

# **ADVANCED ENERGY BUYERS GROUP**

the policy voice of advanced energy purchasers

UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION

Participation of Distributed Energy Resource ) Docket No. RM18-9-000  
Aggregations in )  
Markets Operated by Regional )  
Transmission Organizations and Independent )

System Operators )  
  
Distributed Energy Resources - ) Docket No. AD18-10-000  
Technical Considerations )  
For the Bulk Power System )  
)

## **COMMENTS OF ADVANCED ENERGY BUYERS GROUP**

### **I. INTRODUCTION**

The Advanced Energy Buyers Group (“AE Buyers Group” or “Buyers Group”) on behalf of large energy users<sup>1</sup> appreciates the opportunity to provide comments in response to the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) notices inviting post-technical conference comments (“Notices”) regarding participation of distributed energy resource (“DER”) aggregations in markets operated by Regional Transmission Organizations and Independent

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<sup>1</sup> These comments represent the consensus view of the Advanced Energy Buyers Group (information and membership available at <https://info.aee.net/ae-buyers-group>). However, this document does not necessarily reflect the position of any specific member of the AE Buyers Group, and these comments should not be attributed to any individual company or companies participating in the AE Buyers Group.

System Operators (“RTOs/ISOs”), issued April 27, 2018 in Dockets No. RM18-9-000 and AD18-10-000.<sup>2</sup>

Members of the AE Buyers Group consume over 18 terawatt hours (“TWh”) of electricity annually and totaled over \$1 trillion in revenue last year. As end-use customers with operations in FERC-jurisdictional markets, and as active participants in the market as owner/operators and hosts of DER installations, our companies strongly support the Commission’s efforts to develop clear and equitable opportunities for aggregated DERs to participate in wholesale markets. Allowing DERs to provide value to wholesale markets and compensating this participation appropriately will create new opportunities for members of the AE Buyers Group and other customers to enhance the reliability and resilience of the grid and of our own operations, leading to savings for our companies and more efficient grid operation overall. The AE Buyers Group offers these brief comments explaining our perspective as end use customers and DER owners/operators and hosts in support of a final order from FERC providing a framework for DER participation in both wholesale and retail markets. Straightforward rules and clearly defined responsibilities will enable our companies to make informed decisions about what is right for our operations, and data-driven market signals will ensure that what is best for us is also best for the grid overall.

## **II. ABOUT THE ADVANCED ENERGY BUYERS GROUP**

The Advanced Energy Buyers Group is a business-led coalition of large energy users engaging on policies to expand opportunities to procure energy that is secure, clean, and affordable. Members of the Buyers Group are market leaders and major employers spanning different industry

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<sup>2</sup> Notice Inviting Post-Technical Conference Comments, Docket No. RM18-9-000 (April 27, 2018); Notice Inviting Post-Technical Conference Comments, Docket No. AD18-10-000 (April 27, 2018).

segments, including technology, retail, and manufacturing. Our companies are among the 71% of Fortune 100 companies and 43% of Fortune 500 companies that have established renewable and/or climate targets as part of our corporate sustainability commitments. We share a common interest in expanding our use of advanced energy, such as renewable energy like wind, solar, geothermal, and hydropower; demand-side resources like energy efficiency, demand response, and energy storage; and onsite generation from solar, advanced natural gas turbines, and fuel cells.

In 2017, members of the AE Buyers Group totaled over \$1 trillion in revenue and collectively consumed over 18 TWh of electricity, including over 11 TWh hours of renewable electricity, equivalent to the electricity sales for the states of North Dakota and Delaware, respectively.

### **III. COMMENTS**

The AE Buyers Group supports FERC's efforts to allow greater participation of DER aggregations in RTO/ISO markets, and encourages FERC to move forward with a final rule on the basis of input received through comments in this proceeding and at the technical conference. Below, the AE Buyers Group explains our perspective as large end users and hosts or owners/operators of DER installations, and provides some high-level recommendations for the Commission to consider as it develops a final rule and sets out a framework for RTOs/ISOS.

**A. Aggregated DER participation in wholesale markets will open new opportunities for customer-driven DERs that deliver value to both wholesale and retail markets.**

Members of the AE Buyers Group are representative of a broader trend of corporate demand for advanced energy. Our companies have experience with a range of DERs, including energy storage, demand response, fuel cells, and onsite solar. Our interest in DERs is consistent with our corporate renewable energy and sustainability goals, and is also motivated by our desire to increase the reliability and resilience of our own operations and of the grid that serves our facilities. We

also have an opportunity to save money and control our energy use and costs by installing DERs or participating in DER aggregation programs, and our decision to move forward with a particular DER installation or program is ultimately guided by financial considerations. Where DERs are able to perform to their full potential and are compensated accordingly, our project opportunities are much more favorable.

AE Buyers Group members and other customers both large and small are already very active in the DER space, pursuing projects that serve our needs while also providing grid benefits. Some recent installations by AE Buyers Group members and other customers include:

- Over two-dozen Walmart stores in California have installed advanced energy storage systems to shave the retailer's peak load, balance out on-site solar generation with store consumption, and help the local utility, Southern California Edison, reduce peak demand on the grid in conjunction with a broader grid modernization plan.<sup>3</sup>
- A Microsoft data center in Cheyenne, Wyoming relies on advanced natural gas turbines for backup support, which are available to the local utility to draw upon in times of need.<sup>4</sup>
- Over 800 Target stores in 31 states participate in demand-response programs, reducing peak demand and helping to keep the electric system in balance while also delivering operational savings.<sup>5</sup>

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<sup>3</sup> Jeff St. John, "Wal-Mart, Advanced Microgrid Solutions to Turn Big-Box Stores Into Hybrid Electric Buildings," Greentech Media (April 11, 2017), available at <https://www.greentechmedia.com/articles/read/wal-mart-to-turn-big-box-stores-into-hybrid-electric-buildings#gs.MEHYBsw>.

<sup>4</sup> Athima Chansanchai, "As datacenters grow, Microsoft's innovative approach invests in more clean energy to power them," Microsoft (Nov. 14, 2016), <https://news.microsoft.com/features/as-datacenters-grow-microsofts-innovative-approach-invests-in-more-clean-energy-to-power-them/>.

<sup>5</sup> Deborah Abrams Kaplan, "How Target uses demand response to cut energy, supply chain costs," Supply Chain Dive (Sept. 21, 2017), <https://www.supplychaindive.com/news/Target-demand-response-supply-chain-costs/505359/>.

- Data centers run by Equinix, Apple, eBay, and others rely on fuel cells to provide backup during times of grid failure.<sup>6</sup>

Our companies and other customers could be making many more investments, and providing additional benefit to the grid, if DERs were able to participate more broadly in wholesale markets. Specifically, allowing DERs a clear pathway to participate in wholesale markets will increase the value these resources bring while also creating additional revenue streams for these resources, making DERs more attractive financially in more places. With market signals in place to value and compensate needed grid services that DERs can provide, this increased market activity will bring overall benefits to the grid and ultimately save money for all ratepayers. A final rule from FERC unlocking additional opportunities for aggregated DER participation in wholesale markets is a vital step to enable our companies to play a larger role in delivering value to the grid.

## **B. Recommendations to maximize benefits of customer-driven aggregated DER in wholesale markets.**

As noted above, our companies will consider participation in DER aggregation when it makes economic and practical sense for our businesses. To make such an assessment, our companies and the DER aggregators that serve our needs require transparent and predictable parameters for market participation. These parameters should not be overly restrictive, and undue administrative delays should not be tolerated. The Commission should work to ensure that any potential barriers, conflicts, or concerns are addressed through clear delineation of roles and responsibilities, rather than resorting to blunt solutions such as opt-outs.

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<sup>6</sup> Yevgeniy Sverdlik, “Equinix Makes Big Bet on Fuel Cell-Powered Data Centers,” Data Center Knowledge (Aug. 16, 2017), <http://www.datacenterknowledge.com/energy/equinix-makes-big-bet-fuel-cell-powered-data-centers>.

To meet these goals, the AE Buyers Group recommends that the Commission keep in mind the following recommendations:

- To maximize the value that DERs bring to the grid and to increase availability of cost-effective DER opportunities, individual DERs should not be restricted from participating in both wholesale and retail markets. Rather, the Commission should enable segmentation of services by capacity, time, service provided, and/or by some other metric.
- RTOs/ISOs should set clear standards for coordination between distribution utilities and the RTO/ISO to ensure that the DER aggregator or owner/operator does not receive conflicting signals, and is not in a position of being deemed at fault for conditions beyond its control. This should include transparent and clear rules for curtailment of wholesale market transactions when the DER is needed by the distribution operator. It should be the responsibility of the aggregator, and not the individual DER, to respond to these signals.
- The Commission should work with RTOs/ISOs to address any reliability and jurisdictional concerns through transparent and fair allocation of roles and responsibilities, rather than allowing broad opt-outs that will close off opportunities for DERs to add value to the wholesale market. Customers such as our companies have an interest in investing in DERs in all jurisdictions where they are cost-effective and add value to our operations and the system as a whole, and opt-outs would close off these opportunities unnecessarily.
- RTOs/ISOs should develop a streamlined process for interconnection and aggregation that includes opportunities to raise potential reliability issues or other concerns, but that does not create unnecessary regulatory delays and uncertainty, which would increase costs and place unnecessary burden on DER aggregators and owner/operators of DERs.

- RTOs/ISOs should facilitate streamlined data collection and sharing, including from the RTO/ISO to the distribution utility, to enable data-driven planning and operation to maximize efficiency, as well as to send good investment signals to enable customers such as our companies to prioritize delivery of DERs where they will add maximum value.
- To maximize efficiency and overall benefits, aggregators should not be restricted to aggregating DERs within an individual node, but should be able to aggregate across multiple nodes.
- Both behind- and in front of- the meter DERs should be eligible to participate in wholesale markets. To ensure that they are accurately and fully valued, behind-the-meter resources should be compensated based on their full benefit to the grid.

Establishing clear rules and guidelines upfront will allow owner/operators and DER aggregators to assess value upfront and allow our companies to make informed decisions about our own operations that are also consistent with and supportive of grid needs.

#### **IV. CONCLUSION**

As large electricity customers who benefit from a more efficient grid, and as hosts and owners/operators of DERs, the AE Buyers Group strongly supports opportunities for DERs to participate in wholesale markets. We recommend that FERC issue a final order providing a framework for allowing DER participation in both wholesale and retail markets, and requiring RTOs/ISOs to put in place fair and transparent rules. Doing so will create more opportunities for DERs that add value to the grid, and allow our companies and other customers to play a larger role in improving the efficiency and resilience of the electricity system.