

STATE OF MINNESOTA

BEFORE THE PUBLIC UTILITIES COMMISSION

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**In the Matter of a Commission Investigation into
the Potential Role of Third-Party Aggregation of
Retail Customers**

PUC Docket Number E999/CI-22-600

Reply Comments of the R Street Institute

The R Street Institute (R Street) submits these reply comments in response to the Notice of Comment Period, issued by the Minnesota Public Utilities Commission (Commission or PUC) on December 9, 2022.¹ R Street appreciates the Commission initiating this conversation on whether to allow aggregators of retail customers (ARCs) to participate in Minnesota. The comments provided cover many important topics and will help the Commission determine appropriate next steps for this proceeding.

Introduction

R Street read the initial comments filed by all parties with a tremendous amount of interest. R Street appreciates the effort and time from each commenter and believes that the questions identified by the Commission in its Notice were appropriate for the topic. R Street largely agrees with comments filed by multiple parties, including Rocky Mountain Institute (RMI), Voltus, Minnesota Solar Energy Industries Association (MnSEIA), Clean Energy Economy Minnesota, Advanced Energy Management Alliance, CPower, Armada Power, Walmart, Sunrun, Recurve, Sierra Club and the Minnesota Large Industrial Group (MILG). These groups, along with R Street, submitted comments in favor of removing the prohibition on ARCs in Minnesota. While there were differences in details about how to allow ARCs to participate, R Street believes that on the most important question—whether to remove the prohibition on ARCs—these groups are in alignment and the Commission can address the differences either in future requests for comments, workshops or as directed in a future Commission order.

R Street, instead, will focus its reply comments on the comments of those who oppose the removal of the prohibition on ARC participation in Minnesota, notably the comments of Xcel Energy and the Department of Commerce.

¹ In the Matter of a Commission Investigation into the Potential Role of Third-Party Aggregation of Retail Customers, Notice of Comment Period, Docket No. E999/CI-22-600 (Dec. 9, 2022) (Notice). On Feb. 6, 2023, the Commission issued a subsequent notice extending the due date for reply comments to April 10, 2023.

Reply Comments to Initial Comments of Electric Utilities

Generally, the utilities, including Xcel Energy, Minnesota Power, Otter Tail Power, Great River Energy and Dakota Electric, all describe their long history of implementing demand response programs in their (or their members') service territory. The utilities offer well-worn arguments against allowing competition for demand response services in their territory. For example, Otter Tail cautions that "ARCs not working in conjunction with electric utilities in Minnesota will erode Otter Tail's DR resources, as customers currently enrolled on the Company's DR tariff offerings are recruited into an ARC program."² Xcel notes that "if ARCs are allowed to offer DR directly into MISO, there is a risk that our system could lose important DR resources that we currently use to meet capacity obligations."³ As Xcel notes, these are the same concerns raised by the utilities in the original docket in 2010.⁴ The Commission should reject these concerns. Quite simply, the world is not the same as it was 13 years ago when the Commission addressed this question for the first time. Since 2009, the Federal Energy Regulatory Commission (FERC) has issued additional guidance on the ability of ARCs to participate directly in wholesale markets, described the types of products an ARC can provide in the wholesale market, and given direction on additional products that can be provided by non-utility providers directly into the wholesale market, including distributed energy resources, storage, and frequency products and services.

In the Commission's 2019 order in the Xcel performance-based ratemaking docket (E-002/CI-17-401), the Commission specifically described three types of demand response: "Demand response is a tool for shifting electricity consumption away from peak load times, for reshaping the underlying load profiles, and, when needed, for shedding load; it can be used to avoid unnecessary investments in generation and distribution infrastructure, increase overall system efficiency, and improve reliability."⁵ In other words, demand response can do more than just be counted toward a utility capacity obligation and then never be used, even during high prices, as shown in R Street's initial comments.⁶ Rather, the Commission has already identified that demand response can do much more than that. If the utilities are unwilling or unable to look beyond the capabilities of demand response to act merely as an insurance policy only to be called in emergencies, then the Commission should consider if there are alternative providers who can use demand response to shift and shape demand.

This lack of advancement in demand response products is described in MILG's initial comments. In its comments, MILG notes that both Minnesota Power and Xcel's "implementation of demand response

² Initial Comments, Otter Tail Power Company, Docket No. E999/CI-22-600 at 4 (March 13, 2023).

³ Comments, Xcel Energy, Docket No. E999/CI-22-600 at 5 (March 13, 2023).

⁴ *Id.* at 5-6.

⁵ *In the Matter of a Commission Investigation to Identify Performance Metrics, and Potentially, Incentives for Xcel Energy's Electric Utility Operation*, Order Establishing Performance Metrics, Docket No. E-002/CI-17-401 at 10 (issued September 18, 2019). Portions of the Commission's discussion on these different types of demand response are based on a report prepared by Lawrence Berkeley National Laboratory for the California Public Utilities Commission describing four different types of demand response: shape, shift, shimmy and shed. These new types of demand response are in response to the changing nature of operating the electric grid and new resources, such as wind and solar, and the impacts of those resources on the electric system. One of the interesting findings in that report is that shedding demand response products have "close to zero value created related to avoiding investment in the generation fleet" and "no opportunity for accounting value from avoided investment in new capacity." Furthermore, the reduction in value to shedding demand response products is tied to the growth in variable resources and away from peak capacity needs, which is a future Minnesota is on a path to follow. "2025 California Demand Response Potential Study – Charting California's Demand Response Future: Final Report on Phase 2 Results," Lawrence Berkeley National Lab, LBNL-2001113 at pp. 1-8, 6-2, 6-3 (March 2017). <https://eta-publications.lbl.gov/sites/default/files/lbnl-2001113.pdf>.

⁶ Comments of the R Street Institute, Docket No. E999/CI-22-600 at 3-4 (March 13, 2023).

has lagged and failed to take advantage of opportunities to provide needed rate relief to customers.”⁷ Furthermore, MILG states “the utility-only model has thus far restricted demand response expansion through delayed implementation and limited customer options. To encourage additional options and to accelerate demand response options in the state ... the Commission should permit ARCs to operate” in Minnesota.⁸ Additionally, Walmart also agrees that ARCs can provide more options for customers and “that customers are best served when they have access to all options available to them to participate in DR, including utilizing the services of an ARC to do so” as ARCs are the “most likely to maximize the benefits of DR.”⁹

In response to this expected set of arguments from customers, utilities warn that ARCs would increase costs to customers as the utilities would need to replace potentially lost capacity as ARCs sign up customers from existing utility programs. For example, Xcel cautions that allowing ARCs to participate in Minnesota:

could negatively impact a – perhaps large – portion of the Company’s existing DR program customer base, thereby rendering the remaining base much less cost-effective. ... Were ARCs to cannibalize participants in the Company’s DR programs, the Company and its customers would suffer from the loss of these benefits. Fundamentally, the Company is concerned that ARCs may lead to negative impacts to existing robust retail DR programs through the functional replacement of those programs by ARC programs that may be less cost-effective or provide less benefit to customers.¹⁰

As described in the comments of MILG and Walmart, the utilities are not providing beneficial programs to customers today. As noted in R Street’s initial comments, Xcel is not dispatching its existing demand response program in response to either high prices or any other non-emergency need.¹¹ The same appears to be true for Otter Tail and Minnesota Power.¹² This is not the first time the Commission has discovered that the utilities are not using their demand response programs. In 2012, the Department of Commerce prepared a review of utility use of their demand response programs during the summer of 2012 and “found that the utilities rarely interrupted service to their customers, even during times of high demand.”¹³ The Commission is, in essence, being asked to consider whether to leave demand response solely to the utility, whose existing portfolio of demand response is mostly limited to uncalled, emergency demand response programs or whether to allow competition for new demand response services that are responsive to the demands and needs of customers and can be used at all hours of the day. While the Commission in 2013 decided against allowing ARCs to compete, the issues remain the same 10 years later—the utilities continue to avoid using existing demand response programs even during high-price time periods. At some point, the Commission must decide that this lack of action by the utilities to utilize its demand response programs is not benefiting customers and must change. Only through competition will the state know if customers are willing to do more than what the utility allows and at what price customers are willing to participate.

⁷ Initial Comment, Minnesota Large Industrial Group, Docket Nos. E999/CI-22-268, *et al.* at 5 (March 13, 2023).

⁸ *Id.* at 8.

⁹ Initial Comments of Walmart Inc., Docket No. E999/CI-22-600 at 5 (March 13, 2023).

¹⁰ Xcel Comments at 9.

¹¹ R Street Comments at 3-4.

¹² Comments of Voltus, Inc., Docket No. E999/CI-22-600 at 9-10 (March 13, 2023).

¹³ *In the Matter of an Investigation of Whether the Commission Should Take Action on Demand Response Bid Directly into the MISO Markets by Aggregators of Retail Customers Under FERC Orders 719 and 719-A*, Order Accepting Compliance Filings, Minnesota Public Utilities Commission, Docket No. E-999/CI-09-1449 at 8 (April 16, 2013).

Another line of argument used by utilities is the concern around communication and control. The utilities argue that if ARCs are allowed to participate in Minnesota, then the utilities will have challenges with planning and operating their systems. Amongst the parade of horrors identified by Xcel, “[w]hen DR is registered directly with the utility, such as Xcel Energy, the utility can take account of those locations in its load forecasting. However, if the individual DRs are signed up with a third party ARC, the utility likely would lack this specific locational information.”¹⁴ The result would be operational and forecasting challenges.¹⁵ Minnesota Power notes that “without clear insight into how and when DR would be used by a third party, the Company would not be able to maximize” benefits.¹⁶ Otter Tail states that “customers participating in ARC programs will reduce the Company’s economic load control benefits which impacts all customers as higher priced energy which was avoided, will be purchased, and then passed on to customers through the cost of energy adjustment.”¹⁷ These horrors are all misplaced. The Commission’s goal in determining whether to allow ARCs to participate should be whether customers benefit, not whether the utilities benefit. If ARCs can provide the same or similar demand response products to customers at the same or similar cost while providing benefits, then R Street would argue that that service should be competitive. The way to determine that is to allow ARCs to participate in Minnesota and be allowed to then bid that demand response into Midcontinent Independent System Operator (MISO) markets. The Commission should also reject utility concerns about whether ARC demand response products will be cost-effective as FERC Order No. 745 provides that demand response in wholesale markets will only be compensated if it passes a net benefits test.¹⁸ In other words, if the demand response product passes the MISO net benefits test, then it would be compensated for its services and have provided customer benefits. The Commission should not, therefore, allow the utility to have a monopoly on customer benefits.

Furthermore, as detailed in the initial comments of Voltus, removing the prohibition on ARCs will allow more demand response to participate directly in MISO markets which will have the benefit of lowering overall market costs.¹⁹ As an ARC, Voltus has an incentive to maximize customer benefits, so they can sign up different types of customers, including by aggregating smaller customers, and being able to utilize value stacking, which allows customers to participate in capacity, energy and ancillary services markets to maximize value to the market and customers.²⁰ This value stacking is in contrast to existing utility demand response programs which are limited to emergency, interruptible products.²¹ Since ARCs directly participate in MISO markets, MISO will have visibility into the demand response products offered into its markets. As detailed by Voltus, this means that “if a utility customer signs up with Voltus, that load is added back to the [Planning Reserve Margin Requirement]. Hence the utility where that load resides does not have to replace that load with additional [Zonal Resource Credits] procurement.”²² Essentially, if a customer leaves a utility demand response capacity product and signs up for an ARC capacity product, that demand response is counted the same way at MISO, and that information is then

¹⁴ Xcel Comments at 7.

¹⁵ *Id.*

¹⁶ Minnesota Power Comments at 3.

¹⁷ Otter Tail Comments at 4.

¹⁸ *Demand Response Compensation in Organized Wholesale Energy Mkts.*, Order No. 745, 134 FERC ¶ 61,187 at P 78 (2011), *order on reh’g & clarification*, Order No. 745-A, 137 FERC ¶ 61,215 (2011), *reh’g denied*, Order No. 745-B, 138 FERC ¶ 61,148 (2012), *vacated sub nom. Elec. Power Supply Ass’n v. FERC*, 753 F.3d 216 (D.C. Cir. 2014), *rev’d & remanded sub nom. Elec. Power Supply Ass’n v. FERC*, 136 S. Ct. 760 (2016).

¹⁹ Voltus Comments at 5.

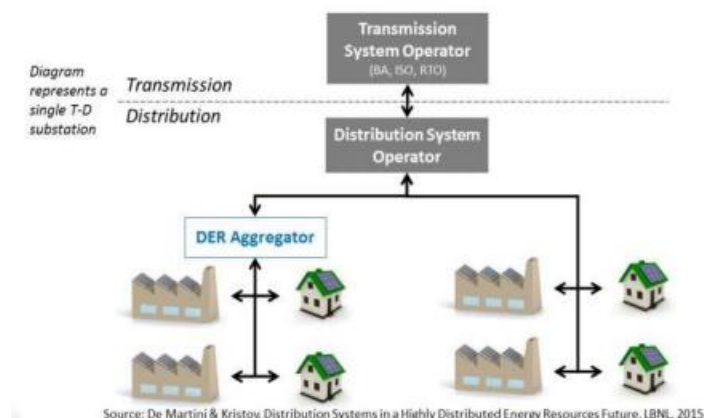
²⁰ *Id.* at 7.

²¹ *Id.* at 12.

²² *Id.* at 15.

provided back to the utility in reduced capacity obligations, same as if the utility did it themselves. Allowing ARCs to participate also would permit customers to participate in more than one type of demand response (or distributed energy resources) product. As it is, since the utilities only have capacity products, there are few to no opportunities for customers to provide demand response, or other products, in MISO energy and ancillary services markets.

Nevertheless, R Street believes that Xcel does outline a long-term solution to this problem and that is through the creation of a distribution system operator (DSO) model. The DSO, be it a utility or a third party, functions similar to an RTO where it runs and clears a market on the distribution side of the system, such as below the transmission-distribution interface. The DSO can also facilitate transactions between an ARC and the RTO, thereby keeping the utility in the loop on demand response (or distributed energy resource) aggregation and dispatch. As described by the National Association of Regulatory Utility Commissioners (NARUC) in a 2018 paper, the DSO would integrate all distributed energy resources for the local distribution area at each transmission-distribution interface and would coordinate the information and electricity interchanges with the balancing authority, so that the balancing authority only sees a single resource at each transmission-distribution interface and does not need visibility to the distributed energy resources.²³ This model would avoid the tier bypass that occurs when the ARC goes around the utility and the utility receives the information from the RTO, rather than directly from the ARC. This Total DSO model is visualized as the following:



This image shows that the ARC operates independently, but would need to go through the DSO to participate in the RTO market.²⁴ Indeed, in the Notice of Proposed Rulemaking that led to the adoption of FERC Order No. 2222, FERC asked “how the distributed energy resource aggregator model proposed herein would interact with or complement the distribution system operator model being discussed in some states, and whether a DSO model might add value to the distributed energy resource aggregator model in terms of facilitating communication among affected entities?”²⁵ FERC clearly had an idea that a DSO could be a long-term solution to this communication and control problem, however, FERC did not

²³ Sharon Thomas, “Evolution of the Distribution System & the Potential for Distribution-level Markets: A Primer for State Utility Regulators,” National Association of Regulatory Utility Commissioners, January 2018, p. 22. <https://www.naruc.org/default/assets/file/201801%20evolution%20of%20the%20distribution%20system.pdf>.

²⁴ *Id.*

²⁵ *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, 157 FERC ¶ 61,121 at P 156 (2016).

include references to a DSO solution in Order No. 2222. Nevertheless, the Commission should consider the possibility of shifting the utility toward a DSO solution, both to support the advancement of ARCs in Minnesota and as a model to better integrate the growth of distributed energy resources more broadly.

Finally, Xcel raises concerns about the timing of allowing ARCs to operate in Minnesota considering the deployment of MISO's compliance with FERC Order No. 2222. In its proposal to FERC, MISO proposed a start date of 2030 for aggregators of distributed energy resources to participate in MISO markets. Xcel also notes in its comments that FERC is still considering whether to remove the opt-out provision from Order No. 719 entirely.²⁶ As such, Xcel states that it believes consideration of removing the opt-out for demand response is "premature" and that the Commission should wait to reconsider allowing ARCs until after FERC decides whether to remove the opt-out provision and further work is done on the implementation of Order No. 2222.²⁷ The Commission should not entertain this concern. As R Street stated in its initial comments, the best way for the Commission to address this issue is to remove the prohibition on ARCs to provide demand response, since Order No. 745 is already in effect.²⁸ If the Commission decides to remove the prohibition on ARCs, whether or not FERC decides to remove the opt-out is moot. Minnesota's customers have failed to enjoy the benefits of the opportunities enabled under Order No. 745, and it would be unfair to those customers to delay these opportunities until 2030 when it is available today. R Street would go further and suggest allowing ARCs to participate in advance of Order No. 2222 implementation, regardless of the start date as directed by FERC, would provide all participants an opportunity to understand how ARCs would work, develop rules and processes to enable participation which would then enable all participants to take those lessons and apply them to Order No. 2222 implementation. Quite simply, all participants will need some time to understand how to make this all work, and it would be better to start off with a limited set of products—demand response—than wait for the entire world of aggregated distributed energy resources.

As shown in the initial comments of R Street, MILG, Voltus and others, utility concerns about ARCs on the effectiveness of their own demand response portfolios are misplaced. Rather, the initial comments of the utilities roll out the same concerns from over a decade ago. This shows that the utility thinking on the role and application of demand response remains largely unchanged. MILG and Walmart each explained the lack of innovation in utility demand response programs and the need for more opportunities for customers to participate in wholesale markets. The Commission should allow ARCs to participate in Minnesota to provide competition to utilities on the provision of demand response and enable additional customer benefits.

Reply Comments to Initial Comments of the Department of Commerce (Department)

R Street responds to two parts of the Department's comments. First, R Street agrees with the Department's legal analysis that ARCs are not public utilities for purpose of Minnesota statutes.²⁹ However, R Street disagrees with the Department's analysis of the benefits of demand response provided by ARCs.

The Department's analysis focuses on the potential savings from demand response. R Street posits that that information does not provide the full picture of the benefits of demand response and is of limited value. As R Street noted in its initial comments, the utilities are simply not using their existing demand

²⁶ Xcel Comments at 2.

²⁷ *Id.* at 4.

²⁸ R Street Comments at 3.

²⁹ Public Comments of the Minnesota Department of Commerce, Division of Energy Resources, Docket No. E999/CI-22-600 at 6 (March 13, 2023).

response programs, even during high-priced periods. As detailed in the initial comments of Voltus, “Minnesota utility data suggests that the Commission can no longer rely on utility demand response programs alone to provide load flexibility during MISO grid stress reliability events.”³⁰ According to information received from Minnesota Power and Otter Tail, Minnesota Power called on its demand response programs three times—in 2019, 2021 and 2022 during MISO system emergencies. Furthermore, Otter Tail did not call its programs at all during Winter Storm Elliott.³¹ In attachments A and B to R Street’s comments, which had been previously provided to the Commission via staff data requests in a prior proceeding, Xcel only called its demand response programs once between the years 2016 and 2022.³² The demand response programs as currently provided by Minnesota’s utilities are extremely limited in application—capacity-only benefits that are only available during MISO emergencies—whereas, Minnesota will need an increasing amount of flexible demand available at all hours of the day. The Department’s comments are overly focused on capacity benefits, which are valuable, and potential demand response savings, which are unlikely to be realized since the utility has little incentive to develop programs to take advantage of those benefits.

The Department draws an unfounded conclusion that if ARCs are successful in developing demand response programs then the utilities will need to build more generation. R Street disagrees with this conclusion. As noted in Voltus’ comments, this does not appear to be the actual practice for how capacity is determined in MISO. R Street also disagrees with the Department’s conclusion that “allowing ARCs will either increase the cost of existing DR, raising retail rates, or DR will be lost resulting in new capacity being constructed and retail rates increasing.”³³ First, as noted above, any demand response products in the MISO energy and contingency reserves market will need to pass a net benefits test, which means that the demand response product will lower costs to customers. Second, competitive pressure will exert downward pressure on costs. That is, if the utility intends to compete with ARCs for customers for their demand response products, then the utility will need to reduce costs or otherwise show that its products are more beneficial to customers than the ARCs. Lastly, the Commission will have final say over whether a utility will be allowed to construct new peaker plants to meet any capacity obligations. It is entirely possible that the Commission could also direct the utilities to procure replacement capacity from ARCs. In essence, the Department’s conclusion that costs will go up is unfounded and without merit.

³⁰ Voltus Comments at 9.

³¹ *Id.* at 9-10.

³² R Street Comments at 3-4, Attachments A and B.

³³ Department Comments at 20.

Conclusion

R Street recommends that the Commission allow ARCs to operate in Minnesota, consistent with R Street's initial comments. R Street recommends that the Commission reject utility arguments against allowing ARCs to participate, and reject the recommendation of the Department taking the same position. R Street thanks the Commission for the opportunity to provide these reply comments on the questions of allowing aggregators to operate in Minnesota.

Respectfully submitted,

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April 10, 2023

CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing pleading has this day been served on each person whose name appears on the Official Service List for E999/CI-22-600, as attached.

xx by depositing a true and correct copy thereof, properly enveloped with postage paid in the United States mail at Eden Prairie, Minnesota

xx electronic filing

/s/ Christopher Villarreal
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Dated at Eden Prairie, Minnesota
This 10th Day of April 2023.

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