs to produce more just and reasonable rates while strengthening reliability and resiliency. Particularly relevant to this proceeding, DR participation in wholesale markets has enabled states to achieve their policy goals in favor of increased demand resources all while increasing market competition and enhancing reliability without receiving state subsidies.

The Commission is aware of the benefits of DR participation in wholesale markets. However, we believe it is important to briefly highlight these benefits, because without competitive price signals from wholesale capacity markets, significantly fewer megawatts (“MW”) of DR and other forms of DERs would come to market, rendering markets less competitive and reliable. States in turn would not receive the benefits from DERs that are part of their policy goals.

The role of DR as a valuable grid resource has been repeatedly upheld at the highest state, federal, and judicial levels. The Supreme Court, in its majority opinion in *FERC v. EPSA*, noted that removing DR from wholesale markets would “flout the [Federal Power Act’s] core

⁵ Docket Nos. RM16-23-000; AD16-20-000

objectives”⁶ of protecting against excessive prices and ensuring the effective transmission of electric power, and emphasized DR’s role in bringing down electricity system costs and preventing service interruptions during peak demand periods. This echoes the arguments put forth by FERC in its petition for a writ of certiorari that demand response produces lower electricity prices, enhances the reliability of the grid, and mitigates generators’ market power.⁷ The Court also noted Congress’ “encourage[ment]” of greater use of DR participation at the wholesale level and ultimately opined that DR is “a practice that so evidently enable[s] the Commission to fulfill its statutory duties of holding down prices and enhancing reliability in the wholesale energy market.”⁸ To quote former FERC Commissioner Phillip Moeller, there is “no debate” on the benefits of having DR participate in wholesale markets.⁹

In PJM alone, the savings from DR are substantial. DR has operated as a capacity resource since the inception of the RPM. Representative of these important customer savings, the inclusion of DR and energy efficiency in the BRA contributed \$9.3 billion in savings in just the 2017/18 BRA.¹⁰ DR resources build up and scale down on a year-to-year basis in response to market needs, with no risk to consumers. In fact, these resources put money back in consumers’ pockets, with hundreds of millions of dollars in annual payments to customers providing demand response.

No other resource contributes to the efficient and reliable operation of electricity markets while delivering money back to consumers and businesses, all without the help of state or federal

⁶ *FERC v. ELECTRIC POWER SUPPLY ASSN.*, 577 U. S. 28 (2016). Retrieved June 12, 2017 from https://www.supremecourt.gov/opinions/15pdf/14-840_k537.pdf

⁷ *FERC v. ELECTRIC POWER SUPPLY ASSN.*, Petition for a writ of certiorari, pages 31-33. Retrieved June 15, 2017 from https://www.justice.gov/sites/default/files/osg/briefs/2015/01/27/ferc_v_epsa_pet.pdf

⁸ *FERC v. ELECTRIC POWER SUPPLY ASSN.*, 577 U. S. 3-4 (2016). Retrieved June 12, 2017 from https://www.supremecourt.gov/opinions/15pdf/14-840_k537.pdf

⁹ *FERC v. ELECTRIC POWER SUPPLY ASSN.*, 577 U. S. 28 (2016). Retrieved June 12, 2017 from https://www.supremecourt.gov/opinions/15pdf/14-840_k537.pdf

¹⁰ http://www.monitoringanalytics.com/reports/Reports/2014/IMM_Analysis_of_the_2017_2018_RPM_Base_Residual_Auction_20141006.pdf

subsidies. New England Power Pool (“NEPOOL”), in outlining their Integrating Markets and Public Policy (“IMAPP”) problem statement, notes “to be sustainable over time, markets must reasonably accommodate various policy requirements such as, for example, carbon-emissions reductions or fuel source diversity.”¹¹ With DR, markets are enabling states to meet their policy objectives without subsidies or any market distortion.

DR is fully harmonized with states’ needs, and states have repeatedly demonstrated their support for DR programs. In *FERC v. EPSA*, the Maryland Public Service Commission and the Pennsylvania Public Utility Commission, as the Joint States, note the “many salutary benefits” that DR confers upon wholesale markets and further maintain:

“**states rely on DR to meet environmental and policy goals...** DR can provide numerous environmental benefits, including that it alleviates the need to build new generation or may displace older, less efficient and high-emissions producing power plants. Overall, it represents a cost-effective, environmentally friendly alternative to traditional generation.”¹²

In a letter from the New England Conference on Public Utilities Commissions (“NECPUC”) to FERC dated July 1, 2014, NECPUC states, “In New England, DR plays a critical role in maintaining electric power system reliability, while reducing costs to consumers and providing environmental benefits.... Elimination of DR participation in the capacity market would not only cost consumers hundreds of millions of dollars but would remove an important and relied-upon tool for protecting reliability across New England and other regions.”¹³ States have explicitly incorporated DR into their public policies through legislation as well. For

¹¹ http://www.nepool.com/uploads/IMAP_20160517_Problem_Statement.pdf

¹² https://www.americanbar.org/content/dam/aba/publications/supreme_court_preview/briefs_2015_2016/14-840_JointStatesBrief.authcheckdam.pdf

¹³ Letter from the New England Conference of Public Utilities Commissioners to Acting Chairman of FERC, Cheryl A. LaFleur, July 1, 2014.

instance, the Illinois Statute states “To protect against this threat to economic well-being, health, and safety it is necessary to improve the process of procuring electricity to serve Illinois residents, to promote investment in energy efficiency and demand-response measures...”¹⁴ As much as 1,100 MW of DR resources located in Illinois have participated in the PJM market, without receiving any state subsidies. Several other states encourage the deployment of DR in their statute.

DR also contributes to a cleaner electric grid, which is increasingly a part of state policy. By meeting a system’s peak capacity needs, DR avoids the need for markets to procure and operate fossil fuel fired generation. Navigant Consulting modeled the effect of peak load reductions from DR on the carbon emissions of PJM, MISO, and ERCOT and found that it could directly reduce emissions by more than 1% in PJM by providing peak load reductions and ancillary services. As DR increasingly plays a real-time role in helping to balance and integrate renewable resources, Navigant found that it could further reduce emissions by 10% or more by reducing renewable curtailments and quickening the resource mix transition from fossil fuels to renewable power.¹⁵ Findings from a report by the Lawrence Berkeley National Laboratory supports these results, which determined that in California, DR could provide “significant renewables integration value” of up to \$500 million by 2025.¹⁶

Other forms of DER, such as behind-the-meter energy storage, have a shorter tenure of participating in wholesale markets, but have tremendous potential for increasing the competitiveness of wholesale markets while facilitating the integration of renewable resources in a manner that minimizes carbon emissions. Although these resources may depend on subsidies in

¹⁴ Illinois Power Agency Act. (20 ILCS 3855/). Sec. 1-5. (4)

¹⁵ http://www.ieca-us.com/wp-content/uploads/Carbon-Dioxide-Reductions-from-Demand-Response_Navigant_11.25.14.pdf

¹⁶ <http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442451541>

certain areas to become commercial, just like other resources that receive subsidies, they should be encouraged to participate in wholesale markets in a manner that does not distort competitive market signals. Ultimately, successful implementation relies upon transparent market signals.

These benefits are enumerated to highlight what could be lost if protection from the suppressive impacts of out-of-market subsidies is not addressed specifically in the capacity market. This is because of the overwhelming majority of revenues for DR and DER resources comes from capacity payments, which is very different than traditional supply-side generation that derives the majority of revenues from a combination of energy and ancillary services.

III. Competitive Capacity Markets are Foundational to DER Growth and Market Penetration

DERs, like any supply-side resource, depend on stable and predictable market signals to be developed. For instance, investors will be loath to finance a battery if pricing is unknown and unpredictable,

The eastern capacity markets have successfully attracted large amounts of DR that have totaled close to 10% of peak demand. In addition to the strong federal and regional support for DR that has fueled this growth, the availability of capacity payments has been a core driver for DR participation. NERA, an economic consultancy, analyzed DR participation across a variety of different program in the US. Their analysis found that “programs with availability payments have substantially higher take rates than programs with ‘economic market’ payments”, and they concluded that the “successful recruitment of demand-side resources is substantially enhanced by the presence of availability payments.”¹⁷

¹⁷ NERA Economic Consulting. “Effective Use of Demand Side Resources: The Continued Need for Availability Payments.” October 23, 2013. Executive Summary, ii.

A primary purpose of capacity markets is to provide the investment signals for resource owners to make rational entry and exit decisions into the market.¹⁸ Subsidized resources that offer into the capacity market at below their true cost threaten those investment signals and this primary purpose. This impact uniquely threatens the viability of DR resources because DR providers require a capacity price that not only provides recovery for their costs but their customers' expected costs as well. Customers place a high value on a continuous supply of electricity and face high marginal costs from electricity curtailments that generally exceed the energy price caps in the eastern markets. Because of these high opportunity costs of curtailing, many customers receive limited revenue from energy and ancillary markets, and depend heavily on capacity markets. Improved market design and technological advances will allow more customers to actively participate in energy and evolving ancillary services over time, including aggregations of residential customers, but a competitive capacity market price will still be foundational for participation. Capacity markets, with their longer dispatch lead-times, more binary load controls, and more predictable events, allow customers to gain familiarity with DR and build comfort adjusting their operations to accommodate dispatches. As customers gain experience and expertise around their energy usage, they are able to participate in more complicated DR programs that offer additional means of monetizing their flexibility.

The level of DR participation across the PJM markets is evidence of this pyramidal phenomenon. In August 2016, there were 9,346 MW of registered DR capacity and 2,428 MW of registered economic DR. However, of this economic DR, only 332 MW were unique MW that participated without a capacity supply obligation. This indicates that 86% of the MW enrolled in the economic DR program in August also received capacity payments, which is consistent with

¹⁸ Response of PJM to FERC information request, Docket ER17-367-001.

the annual totals. The drop-off in customer participation across the spectrum of DR programs highlights the importance of capacity programs and payments for aggregators.

IV. The Commission Should Direct ISOs/RTOs to Develop and File Proposals that Accommodate State Policy Goals through Wholesale Capacity Markets

As noted by many stakeholders and in many of the comments filed in advance of the Technical Conference, the “status quo” is not sustainable. AEMA supports states’ desire to retain their sovereignty to advance the policy goals that matter to their constituents. However, wholesale markets need to send the proper investment signals for resources seeking to enter and exit the market without subsidies. The inclusion of subsidized offers in price formation distorts the price signal for unsubsidized resources, which could ultimately threaten reliability. As the amount of subsidized renewable resources increases, markets will become increasingly dysfunctional if no rules are changed. This is not a hypothetical, as there are thousands of MWs of renewable resources in the interconnection queue in each eastern market, and with Renewable Portfolio Standards (“RPS”) in many states, these resources will be built. While AEMA is fully supportive of state policy goals, we are particularly concerned that subsidized resources will offer as supply resources into the capacity market at below their true market costs, and suppress capacity prices below competitive levels. This will deter entry from DERs, including DR, as they rely on competitive pricing outcomes to come to market. Indeed, the issue extends beyond DERs, and affects all unsubsidized resources. This could create a race for subsidies, and states effectively taking over the resource adequacy planning process, washing away the operational and investment efficiency gains¹⁹ of the last decade. Most stakeholders agree that this is not a

¹⁹ <http://www.pjm.com/~media/library/reports-notice/special-reports/20160505-resource-investment-in-competitive-markets-paper.ashx>

desirable outcome. Therefore, in order for capacity markets to support competitive resources like DR while accommodating valid state policy objectives, the “Accommodate” path is required.

The “Accommodate” path should seek to balance the following objectives:

- Ensure competitive market outcomes for unsubsidized resources, and minimize the ability for subsidized resources to distort market signals;
- Accommodate the gradual entry of subsidized, carbon-free resources to participate in the market;
- Minimize total costs to consumers;
- Preserve the long-term viability of competitive wholesale markets; and
- Address all relevant forms of subsidies, but result in solutions that are not overly complicated to administer.

It is important to note that an objective not included here so far is preventing over-procurement of capacity. Oversupply is only problematic if it increases costs to consumers, but if additional resources are developed with a lower total cost to consumers, that should be considered a preferable outcome for consumers.

AEMA respectfully requests that the Commission direct ISO-NE, NYISO, and PJM, to file with the Commission capacity market solutions that balance these objectives. ISO-NE’s “Competitive Auctions with Subsidized Policy Resources” (“CASPR”) proposal is relatively compatible with these objectives, as is PJM’s Capacity Market Repricing Proposal. These capacity market proposals, while requiring substantive modifications to their current design, nonetheless demonstrate the potential for harmonizing state policy with competitive wholesale markets. It should also be noted that AEMA believes that standardized market design is the least

desirable path given the current market rule variations from ISO to ISO and the diversity of states' policies, objectives and proposed implementation paths.

Given that ISO-NE and PJM are in the midst of developing these capacity market proposals with stakeholders, a Commission Order to file a proposal balancing these various objectives would lend further credibility to those processes. Discussions are also underway in New York to evaluate the impact of a 50% Clean Energy Standard by 2030 on energy and capacity markets. While stakeholders in all three jurisdictions have discussed pricing state policy into energy markets, AEMA does not believe it is appropriate for the Commission to *require* ISOs/RTOs to file proposals that price state policies into energy markets, through mechanisms such as carbon adders. If ISOs and stakeholders can agree on acceptable proposals for the “achieve” path, then they should receive full consideration from the Commission. However, discussions to date have revealed that energy market solutions such as carbon adders face significant hurdles, including thorny issues around state and federal jurisdiction.²⁰ It is not clear that these can be resolved in the near future, and if ISOs/RTOs are directed to file a comprehensive solution that covers both capacity markets and energy markets, a capacity market solution could be unnecessarily delayed, when urgent action is required.²¹

A standalone capacity market solution is less likely to raise controversial jurisdictional issues, as states would not be as concerned about ceding jurisdictional authority to FERC as they would with an energy market solution.

²⁰ The 2005 Federal Power Act expressly recognizes FERC's authority and jurisdiction over inter-state wholesale energy prices. Any state coordination on an energy market solution is therefore likely to fall under FERC's eventual jurisdiction, which may be an unpalatable outcome for many states.

²¹ In addition, even with an accommodation approach, creation of incremental ancillary services may be required to acquire the flexible resources needed to integrate the new entrants resulting from state initiatives.

VI. Conclusion

WHEREFORE, AEMA respectfully requests that the Commission accept the subject comments in this proceeding. In particular, AEMA respectfully requests that the Commission support competitive capacity markets by taking Path Two, the “Accommodate” Path, directing ISOs/RTOs to develop and file proposals that accommodate state policy goals through wholesale capacity markets. Thank you for the opportunity to comment in this proceeding.

Respectfully Submitted,



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