

March 13, 2023

**PUBLIC DOCUMENT**

Will Seuffert  
Executive Secretary  
Minnesota Public Utilities Commission  
121 7<sup>th</sup> Place East, Suite 350  
St. Paul, Minnesota 55101-2147

RE: **PUBLIC Comments of the Minnesota Department of Commerce, Division of Energy Resources**  
Docket No. E999/CI-22-600

Dear Mr. Seuffert:

Attached are the **PUBLIC** comments of the Minnesota Department of Commerce, Division of Energy Resources (Department) in the following matter:

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

The Department recommends **not permit third-party aggregators of retail customers to bid demand response into organized markets and take no other action.** The Department is available to answer any questions the Minnesota Public Utilities Commission may have.

Sincerely,

/s/ STEVE RAKOW  
Analyst Coordinator

SR/ar  
Attachment



## Before the Minnesota Public Utilities Commission

### PUBLIC Comments of the Minnesota Department of Commerce Division of Energy Resources

Docket No. E999/CI-22-600

#### I. EXECUTIVE SUMMARY

The Minnesota Public Utilities Commission (Commission) issued an order on March 15, 2022 in Docket Nos. E002/M-21-101 and E002/M-17-401 initiating an investigation into various issues related to aggregators of retail customers (ARC). In starting the investigation, the Commission noted that it previously addressed issues relating to the aggregation of demand response (DR) in relation to Federal Energy Regulatory Commission (FERC) Order 719 and 719-A in Docket No. E999/CI-09-1449.

The Minnesota Department of Commerce, Division of Energy Resources (Department) performed three sets of analysis in this proceeding. The first set addresses certain legal issues raised by the potential for ARCs to operate in Minnesota. The conclusion is that ARCs are not subject to regulation as public utilities because they do not furnish electricity to retail customers. The service ARCs provide is related to electric service but is not, itself, electric service. Whether ARCs qualify as public utilities under Minnesota law does not answer the question of what terms, if any, that the Commission finds appropriate for inclusion in public utilities' tariffs regarding the operation of ARCs.

The second set of analysis provides information regarding how much DR is currently available in Minnesota. The data provided by the U.S. Energy Information Administration (EIA) shows that Minnesota currently ranks 1<sup>st</sup> nation-wide in MW of potential DR for the residential class, 3<sup>rd</sup> for the commercial class, and 17<sup>th</sup> for the industrial class. Overall, Minnesota has the 4<sup>th</sup> highest level of potential DR among the states. Thus, Minnesota has substantial quantities of DR already available.

The third set of analysis addresses how an ARC would operate in Minnesota and the consequences of ARC operations. It is theoretically possible that allowing ARCs could result in no changes for DR programs and capacity, in which case there is no compelling reason to allow ARCs. However, the most likely scenario is that allowing ARCs will either increase the cost of DR, raising retail rates, or existing DR will be lost resulting in new capacity being constructed and subsequently retail rates increasing.

Based upon the analysis the Department recommends that the Commission:

1. not permit ARCs to bid DR into organized markets;
2. take no action regarding tariffs that allow ARCs to participate in utility DR programs at this time;  
and
3. take no action regarding verifying or certifying ARCs for DR at this time.

## II. INTRODUCTION

On February 1, 2021, Northern States Power Company d/b/a Xcel Energy (Xcel) filed a petition for approval of four new load flexibility pilot programs in Docket No. E002/M-21-101. The petition stated that the pilot programs were intended to study customer interest in various DR offerings and the associated costs, benefits, and grid impacts of customer participation in DR programs.

On March 15, 2022, the Commission issued its *Order Approving Modified Pilots and Demonstration Projects, Authorizing Deferred Accounting, and Taking Other Action* (Pilot Order) in Docket Nos. E002/M-21-101 and E002/M-17-401. At point 3 the Pilot Order authorized the Commission's Executive Secretary to request comment on various issues related to ARCs. Finally, the Pilot Order stated "This order is not a broad authorization of third-party aggregation of demand response in Minnesota, nor does it predetermine any future Commission action."

On December 9, 2022, the Commission issued its *Notice of Comment Period* (Notice) in this proceeding. The Notice stated that the following topics are open for comment:

1. Should the Commission permit ARCs to bid DR into organized markets?
2. Should the Commission require rate-regulated electric utilities to create tariffs allowing third-party aggregators to participate in utility DR programs?
3. Should the Commission verify or certify ARCs for DR or distributed energy resources before they are permitted to operate, and if so, how?
4. Are any additional consumer protections necessary if ARCs are permitted to operate?

The Notice also clarified that the Commission previously addressed issues relating to the aggregation of DR in relation to FERC Order 719 and 719-A in Docket No. E999/CI-09-1449.

Below are the Department's comments regarding the issues specified in the Notice.

## III. DEPARTMENT ANALYSIS

### A. DISCUSSION OF LEGAL ISSUES

In the Pilot Order at pages 2 to 3 the Commission defined the benefits of DR programs being offered by public utilities:

Demand response includes technologies and approaches to modify customer behavior to benefit the utility's broader system. For example, demand-response programs may offer lower rates or rebates to incentivize customers to shift their electricity consumption to avoid times of peak demand, to accommodate variable generation sources, or to curtail demand during emergencies. Effective use of demand response can

enhance system reliability, reduce operation costs by avoiding or delaying the need for infrastructure investments, reduce fuel costs by shifting usage to times of low-cost generation, improve utilization of renewable and carbon free generation sources, and offer customers savings and more control over their electric bills.

Minnesota utilities have included DR among their retail offerings for many years. Minnesota's experience with third party DR aggregators is much more limited. Whether to allow ARCs to operate in Minnesota on a broader basis raises a number of legal issues.

### *1. Definition of Public Utility*

Before ARCs can be allowed to operate, a legal question to be addressed is whether ARCs would qualify as a public utility under Minnesota Statutes § 216B.02. If ARCs qualify as public utilities under Minnesota law, then the Commission would have to regulate the service ARCs provide, review ARC's rates for reasonableness under Minnesota Statutes § 216B.03, approve any competitive rate offered by an ARC under Minnesota Statutes § 216B.162, and so on.

The following statutes are relevant:

Minnesota Statutes § 216B.02, subd. 4, defines a public utility as meaning "persons, corporations, or other legal entities, their lessees, trustees, and receivers, now or hereafter operating, maintaining, or controlling in this state equipment or facilities for furnishing at retail natural, manufactured, or mixed gas or electric service to or for the public or engaged in the production and retail sale thereof..."

Minnesota Statutes § 216B.02, subd. 6, defines service as meaning "natural, manufactured, or mixed gas and electricity; the installation, removal, or repair of equipment or facilities for delivering or measuring such gas and electricity."

Based on this language, there is a technical argument that ARC should be treated as a "public utility." In particular, to implement aggregated DR, it seems likely that an ARC would have to install equipment for "measuring" electricity in order to monitor the amount of DR resulting from the customers' electricity usage. Installation of this equipment would arguably make DR a "service" that the ARC is providing to customers. Because the ARC would be operating, maintaining or controlling this equipment for the purpose of providing DR aggregation service to customers, it would meet the definition of a public utility. In other words, the statutory language does not expressly require that, in order to be a public utility, the entity must provide gas or electricity, but rather, only equipment used to measure gas or electricity.

However, this reading potentially creates tension with another part of the statute as well as the Commission's rules. As discussed below, the part of the statute that requires exclusive territories for electric utilities also has a definition of electric service that is subtly different from § 216B.02, subd. 6, and that difference may affect the regulatory status of ARCs under state law. Specially, under Minn. Stat. § 216B.38, "electric service" is something that is provided to a retail customer "for consumption," while this requirement is not part of the definition of "service" under Minnesota Statutes § 216B.02, subd. 6.

Further, the Commission's resource planning rules contain a definition of electric utility that would not seem to cover an ARC:

"Electric utility" means a person, corporation or other legal entity engaged in generating, transmitting, and selling at retail electricity in Minnesota and whose retail rates are regulated by the Commission.<sup>1</sup>

Although an ARC could possibly be viewed as providing an "electric service" to retail customers (i.e., the aggregation of DR), it would not be providing "retail electricity," as this rule requires for an entity to be considered an electric utility.

## *2. Exclusive Service Territory*

Before ARCs can be allowed to operate, a legal question regards how Minnesota's requirements relating to exclusive territories for electric utilities would apply to aggregated DR service.

Minnesota Statutes § 216B.37 states that "the state of Minnesota shall be divided into geographic service areas within which a specified electric utility shall provide electric service to customers on an exclusive basis." Minnesota Statutes § 216B.40 states "except as provided in sections 216B.42 and 216B.421,<sup>2</sup> each electric utility shall have the exclusive right to provide electric service at retail to each and every present and future customer in its assigned service area and no electric utility shall render or extend electric service at retail within the assigned service area of another electric utility unless the electric utility consents thereto in writing[.]"

Under Minnesota Statutes § 216B.38, the following definitions apply to Minnesota Statutes §§ 216B.37 to 216B.44:

- Customer—means a person contracting for or purchasing electric service at retail from an electric utility;
- Electric service—means electric service furnished to a customer at retail for ultimate consumption;

---

<sup>1</sup> Minn. R. 7843.0100, subp. 5 (2021). This rule is similar to the rule governing certificates of need for power plants and lines. See Minn. R. part 7849.0010, subp. 32 (2021).

<sup>2</sup> Note that section 216B.42 deals with exceptions regarding large customers outside municipality boundaries and section 216B.421 deals with customers in multiple service areas.

- Electric utility—means persons, their lessees, trustees, and receivers, separately or jointly, now or hereafter operating, maintaining, or controlling in Minnesota equipment or facilities for providing electric service at retail and which fall within the definition of "public utility" in section 216B.02, subdivision 4;<sup>3</sup>
- Person—means a natural person, a partnership, a private corporation, a public corporation, a municipality, an association, a cooperative whether incorporated or not, a joint stock association, a business trust, any political subdivision or agency, or two or more persons having joint or common interest.

The definition of "electric service" under this portion of the statute requires that the service be "furnished to a customer at retail for ultimate consumption," an element that is not part of the definition of "service" under Minn. Stat. § 216B.02, subd. 6. The Minnesota Court of Appeals has held that the "electric service" as defined in the exclusive service statute "was intended to distinguish between retail and wholesale electric service, rather than to indicate that service must be furnished to or received by customers." *In re Kandiyohi Coop. Elec. Power Ass'n*, 445 N. W.2d 102, 105 (Minn. Ct. App. 1990). It is difficult to think of ARCs as providing anything to their customers "for consumption." Rather, the customers are providing DR to the ARC, which the ARC is able to sell into the wholesale market.

Further, it would be impossible for an ARC to act as a utility in serving an exclusive territory because the ARC does not provide electricity that is necessary for the generation of DR. An ARC necessarily provides a service that is ancillary to the electric service that its customers receive from a utility.

### *3. Just and Reasonable Rates*

Before ARCs can be allowed, the Commission must determine how ARCs will affect utilities' ability to provide service at just and reasonable rates. Minnesota Statutes § 216B.03 states:

Every rate made, demanded, or received by any public utility, or by any two or more public utilities jointly, shall be just and reasonable. Rates shall not be unreasonably preferential, unreasonably prejudicial, or discriminatory, but shall be sufficient, equitable, and consistent in application to a class of consumers. To the maximum reasonable extent, the commission shall set rates to encourage energy conservation and renewable energy use and to further the goals of sections 216B.164, 216B.241, and 216C.05. Any doubt as to reasonableness should be resolved in favor of the consumer.

---

<sup>3</sup> This statute defines public utility as meaning "persons, corporations, or other legal entities, their lessees, trustees, and receivers, now or hereafter operating, maintaining, or controlling in this state equipment or facilities for furnishing at retail natural, manufactured, or mixed gas or electric service to or for the public or engaged in the production and retail sale thereof"...

First, DR capacity is a scarce resource for any one public utility. If an ARC takes DR capacity from existing programs of a utility, the utility would then have to construct capacity (combustion turbines, energy storage, etc) to replace the lost DR. It is not clear how this situation—increasing everyone’s retail rates in order to allow wholesale market participation by certain customers—would result in just and reasonable rates.

Second, ARCs operating in Minnesota could produce stranded assets when they take DR capacity from existing programs. For decades utility retail tariffs and customer participation have allowed utilities to manage resources. The associated tariffs provide incentives to customers for managing their energy use in exchange for a lower rate. The rate includes recovery of costs associated with DR such as special meters. As customers exit existing DR programs for ARCs the question of how to recover these now stranded costs would have to be addressed.

#### 4. Summary

There may be technical arguments that the Minnesota Statutes and rules that govern public utilities should apply to ARCs. The better reading, however, which harmonizes the language of the relevant statutes and rules, is that ARCs are not subject to regulation as public utilities because they do not furnish electricity to retail customers. The service they provide is related to electric service but is not, itself, electric service. However, even assuming that ARCs themselves are not public utilities, it is not clear how allowing ARCs in Minnesota would enable entities that are public utilities to comply with Minnesota Statutes regarding just and reasonable rates. To the extent the Commission has any questions regarding the correct interpretation of Minnesota law on these or any other issues, it may wish to seek more fully-developed legal briefing.

Of course, whether ARCs qualify as public utilities under Minnesota law does not answer the question of what terms, if any, that the Commission finds appropriate for inclusion in public utilities’ tariffs regarding the operation of ARCs.

#### B. BACKGROUND DATA

##### 1. EIA DR Data

##### i. Statewide DR Data

To obtain basic background data on how Minnesota DR programs compare to DR programs nationwide the Department obtained data from the EIA. All of the data presented below was obtained from EIA’s detailed data files from Form EIA-861: *Annual Electric Power Industry Report*.<sup>4</sup> Data for 2021 was the most recent release available at the time of this analysis.

The Department began by reviewing EIA’s files for data quality issues. The review indicated that the EIA data has issues. One example is utilities reporting potential peak demand savings several times

---

<sup>4</sup> Available at: <https://www.eia.gov/electricity/data/eia861/>.

greater than either winter or summer 2021 peak demand.<sup>5</sup> Another example is utilities reporting DR costs and DR-related energy savings but no actual or potential peak demand savings. A third issue is that EIA's DR data does not distinguish between seasons. Therefore, the Department uses EIA's data below only to provide a high-level overview of how the Minnesota utilities are doing relative to similar utilities nationwide. Specific DR information was requested directly from the utilities and is discussed elsewhere in these comments.

Separately, the Department notes that EIA's data is reported in different formats in different files. Of relevance here is that peak demand data is reported by company; meaning a company reports all of its peak demand in a single number for a single state even if it has service territory in multiple states. Meanwhile, DR data is reported by company by state; meaning a company reports DR activity in each state separately. This is not an issue for Minnesota Power, an operating division of ALLETE, Inc. (MP) since MP only has service territory in Minnesota. However, the different formats mean that Otter Tail Power Company (OTP) has one data point for peak demand (OTP's company-wide peak, reported as in Minnesota) but three data points for DR data (one each for Minnesota, North Dakota, and South Dakota). Xcel is more complicated. There are two peak demand data points:

- one for the Minnesota company (covering Minnesota, North Dakota, and South Dakota); and
- one for the Wisconsin company (covering Michigan and Wisconsin).

The EIA peak demand data reports both companies as in Minnesota. Meanwhile, Xcel has five data points for DR data (one each for Michigan, Minnesota, North Dakota, South Dakota, and Wisconsin).

The varying formats for the data can throw off calculations of DR as a percentage of peak demand. One good example at a statewide level is West Virginia which has only one company reporting peak demand (at 10 MW) but two companies reporting potential DR (at 70 MW), leading to potential DR being reported as far more than 100% of peak demand.

In order to avoid some of the reporting issues associated with the differing formats for the potential DR and peak demand data, the Department reviewed the total DR data by state rather than as a percentage of load. This is shown below in Table 1. Table 1 shows that Minnesota ranks high in terms of the residential and commercial sectors potential DR and in total potential DR but is average in terms of industrial sector potential DR.<sup>6</sup>

---

<sup>5</sup> Note that 2021 peak demand probably was lower than the all-time historic peak for most utilities. However, potential DR more than double the 2021 peak is unlikely and is indicative of data quality issues.

<sup>6</sup> Note that differences in how various utilities classify customers as commercial or industrial may impact the Potential Peak Demand Savings amounts and rankings for these two customer classes.



**Table 1: Statewide Potential DR By Class<sup>7</sup>**

State	Potential Peak Demand Savings (MW)				Potential Peak Demand Savings (Rank)			
	Residential	Commercial	Industrial	Total	Residential	Commercial	Industrial	Total
AL	170	9	1,903	2,082	16	39	1	1
NC	882	680	355	1,918	2	2	15	2
FL	721	903	264	1,889	4	1	19	3
MN	926	653	305	1,884	1	3	17	4
KY	177	35	1,299	1,511	15	26	2	5
MI	381	274	782	1,437	7	8	4	6
GA	478	265	649	1,392	6	9	6	7
AR	32	78	1,129	1,239	34	19	3	8
SC	209	251	748	1,208	13	10	5	9
CA	322	564	283	1,169	9	4	18	10
IL	138	432	579	1,149	20	7	9	11
TX	352	452	175	980	8	5	24	12
MD	808	35	9	851	3	27	37	13
ND	479	165	184	827	5	12	23	14
NY	104	436	253	793	24	6	20	15
IN	187	46	529	762	14	21	10	16
NE	80	42	615	737	26	24	8	17
IA	166	103	465	733	18	16	12	18
OH	36	6	628	670	32	40	7	19
CO	272	116	235	624	10	15	22	20
AZ	259	212	78	549	12	11	26	21
ID	26	23	477	526	37	30	11	22
TN	-	46	454	500	47	22	13	23
WI	69	95	318	482	29	17	16	24
MS	-	26	419	444	47	29	14	25
LA	72	1	245	318	28	41	21	26
MO	108	153	36	298	22	13	31	27
UT	260	19	14	293	11	34	35	28
OK	111	150	23	284	21	14	32	29
VA	147	40	14	202	19	25	34	30
NV	167	21	-	188	17	31	41	31
KS	32	9	145	186	35	38	25	32
SD	106	20	49	175	23	33	28	33
OR	73	73	8	155	27	20	38	34
MA	36	88	6	131	31	18	39	35
DE	96	27	4	127	25	28	40	36

<sup>7</sup> States with no utility reporting DR data include Maine, New Jersey, and Rhode Island. These states are excluded from the table.

**Table 1 Cont'd: Statewide Potential DR By Class**

State	Potential Peak Demand Savings (MW)				Potential Peak Demand Savings (Rank)			
	Residential	Commercial	Industrial	Total	Residential	Commercial	Industrial	Total
CT	24	42	49	115	38	23	29	37
NM	36	10	42	89	33	37	30	38
WV	2	-	68	70	45	43	27	39
MT	29	0	21	51	36	42	33	40
VT	23	11	11	45	39	36	36	41
PA	45	-	-	45	30	43	41	42
HI	15	21	-	36	42	32	41	43
DC	21	-	-	21	40	43	41	44
AK	5	13	-	18	43	35	41	45
WY	18	-	-	18	41	43	41	46
NH	3	-	-	3	44	43	41	47
WA	0	-	-	0	46	43	41	48

*ii. Company-wide DR Data*

Only IOUs are discussed in the analysis below in an attempt to avoid some of the data quality issues in the EIA data associated with cooperative and municipal utilities. For example, there are five utilities, all cooperatives, that report potential DR savings greater than either the summer or winter peak demand. The highest ratio (potential DR / summer peak) is Beltrami Electric Coop, Inc with a 303% ratio. The obvious (more severe) data quality issues appeared to be confined to cooperative and municipal utilities. Therefore, the Department focused the analysis on investor-owned utilities (IOU).

Overall, the EIA data reports peak demand for 168 IOUs. Of those, 83 IOUs reported some potential DR savings while 85 IOUs reported no potential DR savings. The top twenty IOUs (in terms of reported potential DR savings as a percentage of summer peak) are shown below in Table 2.

**Table 2: Potential DR savings as a Percentage of Peak Demand<sup>8</sup>**

Utility Name	NERC Region	Summer Peak Demand	Winter Peak Demand	Potential Peak Savings (MW)	Potential / Summer Peak	Summer Rank	Potential / Winter Peak	Winter Rank
Upper Michigan Energy Resources Corp.		283.9	287.0	162.8	57.3%	1	56.7%	1
Alaska Electric Light & Power Co.	AK	62.0	87.0	18.0	29.0%	2	20.7%	2
ALLETE, Inc.	MRO	1,557.0	1,548.0	305.0	19.6%	3	19.7%	3
Alabama Power Co	SERC	10,854.7	10,870.2	1,682.5	15.5%	4	15.5%	6
Duke Energy Florida, LLC	FRCC	9,682.0	8,359.0	1,372.0	14.2%	5	16.4%	4
Otter Tail Power Co	MRO	751.6	905.4	96.0	12.8%	6	10.6%	11
Northern States Power Co - Minnesota	MRO	7,548.0	5,125.0	763.3	10.1%	7	14.9%	7
Duke Energy Indiana, LLC	RFC	5,753.0	5,071.0	561.0	9.8%	8	11.1%	10
Idaho Power Co	WECC	3,751.0	2,212.0	352.1	9.4%	9	15.9%	5
The Toledo Edison Co	RFC	2,190.2	1,717.2	193.2	8.8%	10	11.3%	9
Montana-Dakota Utilities Co	MRO	670.0	630.1	55.4	8.3%	11	8.8%	19
Interstate Power and Light Co	MRO	2,892.0	2,433.0	236.3	8.2%	12	9.7%	13
Entergy Arkansas LLC	SERC	4,664.0	4,175.0	377.9	8.1%	13	9.1%	17
Southern Indiana Gas & Elec Co	RFC	1,123.0	849.0	84.3	7.5%	14	9.9%	12
Potomac Electric Power Co	RFC	5,058.0	3,888.0	369.5	7.3%	15	9.5%	14
DTE Electric Company	RFC	10,992.0	6,679.0	768.0	7.0%	16	11.5%	8
Public Service Co of Colorado	WECC	6,910.0	5,126.0	480.7	7.0%	17	9.4%	15
Green Mountain Power Corp	NPCC	684.0	641.0	45.4	6.6%	18	7.1%	22
MidAmerican Energy Co		5,236.0	4,358.0	345.9	6.6%	19	7.9%	20
Consumers Energy Co	RFC	7,370.0	4,943.0	450.8	6.1%	20	9.1%	16

<sup>8</sup> A map of the NERC regions is available at: <https://www.nerc.com/AboutNERC/keyplayers/Pages/default.aspx>

Table 2 shows that Minnesota’s IOUs all do well compared to other IOUs nationwide in terms of potential DR savings relative to peak demand; the worst ranking is 11<sup>th</sup> indicating they are all in the top seven percent of IOUs nationwide.<sup>9</sup> Recall that, as mentioned above, the “Otter Tail Power Co” data covers all three states where OTP operates while “Northern States Power Co – Minnesota” covers Minnesota, North Dakota, and South Dakota.

The top twenty IOUs in terms of 2021 cost per kW of potential DR savings are shown below in Table 3. Since Xcel’s Minnesota operating company was not in the top twenty it is added at the bottom of Table 3. Table 4 shows the same data as Table 3 but is restricted to the Minnesota jurisdiction of OTP and Xcel.

---

<sup>9</sup> Note that Xcel’s Wisconsin operating company is in 22<sup>nd</sup> place (using summer rank) and 24<sup>th</sup> place (using winter rank).

**Table 3: 2021 Cost of Potential DR Savings**

Utility Name	NERC Region	Potential Peak Demand Savings (MW)	Customer Incentives (\$ ,000)	All Other Costs (\$ ,000)	Total Cost (\$ ,000)	2021 Cost / kW	Rank
Kentucky Utilities Co	SERC	83.6	\$ -	\$ 1	\$ 1	\$ 0.02	1
UNS Electric, Inc	WECC	5.3	\$ -	\$ 1	\$ 1	\$ 0.12	2
Entergy Texas Inc.	SERC	102.3	\$ 205	\$ 45	\$ 250	\$ 2.44	3
Alaska Electric Light & Power Co.	AK	18.0	\$ 64	\$ 2	\$ 66	\$ 3.67	4
Tucson Electric Power Co	WECC	42.7	\$ 192	\$ 24	\$ 216	\$ 5.05	5
Duke Energy Indiana, LLC	RFC	561.0	\$ 1,051	\$ 2,856	\$ 3,907	\$ 6.96	6
Evergy Kansas Central, Inc	SPP	28.8	\$ -	\$ 221	\$ 221	\$ 7.68	7
Mississippi Power Co	SERC	98.7	\$ 812	\$ -	\$ 812	\$ 8.23	8
Commonwealth Edison Co	RFC	1,040.0	\$ 5,325	\$ 4,467	\$ 9,792	\$ 9.42	9
Otter Tail Power Co	MRO	96.0	\$ 550	\$ 441	\$ 991	\$ 10.32	10
Louisville Gas & Electric Co	SERC	100.5	\$ -	\$ 1,331	\$ 1,331	\$ 13.25	11
Appalachian Power Co	RFC	74.5	\$ 321	\$ 762	\$ 1,083	\$ 14.54	12
DTE Electric Company	RFC	768.0	\$ 867	\$ 10,978	\$ 11,845	\$ 15.42	13
Southern Indiana Gas & Elec Co	RFC	84.3	\$ 772	\$ 600	\$ 1,372	\$ 16.29	14
Georgia Power Co	SERC	840.1	\$ 6,526	\$ 7,831	\$ 14,357	\$ 17.09	15
Alabama Power Co	SERC	1,682.5	\$ 26,942	\$ 1,982	\$ 28,923	\$ 17.19	16
ALLETE, Inc.	MRO	305.0	\$ 5,762	\$ -	\$ 5,762	\$ 18.89	17
AEP Texas Central Company	TRE	28.4	\$ 500	\$ 54	\$ 554	\$ 19.51	18
Northern States Power Co	MRO	75.3	\$ 1,052	\$ 442	\$ 1,494	\$ 19.83	19
Niagara Mohawk Power Corp.	NPCC	236.0	\$ 3,788	\$ 897	\$ 4,685	\$ 19.85	20
...	...	...	...	...	...	...	...
Northern States Power Co - Minnesota	MRO	763.3	\$ 38,646	\$ 8,920	\$ 47,566	\$ 62.31	52

**Table 4: 2021 Cost of Potential DR Savings (Minnesota Jurisdiction Only)**

<b>Utility Name</b>	<b>State</b>	<b>NERC Region</b>	<b>Potential Peak Demand Savings (MW)</b>	<b>Customer Incentives (\$ ,000)</b>	<b>All Other Costs (\$ ,000)</b>	<b>TOTAL COST (\$ ,000)</b>	<b>2021 Cost / kW</b>
<b>Otter Tail Power Co</b>	MN	MISO	52.0	\$ 34	\$ 80	\$ 114	\$ 2.18
<b>Northern States Power Co - Minnesota</b>	MN	MISO	676.1	\$ 35,869	\$ 8,641	\$ 44,510	\$ 65.83

Table 3 shows that both OTP and MP do well compared to other utilities nationwide in terms of the cost of potential DR savings; ranking 10<sup>th</sup> and 17<sup>th</sup>. However, Xcel’s DR programs are more expensive, ranking 52<sup>nd</sup> out of 83 IOUs with DR programs. When data for only the Minnesota jurisdiction is shown (Table 4) the results are similar. DR for OTP’s Minnesota jurisdiction is more cost effective than OTP’s system while the cost for Xcel’s Minnesota jurisdiction is slightly higher than Xcel’s system.

In summary, the EIA data show that the Minnesota IOUs do very well when compared to other IOUs nationwide in terms of the quantity of DR available. Both MP and OTP also do very well in terms of cost of their DR programs. However, the cost of Xcel’s DR programs is somewhat high. Note that there are a number of factors which can impact cost, such as the customer mix, the size of the incentives offered, and so forth.

2. Utility-specific DR Data

i. MP

Department Information Request Nos. 1 and 2 requested basic data on MP’s DR programs and MP’s seasonal peak demand forecast. MP provided a range of DR impact; the low end of MP’s range covers moderate temperatures with low or moderate load and the high end of MP’s range covers extreme temperatures with high load. Tables 5 and 6 below provide a summary of the data reported by MP. Note that all DR is shown “at the meter.” Thus, if the DR data were to be compared to a supply-side resource it would have to be grossed up for the Planning Reserve Margin and for transmission losses.<sup>10</sup>

**Table 5: MP Potential DR Savings—Moderate Temperatures/Low Load (MW)**

Tariff Group	Winter Dec. - Feb.	Spring Mar. - May	Summer June - Aug.	Fall Sep. - Nov.
Dual Fuel	30	4	4	4
Incremental Production Service	-	-	-	-
LP DR (products A and C)	213	213	213	213
Released Energy	-	-	-	-
Voluntary Energy Buyback	-	-	-	-
All tariffs	243	217	217	217
Coincident Peak Demand Net Peak DR % of Coincident Peak	<b>[TRADE SECRET DATA HAS BEEN EXCISED]</b>			

<sup>10</sup> The PRM for next year is 7.4% in summer, 14.9% in fall, 25.5% in winter, and 24.5% in spring. Also, MP estimated transmission losses at 1.5%.

**Table 6: MP Potential DR Savings—Extreme Temperatures/High Load (MW)**

Tariff Group	Winter Dec. - Feb.	Spring Mar. - May	Summer June - Aug.	Fall Sep. - Nov.
Dual Fuel	30	30	4	30
Incremental Production Service	15	15	15	15
LP DR (products A and C)	213	213	213	213
Released Energy	-	-	-	-
Voluntary Energy Buyback	-	-	-	-
All tariffs	258	258	232	258
Coincident Peak Demand Net Peak DR % of Coincident Peak	<b>[TRADE SECRET DATA HAS BEEN EXCISED]</b>			

Of the Tariff Groups reported by MP, Incremental Production Service, LP DR (products A and C), and Released Energy are for MP’s Large Power customer class. Large Power customers account for about 90% of MP’s overall DR potential during extreme weather; in summer the Large Power class represents nearly all of the DR potential. Tables 5 and 6 also show that MP’s DR potential is spread relatively evenly across the seasons.

Overall, MP has substantial DR capability, but the capability is highly concentrated in MP’s Large Power customer class. Given the nature of MP’s customer mix this is not a surprising result. Finally, the Department notes that third parties are not allowed to participate in MP’s DR programs.

*ii. OTP*

Department Information Request Nos. 3, 4, and 7 requested basic data on OTP’s DR programs and OTP’s seasonal peak demand forecast. OTP provided a range of system-wide DR impact. During unusual winter season peak events system impacts of control from all programs (excluding a large commercial customer contract load) has reached as high as 130 MW; at the low end of OTP’s range, covering less extreme peak days, the impact is measured at 90 MW. Table 7 below provides a summary of the data reported by OTP for the low end. As with MP above, all DR is shown “at the meter.” Thus, if the DR data were to be compared to a supply-side resource it would have to be grossed up for the Planning Reserve Margin and transmission losses.



**Table 7: OTP Potential DR Savings—Less Extreme Conditions (MW)<sup>11</sup>**

Program	Winter Dec. - Feb.	Spring Mar. - May	Summer June - Aug.	Fall Sep. - Nov.
<b>Water Heating Control</b> <b>Residential Demand Control</b> <b>Air Conditioning Cycling</b> <b>Deferred Load</b> <b>Dual Fuel</b>	<b>[TRADE SECRET DATA HAS BEEN EXCISED]</b>			
<b>All tariffs</b> <b>Coincident Peak Demand</b> <b>Net Peak</b> <b>DR % of Coincident Peak</b>				

The data provided in Table 7 are for OTP’s system. However, the Commission only has authority over OTP’s Minnesota jurisdiction. From the EIA data (shown above in Tables 4 and 5) it can be seen that the Minnesota jurisdiction represents about half of OTP’s overall DR potential.<sup>12</sup>

Of the programs reported by OTP the Water Heating, Deferred Load, and Dual Fuel programs are available to several customer classes and account for over 90% of the potential DR. Table 7 also shows that OTP’s DR potential is **[TRADE SECRET DATA HAS BEEN EXCISED]** In addition, **[TRADE SECRET DATA HAS BEEN EXCISED]**

Lastly, the Department notes that third parties are not allowed to participate in OTP’s DR programs.

---

<sup>11</sup> Table 7 excludes OTP’s Large Load Contract DR program as OTP excluded that program from the detailed data. This program “Permits control of greater than 25 MW of load for a contracted MWH per year and additional curtailment for emergency and capacity events.”

<sup>12</sup> To provide some context, according to OTP’s most recent annual forecast report (Docket No. E999/PR-22-11) Minnesota represented 54% of OTP’s systemwide energy consumption in 2021.

iii. Xcel

Department Information Request Nos. 5 and 6 requested basic data on Xcel’s DR programs and Xcel’s seasonal peak demand forecast. The Department notes that, in the responses, Xcel reported several pilot programs that are underway. The pilot programs include the following:

- EV Optimization—for the Commercial and Residential classes, launched December 2022;
- Peak Flex Credit Rider—for the Commercial and Industrial classes, launched December 2022;
- Load Shifting: Commercial Thermal Storage—for the Commercial and Industrial classes, launched December 2022;
- Residential Time of Use—for the Residential class, currently not tracking as DR;<sup>13</sup>
- Critical Peak Pricing—for the Commercial and Industrial classes, not yet approved by the Commission; and
- General Time of Use—for the Commercial and Industrial classes, not yet approved by the Commission.

For operational programs the seasonal DR impact is shown below in Table 8.

**Table 8: Xcel Potential DR Savings (MW)**

Program	Winter Dec. - Feb.	Spring Mar. - May	Summer June - Aug.	Fall - Nov.	Sep.
AC*Rewards	-	9	19		11
Electric Rate Savings	204	237	270		263
Peak Partner Rewards	N/A	N/A	9		N/A
Saver's Switch	-	179	345		191
<b>All tariffs</b>	204	425	643		465
<b>Coincident Peak Demand</b>	6,147	6,232	8,434		6,973
<b>Net Peak</b>	5,943	5,807	7,791		6,508
<b>DR as % of Peak</b>	3%	7%	8%		7%

As with OTP, the data provided in Table 8 are for Xcel’s system. However, the Commission only has authority over Xcel’s Minnesota jurisdiction. Xcel’s DR programs are largely designed to address demand in the company’s peak season but, as a whole, do provide substantial capacity in the spring and fall (shoulder) seasons. Xcel’s winter DR capability is substantially lower, but Xcel’s overall peak is summer. Even with certain resources unavailable in the winter (e.g., the Manitoba Hydro diversity exchange) if Xcel’s resources covered the summer peak, then they likely also cover the winter peak.<sup>14</sup>

<sup>13</sup> Xcel is awaiting pilot completion and market analysis.

<sup>14</sup> Better information on seasonal load and capability will be available in the near future as MISO’s 2023 Planning Resource Auction progresses.

### 3. *FERC Order 2222 Discussion*

According to a fact sheet published by FERC<sup>15</sup>, the goal of FERC Order 2222 was to “help usher in the electric grid of the future and promote competition in electric markets by removing the barriers preventing distributed energy resources (DERs) from competing on a level playing field in the organized capacity, energy and ancillary services markets run by regional grid operators.” According to FERC’s fact sheet DERs:

- are small-scale power generation or storage technologies (typically from 1 kW to 10 MW);
- can be located on an electric utility’s distribution system, a subsystem of the utility’s distribution system or behind a customer meter; and
- may include electric storage, intermittent generation, distributed generation, DR, energy efficiency, thermal storage or electric vehicles and their charging equipment.

Of importance here is that the FERC’s definition of DERs includes DR. The most recent action by FERC in this proceeding was FERC Order 2222-B, which states at point 29:

we find that, as the Commission stated in Order No. 2222, “the participation of demand response in distributed energy resource aggregations is subject to the opt-out and opt-in requirements of Order Nos. 719 and 719-A. Therefore, if the relevant electric retail regulatory authority where a demand response resource is located has either chosen to opt out or has not opted in [pursuant to Order Nos. 719 and 719-A], then the demand response resource may not participate in a distributed energy resource aggregation.”

Recall that the Commission’s Notice clarified that the Commission previously addressed issues relating to the aggregation of DR in relation to FERC Order 719 and 719-A in Docket E999/CI-09-1449. Therefore, the Commission’s prior decision remains in effect at this time.

At FERC the issue of relevant electric retail regulatory authority (RERRA) opting out of DR participation in wholesale markets is now being explored further in FERC Docket No. RM21-14-000 *Participation of Aggregators of Retail Demand Response Customers in Markets Operated by Regional Transmission Organizations and Independent System Operators*.

Also, under FERC Order 2222 regional grid operators must revise their tariffs to establish DERs as a category of market participant. The filing of Midcontinent Independent System Operator, Inc. (MISO) with FERC to revise MISO’s tariffs is pending in FERC Docket No. ER22-1640. Among other things, MISO’s proposed tariff requested an implementation date of October 1, 2029 and allows for aggregations to a single location.<sup>16</sup>

---

<sup>15</sup> The fact sheet is available at: <https://ferc.gov/media/ferc-order-no-2222-fact-sheet>

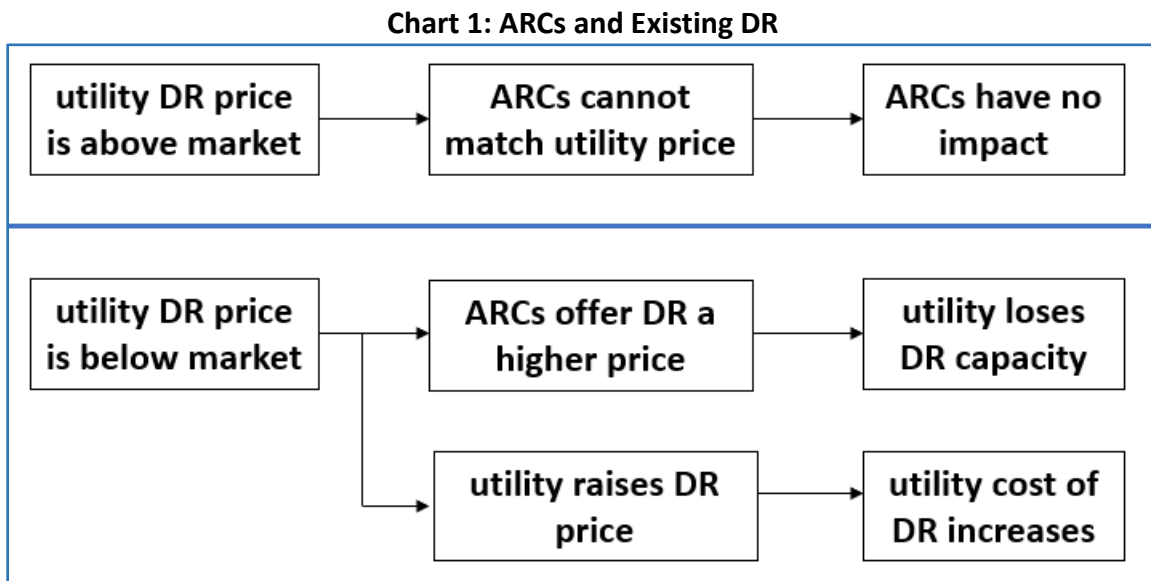
<sup>16</sup> Technically the single location is referred to as an Elemental Pricing Node or EPNode in MISO.

### C. SOURCES OF DR FOR ARCS

Broadly speaking, assuming ARCs are permitted to operate independently, there are two potential sources of DR for ARCs. The first potential source of DR for ARCs is DR already participating in existing, utility-run DR programs. In this first scenario ARCs attempt to induce DR to switch programs from a utility-run program to the ARC program. The second potential source is to find load not currently participating in utility-run programs. In this second scenario ARCs recruit customers not participating in utility DR programs, organize them, and offer the resulting DR into the wholesale market. The Commission’s notice did not specify whether it was focused on the first source, the second, or both.

#### 1. ARCs and Existing DR Capacity

The result of ARCs attempting to get existing DR to switch away from utility-run DR programs depends on the prices paid by the utility and the ARC. The utility’s price would be determined by Commission-approved tariffs and the ARC price would be determined by MISO’s markets.<sup>17</sup> The analysis of ARCs and existing DR is illustrated in Chart 1.



One possibility is that the utility’s price is above MISO market prices. In this case ARCs will not be able to match the utility’s price and the existing DR capacity will not exit the utility program. Thus, no change will result from ARCs. This is illustrated in the top half of Chart 1.

---

<sup>17</sup> While ARCs technically could offer whatever price they wanted, ARCs would only be profitable if they offer customers the MISO market price less an amount to cover the ARCs’ costs. Thus, ARC pricing is ultimately determined by the MISO markets.

A second possibility is that the utility's price is below market. This is illustrated in the bottom half of Chart 1. In this situation ARCs will be able to offer existing DR a higher price. There are two potential results from this possibility. The first result is that customers leave the utility-run DR program, causing the utility to lose accredited capacity. The lost capacity would have to be replaced. Since Minnesota's utilities generally do not rely upon buying from MISO's capacity market<sup>18</sup> new capacity would have to be built or otherwise acquired. Since it is peaking capacity that is being lost presumably new peaking capacity in some form would have to be added. However, the specific type of replacement capacity is of lesser importance here and would be determined in the resource planning process.

We know the lost capacity would have to be replaced because the utilities' existing capacity surpluses will disappear in the near future as large coal plants and other resources retire. Having to replace existing DR with new resources will increase overall rates unless the DR were not cost effective (meaning new resources are lower in cost than the DR that was lost). There is no evidence that existing DR is more expensive than new resources.

The second result is that the utility increases the price it offers (amends the tariffs) to be equal to or greater than the market price. This would prevent customers from leaving but would increase the cost of existing utility-run DR programs.

In summary, allowing ARCs to participate could result in no changes for existing DR programs and capacity, in which case there is no compelling reason to allow ARCs. The alternative is 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.

## *2. ARCs and New DR Capacity*

The second approach is ARCs organizing DR capacity not currently participating in utility programs. This would result in a lower level of potential DR for new utility programs to access and more DR in MISO's markets. If utilities are not expected to pursue expansion of DR in particular or capacity resources in general, this would not be an issue. The ARCs would make more capacity available to MISO's markets; less would be available for Minnesota utilities, but the utilities are assumed to not pursue the potential resources anyway.

To the extent new DR is expected to be needed,<sup>19</sup> then loss of DR potential via ARCs would again raise overall retail rates. This is because utilities would have to offer above market prices to get DR to switch from ARCs to the utility. In this scenario the utility pursues DR that is available but not organized by ARCs. Since ARCs will have the incentive to pursue all cost-effective DR, the only DR that would remain will be DR that is not cost effective in the sense that the payments it requires are above the market price. In other words, the high-cost DR should be all that is un-organized.

---

<sup>18</sup> The Department understands that the utilities currently use MISO's Fixed Resource Adequacy Plan.

<sup>19</sup> Either to meet specific, Commission-ordered DR goals or to meet general capacity needs determined in IRPs.

### 3. Summary

In summary, it is theoretically possible that allowing ARCs could result in no changes for existing DR programs and capacity, in which case there is no compelling reason to allow ARCs. However, the most likely scenario is that allowing ARCs will either increase the cost of DR, raising retail rates, or existing DR will be lost resulting in new capacity being constructed and subsequently retail rates increasing.

#### D. COMMISSION QUESTIONS

##### 1. Bidding DR Into Organized Markets

The first topic specified by the Notice is “Should the Commission permit aggregators of retail customers to bid demand response into organized markets?”

In essence, allowing ARCs to bid DR into markets is deregulating DR as an electric service in Minnesota. The Department’s legal analysis (section III A) demonstrates that ARCs are not public utilities, resulting in significant limits to the Commission’s ability to regulate ARCs. The Department’s background research (section III B), using both EIA data and utility responses to information requests, demonstrates utilities currently have significant amounts of DR on their system compared to other states and to the utility’s peak demand. The Department’s theoretical discussion demonstrating the potential impacts of ARCs (section III C), when combined with the background data, demonstrates that it is reasonable to expect ARCs to result in new resource acquisitions and/or higher retail rates.

Based upon the analysis above the Department recommends that the Commission not permit ARCs to bid DR into organized markets.

##### 2. Requiring Tariffs

The second topic specified by the Notice is “Should the Commission require rate-regulated electric utilities to create tariffs allowing third-party aggregators to participate in utility demand response programs?”

One understanding of the question is that it is asking about re-writing existing utility tariffs implementing existing DR programs to allow ARCs to deliver the programs (either in place of or at the same time as the utility). The Department recommends the Commission not pursue such a path. This would trigger numerous regulatory proceedings re-writing several tariffs with no evidence, at least at this time, that ARCs are even interested in such an approach. Scarce regulatory resources would be consumed creating a cost with no evidence that there would even be benefits (ARC participation resulting in reduced system costs), much less that the benefits would exceed the costs.

A second understanding of the question is that it is asking about writing a new, generic tariff allowing ARCs to propose DR programs to the utility. This approach would still trigger regulatory proceedings and regulatory costs, but they would be lower than if existing tariffs were to be re-written. While the

Department does not oppose such a concept, the Department recommends the Commission not pursue such a path at this time. Again, scarce regulatory resources would be consumed creating a cost with no evidence that there would even be benefits (ARC participation resulting in reduced system costs), much less that the benefits would exceed the costs. Until ARCs have indicated a desire to work within the utility program structure and provided information regarding necessary elements of such a structure there is no reason to expect a successful tariff could be written.

In summary, until ARCs have indicated a willingness to work within the utility structure and ARCs explain what would be required for such a program to be successful, there is no reason to consume resources (incur costs) speculating on how a successful tariff would be structured and that there may be benefits at some point in the future. Therefore, the Department recommends that the Commission take no action regarding tariffs that allow ARCs to participate in utility DR programs at this time.

### *3. Certifying ARCs*

The third topic specified by the Notice is “Should the Commission verify or certify aggregators of retail customers for demand response or distributed energy resources before they are permitted to operate, and if so, how?”

Regarding the question of how the Commission would verify or certify ARCs, above the Department concluded that—as a legal matter—ARCs do not qualify as public utilities under Minnesota law. Thus, verification or certification of ARCs would have to be implemented via terms included in the utilities’ tariffs.

Regarding the question “should the Commission verify or certify” ARCs, there are two possible situations. First, if ARCs operate within a utility DR program, the verification would be undertaken by the utility in the same way it verifies all other contractors the utility does business with. No Commission action would be necessary outside of any approvals requested by the utility in the normal course of business.

Second, assuming ARCs are allowed to operate independently of utilities, it is not clear why the Commission would extend utility tariffs to cover market-based transactions between Minnesotans and ARCs; particularly since the transactions would not impact the utility system differently than many other transactions. Minnesotans are involved in a wide variety of market-based transactions on a daily basis that result in changes to energy use patterns. While the Department does not oppose verification or certification, it is not clear at this time what incremental benefits would be achieved that would offset the costs of developing a verification or certification process. It is also not clear why the existing laws that would normally cover a transaction between an end-use customer and an ARC are insufficient.

In summary, the Department recommends that the Commission take no action regarding verifying or certifying ARCs for DR at this time.

*4. Additional Consumer Protections*

The fourth topic specified by the Notice is “Are any additional consumer protections necessary if aggregators of retail customers are permitted to operate?” The Department does not have any consumer protections not already provided by existing laws that would normally cover a transaction between an end-use customer and an ARC.

**IV. DEPARTMENT RECOMMENDATION**

The Department recommends that the Commission:

1. not permit ARCs to bid DR into organized markets;
2. take no action regarding tariffs that allow ARCs to participate in utility DR programs at this time;  
and
3. take no action regarding verifying or certifying ARCs for DR at this time.



## **CERTIFICATE OF SERVICE**

I, Sharon Ferguson, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

**Minnesota Department of Commerce  
Public Comments**

**Docket No. E999/CI-22-600**

Dated this **13<sup>th</sup>** day of **March 2023**

**/s/Sharon Ferguson**

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Gary	Ambach	Gambach@slipstreaminc.org	Slipstream, Inc.	8973 SW Village Loop  Chanhassen, MN 55317	Electronic Service	No	OFF_SL_22-600_Official
Alison C	Archer	aarcher@misoenergy.org	MISO	2985 Ames Crossing Rd  Eagan, MN 55121	Electronic Service	No	OFF_SL_22-600_Official
Susan	Arntz	sarntz@mankatomn.gov	City Of Mankato	P.O. Box 3368  Mankato, MN 560023368	Electronic Service	No	OFF_SL_22-600_Official
Mara	Ascheman	mara.k.ascheman@xcelenenergy.com	Xcel Energy	414 Nicollet Mall Fl 5  Minneapolis, MN 55401	Electronic Service	No	OFF_SL_22-600_Official
Jessica L	Bayles	Jessica.Bayles@stoel.com	Stoel Rives LLP	1150 18th St NW Ste 325  Washington, DC 20036	Electronic Service	No	OFF_SL_22-600_Official
David	Bender	dbender@earthjustice.org	Earthjustice	1001 G Street NW Suite 1000 Washington, District of Columbia 20001	Electronic Service	No	OFF_SL_22-600_Official
Tracy	Bertram	tbertram@ci.becker.mn.us		12060 Sherburne Ave Becker City Hall Becker, MN 55308-4694	Electronic Service	No	OFF_SL_22-600_Official
James J.	Bertrand	james.bertrand@stinson.com	STINSON LLP	50 S 6th St Ste 2600  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-600_Official
Jessica	Beyer	jbeyer@greatermankato.com	Greater Mankato Growth	1961 Premier Dr Ste 100  Mankato, MN 56001	Electronic Service	No	OFF_SL_22-600_Official
Ingrid	Bjorklund	ingrid@bjorklundlaw.com	Bjorklund Law, PLLC	855 Village Center Drive #256  North Oaks, MN 55127	Electronic Service	No	OFF_SL_22-600_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Michael	Bull	mike@mrea.org	Minnesota Rural Electric Assn	11640 73rd Ave North Maple Grove, MN 55369	Paper Service	No	OFF_SL_22-600_Official
James	Canaday	james.canaday@ag.state.mn.us	Office of the Attorney General-RUD	Suite 1400 445 Minnesota St. St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_22-600_Official
Thomas	Carlson	thomas.carlson@edf-re.com	EDF Renewable Energy	10 2nd St NE Ste. 400  Minneapolis, Minnesota 55413	Electronic Service	No	OFF_SL_22-600_Official
John	Coffman	john@johncoffman.net	AARP	871 Tuxedo Blvd.  St. Louis, MO 63119-2044	Electronic Service	No	OFF_SL_22-600_Official
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400  St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_22-600_Official
Riley	Conlin	riley.conlin@stoel.com	Stoel Rives LLP	33 S. 6th Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-600_Official
George	Crocker	gwillc@nawo.org	North American Water Office	PO Box 174  Lake Elmo, MN 55042	Electronic Service	No	OFF_SL_22-600_Official
David	Dahlberg	davedahlberg@nweco.com	Northwestern Wisconsin Electric Company	P.O. Box 9 104 South Pine Street Grantsburg, WI 548400009	Electronic Service	No	OFF_SL_22-600_Official
Matthew	Deal	matthew.deal@chargepoint.com	ChargePoint, Inc.	254 Hacienda Ave  Campbell, CA 95008	Electronic Service	No	OFF_SL_22-600_Official
James	Denniston	james.r.denniston@xcelenergy.com	Xcel Energy Services, Inc.	414 Nicollet Mall, 401-8  Minneapolis, MN 55401	Electronic Service	No	OFF_SL_22-600_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
J.	Drake Hamilton	hamilton@fresh-energy.org	Fresh Energy	408 St Peter St Ste 350  Saint Paul, MN 55101	Electronic Service	No	OFF_SL_22-600_Official
Catherine	Fair	catherine@energycents.org	Energy CENTS Coalition	823 E 7th St  St Paul, MN 55106	Electronic Service	No	OFF_SL_22-600_Official
John	Farrell	jfarrell@ilsr.org	Institute for Local Self-Reliance	2720 E. 22nd St Institute for Local Self-Reliance Minneapolis, MN 55406	Electronic Service	No	OFF_SL_22-600_Official
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280  Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_22-600_Official
Mike	Fiterman	mikefiterman@libertydiversified.com	Liberty Diversified International	5600 N Highway 169  Minneapolis, MN 55428-3096	Electronic Service	No	OFF_SL_22-600_Official
Edward	Garvey	edward.garvey@AESLconsulting.com	AESL Consulting	32 Lawton St  Saint Paul, MN 55102-2617	Electronic Service	No	OFF_SL_22-600_Official
Jason	Grenier	jgrenier@otpc.com	Otter Tail Power Company	215 South Cascade Street  Fergus Falls, MN 56537	Electronic Service	No	OFF_SL_22-600_Official
Todd J.	Guerrero	todd.guerrero@kutakrock.com	Kutak Rock LLP	Suite 1750 220 South Sixth Street Minneapolis, MN 554021425	Electronic Service	No	OFF_SL_22-600_Official
Katherine	Hamilton	katherine@aem-alliance.org	Advanced Energy Management Alliance	1701 Rhode Island Ave, NW  Washington, DC 20036	Electronic Service	No	OFF_SL_22-600_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Kim	Havey	kim.havey@minneapolismn.gov	City of Minneapolis	350 South 5th Street, Suite 315M Minneapolis, MN 55415	Electronic Service	No	OFF_SL_22-600_Official
Philip	Hayet	phayet@jkenn.com	J. Kennedy and Associates, Inc.	570 Colonial Park Drive Suite 305 Roswell, GA 30075-3770	Electronic Service	No	OFF_SL_22-600_Official
Adam	Heinen	aheinen@dakotaelectric.com	Dakota Electric Association	4300 220th St W  Farmington, MN 55024	Electronic Service	No	OFF_SL_22-600_Official
Kimberly	Hellwig	kimberly.hellwig@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-600_Official
Annete	Henkel	mui@mutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St.Paul, MN 55101	Electronic Service	No	OFF_SL_22-600_Official
Michael	Hoppe	lu23@ibew23.org	Local Union 23, I.B.E.W.	445 Etna Street Ste. 61 St. Paul, MN 55106	Electronic Service	No	OFF_SL_22-600_Official
Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law	2950 Yellowtail Ave.  Marathon, FL 33050	Electronic Service	No	OFF_SL_22-600_Official
Richard	Johnson	Rick.Johnson@lawmoss.com	Moss & Barnett	150 S. 5th Street Suite 1200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-600_Official
Sarah	Johnson Phillips	sarah.phillips@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-600_Official
William D	Kenworthy	will@votesolar.org	Vote Solar	332 S Michigan Ave FL 9  Chicago, IL 60604	Electronic Service	No	OFF_SL_22-600_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Frank	Kohlasch	frank.kohlasch@state.mn.us	MN Pollution Control Agency	520 Lafayette Rd N.  St. Paul, MN 55155	Electronic Service	No	OFF_SL_22-600_Official
Michael	Krikava	mkrikava@taftlaw.com	Taft Stettinius & Hollister LLP	2200 IDS Center 80 S 8th St Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-600_Official
Jeffrey L.	Landsman	jlandsman@wheelerlaw.com	Wheeler, Van Sickle & Anderson, S.C.	44 E. Mifflin Street, 10th Floor  Madison, WI 53703	Electronic Service	No	OFF_SL_22-600_Official
Carmel	Laney	carmel.laney@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-600_Official
Peder	Larson	plarson@larkinhoffman.com	Larkin Hoffman Daly & Lindgren, Ltd.	8300 Norman Center Drive Suite 1000 Bloomington, MN 55437	Electronic Service	No	OFF_SL_22-600_Official
Annie	Levenson Falk	annief@cupminnesota.org	Citizens Utility Board of Minnesota	332 Minnesota Street, Suite W1360  St. Paul, MN 55101	Electronic Service	No	OFF_SL_22-600_Official
Kavita	Maini	kmairi@wi.rr.com	KM Energy Consulting, LLC	961 N Lost Woods Rd  Oconomowoc, WI 53066	Electronic Service	No	OFF_SL_22-600_Official
Emily	Marshall	emarshall@mojlaw.com	Miller O'Brien Jensen, PA	120 S. 6th Street Suite 2400 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_22-600_Official
Mary	Martinka	mary.a.martinka@xcelenergy.com	Xcel Energy Inc	414 Nicollet Mall 7th Floor Minneapolis, MN 55401	Electronic Service	No	OFF_SL_22-600_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Daryl	Maxwell	dmaxwell@hydro.mb.ca	Manitoba Hydro	360 Portage Ave FL 16 PO Box 815, Station Main Winnipeg, Manitoba R3C 2P4  Canada	Electronic Service	No	OFF_SL_22-600_Official
Taylor	McNair	taylor@gridlab.org		668 Capp Street  San Francisco, CA 94110	Electronic Service	No	OFF_SL_22-600_Official
Joseph	Meyer	joseph.meyer@ag.state.mn.us	Office of the Attorney General-RUD	Bremer Tower, Suite 1400 445 Minnesota Street St Paul, MN 55101-2131	Electronic Service	No	OFF_SL_22-600_Official
Stacy	Miller	stacy.miller@minneapolismn.gov	City of Minneapolis	350 S. 5th Street Room M 301 Minneapolis, MN 55415	Electronic Service	No	OFF_SL_22-600_Official
Gregory C.	Miller	gmiller@dakotaelectric.com	Dakota Electric Association	4300 220th Street West  Farmington, MN 55024	Electronic Service	No	OFF_SL_22-600_Official
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St  Duluth, MN 558022093	Electronic Service	No	OFF_SL_22-600_Official
Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP	33 South Sixth St Ste 4200  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-600_Official
Evan	Mulholland	emulholland@mncenter.org	Minnesota Center for Environmental Advocacy	1919 University Ave W Ste 515  Saint Paul, MN 55101	Electronic Service	No	OFF_SL_22-600_Official
Alan	Muller	alan@greendel.org	Energy & Environmental Consulting	1110 West Avenue  Red Wing, MN 55066	Electronic Service	No	OFF_SL_22-600_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Kristin	Munsch	kmunsch@citizensutilityboard.org	Citizens Utility Board of Minnesota	309 W. Washington St. Ste. 800 Chicago, IL 60606	Electronic Service	No	OFF_SL_22-600_Official
Amanda	Myers	amanda@weavegrid.com	Weave Grid, Inc.	222 7th Street 2nd Floor San Francisco, California 94103	Electronic Service	No	OFF_SL_22-600_Official
Carl	Nelson	cnelson@mncee.org	Center for Energy and Environment	212 3rd Ave N Ste 560  Minneapolis, MN 55401	Electronic Service	No	OFF_SL_22-600_Official
J	Newberger	Jnewberger1@yahoo.com	State Rep	14225 Balsam Blvd  Becker, MN 55308	Electronic Service	No	OFF_SL_22-600_Official
David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency	220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_22-600_Official
Rolf	Nordstrom	rnordstrom@gpisd.net	Great Plains Institute	2801 21ST AVE S STE 220  Minneapolis, MN 55407-1229	Electronic Service	No	OFF_SL_22-600_Official
Samantha	Norris	samanthanorris@alliantenergy.com	Interstate Power and Light Company	200 1st Street SE PO Box 351  Cedar Rapids, IA 524060351	Electronic Service	No	OFF_SL_22-600_Official
M. William	O'Brien	bobrien@mojlaw.com	Miller O'Brien Jensen, P.A.	120 S 6th St Ste 2400  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-600_Official
Ric	O'Connell	ric@gridlab.org	GridLab	2120 University Ave  Berkeley, CA 94704	Electronic Service	No	OFF_SL_22-600_Official



First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Carol A.	Overland	overland@legalectric.org	Legaelectric - Overland Law Office	1110 West Avenue Red Wing, MN 55066	Electronic Service	No	OFF_SL_22-600_Official
Jessica	Palmer Denig	jessica.palmer-Denig@state.mn.us	Office of Administrative Hearings	600 Robert St N PO Box 64620 St. Paul, MN 55164	Electronic Service	No	OFF_SL_22-600_Official
Audrey	Partridge	apartridge@mncee.org	Center for Energy and Environment	212 3rd Ave. N. Suite 560  Minneapolis, Minnesota 55401	Electronic Service	No	OFF_SL_22-600_Official
Lisa	Perry	Lisa.Perry@walmart.com	Walmart	2608 SE J St  Bentonville, AR 72716	Electronic Service	No	OFF_SL_22-600_Official
J. Gregory	Porter	greg.porter@nngco.com	Northern Natural Gas Company	1111 South 103rd St  Omaha, NE 68124	Electronic Service	No	OFF_SL_22-600_Official
Gregory	Poulos	gpoulos@enercoc.com	EnerNOC, Inc.	5093 Heath Gate Dr.  New Albany, Ohio 43054	Electronic Service	No	OFF_SL_22-600_Official
Kevin	Pranis	kpranis@liunagro.com	Laborers' District Council of MN and ND	81 E Little Canada Road  St. Paul, Minnesota 55117	Electronic Service	No	OFF_SL_22-600_Official
Greg	Pruszinske	gpruszinske@ci.becker.mn.us	City of Becker	PO Box 250 12060 Sherburne Ave Becker, MN 55308	Electronic Service	No	OFF_SL_22-600_Official
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_22-600_Official
Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy	26 E Exchange St, Ste 206  St. Paul, MN 551011667	Electronic Service	No	OFF_SL_22-600_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750  St. Paul, MN 55101	Electronic Service	No	OFF_SL_22-600_Official
Jacob J.	Schlesinger	jschlesinger@keyesfox.com	Keyes & Fox LLP	1580 Lincoln St Ste 880  Denver, CO 80203	Electronic Service	No	OFF_SL_22-600_Official
Christine	Schwartz	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7  Minneapolis, MN 554011993	Electronic Service	Yes	OFF_SL_22-600_Official
Doug	Scott	dscott@gpisd.net	Great Plains Institute	2801 21st Ave Ste 220  Minneapolis, MN 55407	Electronic Service	No	OFF_SL_22-600_Official
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th PI E Ste 350  Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_22-600_Official
Patricia F	Sharkey	psharkey@environmentallawcounsel.com	Midwest Cogeneration Association.	180 N LaSalle St Ste 3700 Chicago, IL 60601	Electronic Service	No	OFF_SL_22-600_Official
Joshua	Smith	joshua.smith@sierraclub.org		85 Second St FL 2  San Francisco, California 94105	Electronic Service	No	OFF_SL_22-600_Official
Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.	76 W Kellogg Blvd  St. Paul, MN 55102	Electronic Service	No	OFF_SL_22-600_Official
Beth H.	Soholt	bsoholt@windonthewires.org	Wind on the Wires	570 Asbury Street Suite 201  St. Paul, MN 55104	Electronic Service	No	OFF_SL_22-600_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Anna	Sommer	ASommer@energyfuturesgroup.com	Energy Futures Group	PO Box 692  Canton, NY 13617	Electronic Service	No	OFF_SL_22-600_Official
Mark	Spurr	mospurr@fvbenergy.com	International District Energy Association	222 South Ninth St., Suite 825  Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_22-600_Official
Byron E.	Starns	byron.starns@stinson.com	STINSON LLP	50 S 6th St Ste 2600  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-600_Official
James M	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered	150 S 5th St Ste 700  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-600_Official
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_22-600_Official
Mona	Tierney Lloyd	mtierney-lloyd@enemroc.com	EnerNoc Inc	N/A	Paper Service	No	OFF_SL_22-600_Official
Christopher	Villarreal	cvillarreal@rstreet.org	R Street Institute	1212 New York Ave NW Ste 900 Washington, DC 20005	Electronic Service	No	OFF_SL_22-600_Official
Julie	Voeck	julie.voeck@nee.com	NextEra Energy Resources, LLC	700 Universe Blvd  Juno Beach, FL 33408	Electronic Service	No	OFF_SL_22-600_Official
Samantha	Williams	swilliams@nrdc.org	Natural Resources Defense Council	20 N. Wacker Drive Ste 1600 Chicago, IL 60606	Electronic Service	No	OFF_SL_22-600_Official
Laurie	Williams	laurie.williams@sierraclub.org	Sierra Club	Environmental Law Program 1536 Wynkoop St Ste 200 Denver, CO 80202	Electronic Service	No	OFF_SL_22-600_Official

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine	225 South Sixth Street, Suite 3500  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-600_Official
Jeff	Zethmayr	jzethmayr@citizensutilityboard.org	Citizens Utility Board	309 W. Washington, Ste 800  Chicago, IL 60606	Electronic Service	No	OFF_SL_22-600_Official
Kurt	Zimmerman	kwz@ibew160.org	Local Union #160, IBEW	2909 Anthony Ln  St Anthony Village, MN 55418-3238	Electronic Service	No	OFF_SL_22-600_Official
Patrick	Zomer	Pat.Zomer@lawmoss.com	Moss & Barnett PA	150 S 5th St #1200  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_22-600_Official