September 25, 2018

Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: 2020-2034 UPPER MIDWEST RESOURCE PLAN
SEPTEMBER 24, 2018 WORKSHOP MATERIALS
DOCKET NO. E002/RP-15-21

Dear Mr. Wolf:

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission the materials presented at our September 24, 2018 workshop, Economic and Technical Considerations – Part 2. This workshop was the fifth in a series leading-up to our 2020-2034 Upper Midwest Integrated Resource Plan filing in 2019.

We have electronically filed this document with the Commission, and copies have been served on the parties on the attached service list. Please contact Amber Hedlund at 612-337-2268 or amber.r.hedlund@xcelenergy.com or Bria Shea at (612) 330-6064 or bria.e.shea@xcelenergy.com if you have any questions regarding this filing.

Sincerely,

/s/
BRIA SHEA
DIRECTOR, REGULATORY AND STRATEGIC ANALYSIS

Enclosures
cc: Service list
Xcel Energy’s IRP Stakeholder Workshop 5: Economic and Technical Considerations—Part 2

September 24, 2018
Agenda

1:00 – 1:15 pm    Welcome, Agenda Review, Intros

1:15 – 2:15 pm    Pathways Study
                  – Experts from E3 will present preliminary results of the statewide decarbonization analysis using the PATHWAYS model.
                  – Q&A

2:15 – 2:30 pm    Break

2:30 – 3:30 pm    Transmission Studies
                  – Xcel Energy’s Transmission Planning group will present and discuss transmission considerations for changes in the resource mix, including initial reactions to transmission studies completed for the 2020 – 2034 Upper Midwest Resource Plan thus far.
                  – Q&A

3:30 – 4:00 pm    Q&A and Table Activity

4:00 pm          ADJOURN
Agenda

- Motivation
- Modeling Approach
- Results
- Next Steps
MOTIVATION
**Background and Analysis Questions**

+ Xcel Energy has committed to reducing the GHG emissions from their electric generating fleet

+ Minnesota has set targets to reduce statewide GHG emissions for 2015, 2025, and 2050

+ This analysis will focus on the role of electricity decarbonization in achieving state-wide GHG targets for the whole economy
  
  - How far can electricity decarbonization get the state towards GHG targets?
  - How quickly do new electric vehicles and appliances need to be sold?
  - What is the impact on electric loads from new electric vehicles and appliances?
Minnesota decarbonization analysis is statewide and economy-wide.

Xcel electricity portfolio and reliability analysis will model the electricity sector only, across the footprint of the Northern States Power Upper Midwest region.

- Same footprint as NSP IRP; includes loads in MI, MN, ND, SD, WI.
By 2025: 30% reduction in GHGs, relative to 2005

By 2050: 80% reduction in GHGs, relative to 2005

Minnesota Greenhouse Gas Reduction Targets

Source: https://www.pca.state.mn.us/air/greenhouse-gas-emissions-data

1 Million Metric Tonne (MMT) = 1.1 Million Short Tons
Focus today is on 3 sectors that Xcel Energy can have direct impact on:

- Buildings
- Transportation
- Electricity Generation

Source: 2014 GHG Inventory https://www.pca.state.mn.us/air/greenhouse-gas-emissions-data
MODELING APPROACH
E3 has developed a three-model approach for deep decarbonization

Analysis consists of three steps:

1. Analysis of economy-wide GHG goals through 2050 using PATHWAYS
2. Optimal electricity system portfolio analysis using RESOLVE
3. Electricity sector resource adequacy analysis using RECAP

- **Economy-wide GHG scenarios (PATHWAYS)**
  - Evaluate alternative economy-wide scenarios for meeting 80% reduction in GHGs by 2050

- **Electricity Sector Capacity Expansion and Dispatch (RESOLVE)**
  - Evaluate least-cost portfolio of electricity generation, storage and capacity resources to meet demand

- **Electricity Resource Adequacy Modeling (RECAP)**
  - Evaluate reliability of electric energy and capacity availability over thousands of simulated weather years
Economy-wide infrastructure-based GHG and energy analysis

- Captures “infrastructure inertia” reflecting lifetimes and vintages of buildings, vehicles, equipment
- Models physical energy flows within all sectors of the economy
- Allows for rapid comparison between user-defined scenarios

Scenarios test “what if” questions

- Reference or counterfactual scenario for consistent comparison in future years
- Multiple mitigation scenarios can be compared that each meet the same GHG emissions goal
Long Lifetimes of Equipment Affect Realistic Timing of GHG Reductions

2050 is less than 32 years from today

- Electric lighting
- Hot water heater
- Space heater
- Light duty vehicle
- Heavy duty vehicle
- Industrial boiler
- Residential building

Equipment/Infrastructure Lifetime (Years)
Light duty vehicles have an average life of ~15 years, which means a car sold today, is likely to be replaced only once or twice by 2050.

- Even if Minnesota reaches 100% of new sales as Zero Emission Vehicle alternatives, it will take significant time for existing gasoline vehicles to come off the road.
- Delayed progress in sales could lead to costly programs to retire the existing fleet early (e.g. cash for clunkers programs).
Basic Energy Modeling Framework

Demand Sectors

End-Use Energy Services Demand

- How many miles do people drive per year (2015-2050)?
- How many electric vehicles are on the road?

Stock Rollover

- How much fuel of each type is required to meet driving demand?

Supply Sectors

Electricity Supply

- What is the % of carbon-free electricity on the grid?

Pipeline Supply

- What is the % of biofuels?

Other Fuels (Gasoline, Diesel, Hydrogen, etc.)

- How much do EV’s cost over the baseline internal combustion engine vehicle?

Model Outputs:
GHGs, cost

Energy + Environmental Economics
PATHWAYS scenarios evaluate uncertain and complex futures
RESULTS
**Scenarios and Sensitivities**

**Reference Scenario**
- Current Policy Scenario

**Mitigation Scenarios**
- Designed to meet the 2050 GHG goal
  - High Electrification Scenario
  - High Biofuels Scenario

**Sensitivities**
- Sensitivity #1: Focus first on energy efficiency and electrification measures with higher shares of carbon-free electricity, no other measures to meet 2050 GHG goal
- Energy Efficiency, Electrification and an increase in Carbon-Free Electricity are necessary but insufficient to meet 2025 and 2050 economy-wide GHG goals. Additional mitigation measures are needed.
**Scenario Assumptions**

**High Electrification vs. High Biofuels**

High Electrification scenario includes more electrification and less biofuels than the High Biofuels scenario.

High Biofuels scenario includes use of purpose-grown biofuel crops, excluded from High Electrification scenario.
High Electrification Scenario

Minnesota Greenhouse Emissions and Reduction Measures

- 42% carbon-free generation
- Begin high efficiency retrofits in buildings
- Begin installing electric heat pumps
- 5% light duty ZEV sales
- 75,000 light duty ZEVs
- 50% electric heat pump sales
- 9% biofuels, excluding purpose grown
- 100% sales high efficiency appliances
- 78% carbon-free generation
- 97% heat pump sales
- 100% ZEV sales: light, medium duty, heavy duty
- Partial industrial electrification
- 64% reduction in all other sectors vs. 2005

Energy + Environmental Economics
**High Biofuels Scenario**

**Minnesota Greenhouse Emissions and Reduction Measures**

- **42% carbon-free generation**
- **Begin high efficiency retrofits in buildings**
- **Begin installing electric heat pumps**
- **20-30% electric heat pump sales**
- **24% biofuels, including purpose grown**
- **5% light duty ZEV sales**
- **75,000 light duty ZEVs**
- **100% sales high efficiency appliances**
- **100% LDV ZEV sales**
- **80% MDV**
- **50% HDV**
- **78% carbon-free generation**
- **60% reduction in all other sectors vs. 2005**
How do Xcel Energy’s commitments compare to MN electricity decarbonization scenarios?

+ Xcel Energy has a lower-carbon generation mix than the state as a whole today, and lower carbon electricity commitments than the Minnesota Pathways mitigation scenarios assume

Percentage of Carbon-Free Electricity Generation
High Biofuels Scenario includes more conventional efficiency in buildings and less building electrification, and less heavy-duty trucking electrification & hydrogen electrolysis.

High Electrification: load *increases by 45%* in 2050, relative to 2015.

High Biofuels: load *decreases by 1%* in 2050 in, relative to 2015.
Mitigation scenarios achieve same 2050 target, with different mitigation measures by sector.

### GHG Emissions By Sector

#### High Biofuels Scenario

<table>
<thead>
<tr>
<th>Sector</th>
<th>High Electrification</th>
<th>High Biofuels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buildings</td>
<td>-76%</td>
<td>-37%</td>
</tr>
<tr>
<td>Transportation</td>
<td>-88%</td>
<td>-98%</td>
</tr>
<tr>
<td>Electricity Generation</td>
<td>-90%</td>
<td>-94%</td>
</tr>
<tr>
<td>Other</td>
<td>-64%</td>
<td>-60%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>-80%</strong></td>
<td><strong>-80%</strong></td>
</tr>
</tbody>
</table>

#### High Electrification Scenario
Results by Sector
Buildings

Both scenarios achieve significant energy efficiency relative to the Reference Scenario, but the High Electrification scenario achieves higher efficiency due to electric heat pump adoption.

Energy Use in Buildings

High Biofuels Scenario

High Electrification Scenario

These scenarios do not include a detailed analysis of electric heat pump performance in Minnesota.
Results by Sector Transportation

- Electric vehicles and fuel economy standards for vehicles reduce total transportation energy demand in both Mitigation scenarios relative to Reference.

- In High Electrification scenario, hydrogen fuel cell heavy duty trucks are used, in lieu of higher biofuels used in the High Biofuels scenario.
The two mitigation scenarios have very different electricity demands, but achieve the same percentage carbon-free electricity generation by 2050.
Electricity sector helps to decarbonize other sectors, through low-carbon electricity plus electrification

- Deep decarbonization scenario results in direct GHG savings in the electricity sector of about 39-41 Million Short Tons CO₂ in 2050, compared to a 25% renewables scenario.

- The electricity sector enables an additional 14-34 Million Short Tons CO₂ of GHG savings in 2050 in other sectors, due to electrification in:
  - Vehicles
  - Buildings
  - Industry
Aggressive action is needed across all sectors to meet a statewide goal of 80% reduction below 2005 levels

- Reaching 80% GHG reductions by 2050 is challenging and not a given

Increased reliance on low-carbon electricity enables emission reductions in other sectors

- Electrification and carbon-free electricity is necessary but not sufficient

Transportation and building electrification drive electric load growth, especially after 2025, particularly in a future with less biofuels

Buildings and transportation electrification are dependent on consumer adoption, which will benefit from reasonable electric rates

Scenarios represent a “first cut”: Further research is needed around building electrification impacts in Minnesota’s climate, opportunities in biofuels, agriculture, and industrial sectors
NEXT STEPS
Next Steps

+ **Minnesota Decarbonization Scenarios**

  - Stakeholder feedback
    - Send to Nick Martin: Nicholas.F.Martin@xcelenergy.com
    - Due by October 9th, 2018
  - Modeling Refinements
    - Additional detail on electric sector from Xcel Portfolio analysis
    - Additional refinement in building energy efficiency and electrification potential

+ **Updated Decarbonization scenarios and E3’s electricity portfolio and reliability analysis to be presented in October**
Outline

• **What do we need to serve power reliably?**
  – Energy vs Demand
  – Types of system needs
  – Relying on external support

• **Initial Results of Exploratory Retirement Studies**
  – Scenarios and Assumptions
  – Study results
  – What has changed?

• **Additional System Analytics**
  – MISO Generator Interconnection Process
    • August 2016 West DPP Phase 1 upgrades
    • Delays in replacing energy
  – MISO Regional Transmission Overlay Study
  – Baseload Reduction
RELIABILITY
System Needs for Operation

\[
\text{Amount of Available Energy} \geq \text{Amount of Demand} + \text{Losses}
\]

The highest level Need for the reliable delivery of electricity is the availability of enough energy to meet demand.
System Operation Attributes – Simplified

Energy > Demand

- Reserves
  - Operating Reserves
  - Planning Reserves
  - Ramping

- Facility Limits
  - Voltage
  - Thermal
  - Fault Current

- System Stability
  - Frequency
  - Voltage
  - Synchronism

- Protection & Restoration
  - Fault Current
  - Relaying & Operations
  - Black Start

External Support
System Reliability – Availability of External Support

- Participation by resources and system in a large geographic areas can increase overall system reliability, but only to a certain point
- Example: NERC Standard PRC-006-3
  - To ensure protection against cascading events, those in charge of planning and operations of transmission system are required to develop *islanding* procedures
System Reliability – Reconnecting to the Broader System

• Black Start
  – All planning area and transmission operators are required to have plans to restore the system after a catastrophic failure resulting in a blackout
  – Similar to UFLS islanding, at the time of a catastrophic event, the regional “grid” cannot be relied upon until the local system has achieved a sufficient level of restoration.

  • If system reintegration is attempted before restoration is sufficiently complete, additional cascading issues can result
NSP EXPLORATORY GENERATION RETIREMENT STUDIES
System Studies and Analytics – *Types*

- **Annual Transmission Studies**
  - MISO Transmission Expansion Plan (MTEP)
    - Reliability Studies using powerflow and Stability analysis tools
      - PSSE, PSLF, VSAT, TSAT
    - Economic Studies using production cost modeling tools
      - PROMOD, GridView, PLEXOS, EGEAS
    - Interconnection Studies – same as reliability studies.

- **Specialized Transmission Studies**
  - Regional Transmission Overlay Study
    - EGEAS, PLEXOS, Powerflow, PROMOD, VSAT, TSAT
  - Local System Changes
    - Customer additions
    - Generation Changes

- **Non-Transmission Studies**
  - Resource Planning, Capacity Expansion, Distribution level
MISO Retirement Studies

MISO Attachment Y

- **Binding** generation retirement study

- Potential Results:
  - No issues = Retirement
  - Issues = SSR Designation
  - Limited window into which Attachment Y can be rescinded
    - Maximum current span is 3 years

- Why file this?
  - A generator is set to retire

MISO Attachment Y-2

- **Non-binding**, exploratory study

- Potential Results
  - Cannot result in a generator retirement without an Attachment Y
  - Additional information into the retirement of specific generating units given the assumptions specified in the study scope

- Why would this be filed?
  - Generator owners looking to find out additional information on the system impacts of a specific retirement(s).
MISO Attachment Y-2 Scenarios

• **Coal Retirement Scenarios**
  – Retirement of Sherburne County (Sherco) Unit 3 – 910 MW
  – Retirement of Allen S King – 560 MW
  – Retirement of both Sherco Unit 3 and Allen S King – 1,470 MW

• **Nuclear Retirements Scenarios**
  – Retirement of Prairie Island Unit 1 – 553 MW
  – Retirement of Prairie Island Unit 2 – 552 MW
  – Retirement of Monticello – 675 MW
  – Retirement of Prairie Island Units 1 & 2, and Monticello – 1,780 MW

• **Combined Generation Scenarios**
  – Sensitivities performed analyzing the impacts of other fuel types retired in addition to above scenarios
    • Coal retirement scenarios analyzed sensitivities the retirement of nuclear units
    • Nuclear retirement scenarios analyzed sensitivities the retirement of coal units
Input Assumptions – all retirement scenarios analyzed

- Model year 2030 assumptions
- Sherco Units 1 & 2 are replaced by a 786 MW natural gas fired combined cycle generator located at the existing Sherco site.
- Announced wind additions as follows:
  - Freeborn – 200 MW
  - Foxtail – 150 MW
  - Blazing Star 1 & 2 – 400 MW
  - Allete Clean Energy 1 – 100 MW
  - Crowned Ridge 1, 2, & 3 – 600 MW
  - Lake Benton Repower – 100 MW
The first release contains a very large number of violations that may or may not be credible, for reasons we discuss.

For Example: The initial results of the “Combined Generation” scenario looking at the retirement of all of the units identified on slide 11 contain:

- 73,212 individual voltage violations
  - 595 unique facilities
- 23,983 individual thermal violations
  - 79 unique facilities
Results Maps – *Initial Att Y2 Results*
Potential SSR Issues

• After the initial results are received, the study participants review the results for credible issues.
  – For Example: The initial results of the “Combined Generation” scenario looking at the retirement of all of the units identified on slide 11 contain:
    • 10,114 individual voltage violations
      – 252 unique facilities
    • 2,062 individual thermal violations
      – 14 unique facilities

• These represent reliability violations that would likely result in a SSR designation for the generator(s) requesting retirement.
Results Maps – Potential SSR Issues
Changes Impacting Y-2 Results

• Generation Retirements
  – Duane Arnold Energy Center – NextEra
    • 615 MW nuclear plant in Palo, Iowa
    • Alliant Energy to replace 340 MW of capacity with new wind additions
  – Wisconsin Coal
    • 4 coal plants totaling 2,358.3 MW of capacity to be retired before 2020

• Generation Additions
  – February 2016 Generation Interconnection Phase III Completed on June 27
    • 4,633 MW of new generating capacity
Generation Changes Since Att Y-2 Submitted
Additional System Data
MISO Generator Interconnection

• Generators seeking interconnection to the transmission system in the MISO footprint are:
  – Required to complete the interconnection study process
  – Required to fund any network upgrades that would not have otherwise been built “but for” the interconnection of that generator
MISO DPP August 2016 West

• **Cycle Overview**
  - 5,622 MW of Interconnection Requests
    - All requests are for new wind additions
  - Study delayed by over 3 years
    - Completion of Cycle study is estimated for October 2019

• **Identified Upgrades Overview**
  - Over 800 Miles of new 345 kV transmission lines
  - Estimate $3.2 Billion in transmission upgrade costs
    - ~$570,000 per MW or ~$570 per kW average
  - Represents the highest cost for network upgrade ever required in a single cycle in MISO’s history

*Significant delays in study cycles and unrealistic costs for network upgrades decrease ability to develop replacement generation.*
MISO West Area Queue

• Total Active Requests in the MISO West Area Queue
  – 31,935 MW of active requests
    • 24,960 MW are new wind interconnection requests
    • 6,243 MW are new solar interconnection requests
    • 155 MW of battery interconnection requests
    • 577 MW of thermal interconnection requests
  – Historical average for west area, 26% of requests actually interconnect
    • This would represent 8,303 MW of new capacity if it holds true

• Current data for MISO West Area (LRZ 1 and 3)
  – 27,180 MW of combined peak demand
  – 30,200 MW of installed capacity
MISO West Area Queue
Transmission Overlay

• MISO’s Regional Transmission Overlay Study (RTOS)
  – Proposed three year study began in February 2016
  – Intended to identify long-term transmission needs to accommodate the changing resource mix
  – Study ended prematurely with a final recap included in the MTEP17 report, approved in December 2017

• RTOS Overview
  – Maximum potential Economic Benefit: $1.4 Billion
  – Mitigated 296 individual reliability issues
  – Worsened 109 reliability issues
MISO High Renewable Case

- Maximum Potential Congestion Relief: $1.4 Billion
- Cost of Identified Projects: >$40 Billion
- High correlation with current identified interconnection upgrades
• Xcel Energy has been able to identify significant system instability when certain ancillary services are no longer provided due dispatchable resources being off-line (not necessarily retired, but unavailable).
Future Changes from MISO to Address Challenges

• MISO Resource Availability and Need (RAN) effort
  – Initiated to take a deeper look at how Load Modifying Resources (LMR) can be utilized by MISO operations
  – Overall, the beginning of a trend to redefine how resources are accredited.

• MISO Capacity Accreditation and ELCC
  – The MISO Renewable Integration Impact Assessment has shown that increased renewables result in lower Effective Load Carrying Capability (ELCC) for renewable resources
    • May result in lower accredited capacity for those resources or increased reserve margins

• MISO Queue and Retirement process changes could reduce the number of violations that would result in an SSR designation
  – Currently, > 3% DFAX
CERTIFICATE OF SERVICE

I, Lynnette Sweet, hereby certify that I have this day served copies of the foregoing document on the attached lists of persons.

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

   xx electronic filing

Docket No. E002/RP-15-21

Dated this 25th day of September 2018

/s/

____________________________

Lynnette Sweet

Regulatory Administrator
<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Email</th>
<th>Company Name</th>
<th>Address</th>
<th>Delivery Method</th>
<th>View Trade Secret</th>
<th>Service List Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>David</td>
<td>Aafedt</td>
<td><a href="mailto:daafedt@winthrop.com">daafedt@winthrop.com</a></td>
<td>Winthrop &amp; Weinstine, P.A.</td>
<td>Suite 3500, 225 South Sixth Street, Minneapolis, MN 55402</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Christopher</td>
<td>Anderson</td>
<td><a href="mailto:canderson@allete.com">canderson@allete.com</a></td>
<td>Minnesota Power</td>
<td>30 W Superior St, Duluth, MN 55802</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Alison C</td>
<td>Archer</td>
<td><a href="mailto:saarcher@misoenergy.org">saarcher@misoenergy.org</a></td>
<td>MISO</td>
<td>2985 Ames Crossing Rd, Eagan, MN 55121</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Mara</td>
<td>Ascheman</td>
<td><a href="mailto:mara.k.ascheman@xcelenergy.com">mara.k.ascheman@xcelenergy.com</a></td>
<td>Xcel Energy</td>
<td>414 Nicollet Mall Fl 5, Minneapolis, MN 55401</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Tracy</td>
<td>Bertram</td>
<td><a href="mailto:tbertram@ci.becker.mn.us">tbertram@ci.becker.mn.us</a></td>
<td></td>
<td>12060 Sherburne Ave, Becker City Hall, Becker, MN 55308-4694</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>James J.</td>
<td>Bertrand</td>
<td><a href="mailto:james.bertrand@stinson.com">james.bertrand@stinson.com</a></td>
<td>Stinson Leonard Street LLP</td>
<td>50 S 6th St Ste 2600, Minneapolis, MN 55402</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Michael J.</td>
<td>Bull</td>
<td><a href="mailto:mbull@mncee.org">mbull@mncee.org</a></td>
<td>Center for Energy and Environment</td>
<td>212 Third Ave N Ste 560, Minneapolis, MN 55401</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Thomas</td>
<td>Carlson</td>
<td><a href="mailto:thomas.carlson@edfre.com">thomas.carlson@edfre.com</a></td>
<td>EDF Renewable Energy</td>
<td>10 2nd St NE Ste. 400, Minneapolis, Minnesota 55413</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>First Name</td>
<td>Last Name</td>
<td>Email</td>
<td>Company Name</td>
<td>Address</td>
<td>Delivery Method</td>
<td>View Trade Secret</td>
<td>Service List Name</td>
</tr>
<tr>
<td>-----------</td>
<td>----------------</td>
<td>----------------------------------------</td>
<td>---------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>-------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Jeanne</td>
<td>Cochran</td>
<td><a href="mailto:Jeanne.Cochran@state.mn.us">Jeanne.Cochran@state.mn.us</a></td>
<td>Office of Administrative Hearings</td>
<td>P.O. Box 64620</td>
<td>Electronic</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>St. Paul, MN 55164-0620</td>
<td>Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>John</td>
<td>Coffman</td>
<td>johnojohncoffman.net</td>
<td>AARP</td>
<td>871 Tuxedo Blvd. St. Louis, MO 63119-2044</td>
<td>Electronic</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Riley</td>
<td>Conlin</td>
<td><a href="mailto:riley.conlin@stoel.com">riley.conlin@stoel.com</a></td>
<td>Stoel Rives LLP</td>
<td>33 S. 6th Street Suite 4200 Minneapolis, MN 55402</td>
<td>Electronic</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Carl</td>
<td>Cronin</td>
<td><a href="mailto:Regulatory.records@xcelenergy.com">Regulatory.records@xcelenergy.com</a></td>
<td>Xcel Energy</td>
<td>414 Nicollet Mall FL 7 Minneapolis, MN 554011993</td>
<td>Electronic</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Leigh</td>
<td>Currie</td>
<td><a href="mailto:lcurrie@mncenter.org">lcurrie@mncenter.org</a></td>
<td>Minnesota Center for Environmental Advocacy</td>
<td>26 E. Exchange St., Suite 206 St. Paul, Minnesota 55101</td>
<td>Electronic</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>James</td>
<td>Denniston</td>
<td><a href="mailto:james.r.denniston@xcelenergy.com">james.r.denniston@xcelenergy.com</a></td>
<td>Xcel Energy Services, Inc.</td>
<td>414 Nicollet Mall, Fifth Floor Minneapolis, MN 55401</td>
<td>Electronic</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Ian</td>
<td>Dobson</td>
<td><a href="mailto:residential.utilities@ag.state.mn.us">residential.utilities@ag.state.mn.us</a></td>
<td>Office of the Attorney General-RUD</td>
<td>1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130</td>
<td>Electronic</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>John</td>
<td>Farrell</td>
<td><a href="mailto:jfarrell@ilsr.org">jfarrell@ilsr.org</a></td>
<td>Institute for Local Self-Reliance</td>
<td>1313 5th St SE #303 Minneapolis, MN 55414</td>
<td>Electronic</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>First Name</td>
<td>Last Name</td>
<td>Email</td>
<td>Company Name</td>
<td>Address</td>
<td>Delivery Method</td>
<td>View Trade Secret</td>
<td>Service List Name</td>
</tr>
<tr>
<td>------------</td>
<td>-----------</td>
<td>------------------------------</td>
<td>-------------------------------</td>
<td>---------------------------------------</td>
<td>----------------</td>
<td>-------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Sharon</td>
<td>Ferguson</td>
<td><a href="mailto:sharon.ferguson@state.mn.us">sharon.ferguson@state.mn.us</a></td>
<td>Department of Commerce</td>
<td>85 7th Place E Ste 280</td>
<td>Electronic</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Saint Paul, MN 551012198</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mike</td>
<td>Fiterman</td>
<td><a href="mailto:mikefiterman@libertydiversified.com">mikefiterman@libertydiversified.com</a></td>
<td>Liberty Diversified International</td>
<td>5600 N Highway 169</td>
<td>Electronic</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Minneapolis, MN 55428-3096</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stephen</td>
<td>Fogel</td>
<td><a href="mailto:Stephen.E.Fogel@XcelEnergy.com">Stephen.E.Fogel@XcelEnergy.com</a></td>
<td>Xcel Energy Services, Inc.</td>
<td>816 Congress Ave, Suite 1650</td>
<td>Electronic</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Austin, TX 78701</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J Drake</td>
<td>Hamilton</td>
<td><a href="mailto:hamilton@fresh-energy.org">hamilton@fresh-energy.org</a></td>
<td>Fresh Energy</td>
<td>408 St Peter St</td>
<td>Electronic</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Saint Paul, MN 55101</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kimberly</td>
<td>Hellwig</td>
<td><a href="mailto:kimberly.hellwig@stoel.com">kimberly.hellwig@stoel.com</a></td>
<td>Stoel Rives LLP</td>
<td>33 South Sixth Street Suite 4200</td>
<td>Electronic</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Minneapolis, MN 55402</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annette</td>
<td>Henkel</td>
<td><a href="mailto:mui@mnutilityinvestors.org">mui@mnutilityinvestors.org</a></td>
<td>Minnesota Utility Investors</td>
<td>413 Wacouta Street #230 St.Paul</td>
<td>Electronic</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MN 55101</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patrick</td>
<td>Hentges</td>
<td><a href="mailto:phentges@mankatommn.gov">phentges@mankatommn.gov</a></td>
<td>City Of Mankato</td>
<td>P.O. Box 3368</td>
<td>Electronic</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mankato, MN 560023368</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michael</td>
<td>Hoppie</td>
<td><a href="mailto:l23@mtn.org">l23@mtn.org</a></td>
<td>Local Union 23, I.B.E.W.</td>
<td>932 Payne Avenue</td>
<td>Electronic</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>St. Paul, MN 55130</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alan</td>
<td>Jenkins</td>
<td><a href="mailto:aj@jenkinsatlaw.com">aj@jenkinsatlaw.com</a></td>
<td>Jenkins at Law</td>
<td>2265 Roswell Road Suite 100</td>
<td>Electronic</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Marietta, GA 30062</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Name</td>
<td>Last Name</td>
<td>Email</td>
<td>Company Name</td>
<td>Address</td>
<td>Delivery Method</td>
<td>View Trade Secret</td>
<td>Service List Name</td>
</tr>
<tr>
<td>------------</td>
<td>-----------</td>
<td>-------</td>
<td>--------------</td>
<td>---------</td>
<td>----------------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Linda</td>
<td>Jensen</td>
<td><a href="mailto:linda.s.jensen@ag.state.mn.us">linda.s.jensen@ag.state.mn.us</a></td>
<td>Office of the Attorney General-DOC</td>
<td>1800 BRM Tower 445 Minnesota Street St. Paul, MN 551012134</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Richard</td>
<td>Johnson</td>
<td><a href="mailto:Rick.Johnson@lawmoss.com">Rick.Johnson@lawmoss.com</a></td>
<td>Moss &amp; Barnett</td>
<td>150 S. 5th Street Suite 1200 Minneapolis, MN 55402</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Sarah</td>
<td>Johnson Phillips</td>
<td><a href="mailto:sarah.phillips@stoel.com">sarah.phillips@stoel.com</a></td>
<td>Stoel Rives LLP</td>
<td>33 South Sixth Street Suite 4200 Minneapolis, MN 55402</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Mark J.</td>
<td>Kaufman</td>
<td><a href="mailto:mkaufman@ibewlocal949.org">mkaufman@ibewlocal949.org</a></td>
<td>IBEW Local Union 949</td>
<td>12908 Nicollet Avenue South Burnsville, MN 55337</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Hank</td>
<td>Koegel</td>
<td><a href="mailto:hank.koegel@edf-re.com">hank.koegel@edf-re.com</a></td>
<td>EDF Renewable Energy</td>
<td>10 2nd St NE Ste 400 Minneapolis, MN 55413-2652</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Thomas</td>
<td>Koehler</td>
<td><a href="mailto:TGK@IBEW160.org">TGK@IBEW160.org</a></td>
<td>Local Union #160, IBEW</td>
<td>2909 Anthony Ln St Anthony Village, MN 55418-3238</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Frank</td>
<td>Kohlasch</td>
<td><a href="mailto:frank.kohlasch@state.mn.us">frank.kohlasch@state.mn.us</a></td>
<td>MN Pollution Control Agency</td>
<td>520 Lafayette Rd N. St. Paul, MN 55155</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Michael</td>
<td>Krikava</td>
<td><a href="mailto:mkrikava@briggs.com">mkrikava@briggs.com</a></td>
<td>Briggs And Morgan, P.A.</td>
<td>2200 IDS Center 80 S 8th St Minneapolis, MN 55402</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Douglas</td>
<td>Larson</td>
<td><a href="mailto:dilarson@dakotaelectric.com">dilarson@dakotaelectric.com</a></td>
<td>Dakota Electric Association</td>
<td>4300 220th St W Farmington, MN 55024</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>First Name</td>
<td>Last Name</td>
<td>Email</td>
<td>Company Name</td>
<td>Address</td>
<td>Delivery Method</td>
<td>View Trade Secret</td>
<td>Service List Name</td>
</tr>
<tr>
<td>------------</td>
<td>-----------</td>
<td>---------------------------</td>
<td>---------------------------------</td>
<td>--------------------------------------------------</td>
<td>-------------------------</td>
<td>-------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Peder</td>
<td>Larson</td>
<td><a href="mailto:plarson@larkinhoffman.co">plarson@larkinhoffman.co</a> m</td>
<td>Larkin Hoffman Daly &amp; Lindgren, Ltd.</td>
<td>8300 Norman Center Drive Suite 1000 Bloomington, MN 55437</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Peter</td>
<td>Madsen</td>
<td><a href="mailto:peter.madsen@ag.state.m">peter.madsen@ag.state.m</a> n.us</td>
<td>Office of the Attorney General-DOC</td>
<td>Bremer Tower, Suite 1800 445 Minnesota Street St Paul, Minnesota 55101</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Kavita</td>
<td>Maini</td>
<td><a href="mailto:kmaini@wi.rr.com">kmaini@wi.rr.com</a></td>
<td>KM Energy Consulting LLC</td>
<td>961 N Lost Woods Rd Oconomowoc, WI 53066</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Pam</td>
<td>Marshall</td>
<td><a href="mailto:pam@energycents.org">pam@energycents.org</a></td>
<td>Energy CENTS Coalition</td>
<td>823 7th St E St. Paul, MN 55106</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Mary</td>
<td>Martinka</td>
<td>mary.a.martinka@xcelenere gy.com</td>
<td>Xcel Energy Inc</td>
<td>414 Nicollet Mall 7th Floor Minneapolis, MN 55401</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Daryl</td>
<td>Maxwell</td>
<td><a href="mailto:dmaxwell@hydro.mb.ca">dmaxwell@hydro.mb.ca</a></td>
<td>Manitoba Hydro</td>
<td>360 Portage Ave FL 16 PO Box 815, Station Main Winnipeg, Manitoba R3C 2P4 Canada</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Brian</td>
<td>Meloy</td>
<td><a href="mailto:brian.meloy@stinson.com">brian.meloy@stinson.com</a></td>
<td>Stinson,Leonard, Street LLP</td>
<td>50 S 6th St Ste 2600 Minneapolis, MN 55402</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>David</td>
<td>Moeller</td>
<td><a href="mailto:dmoeller@allele.com">dmoeller@allele.com</a></td>
<td>Minnesota Power</td>
<td>30 W Superior St Duluth, MN 558022093</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Andrew</td>
<td>Moratzka</td>
<td><a href="mailto:andrew.moratzka@stoel.co">andrew.moratzka@stoel.co</a> m</td>
<td>Stoel Rives LLP</td>
<td>33 South Sixth St Ste 4200 Minneapolis, MN 55402</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>First Name</td>
<td>Last Name</td>
<td>Email Address</td>
<td>Company Name</td>
<td>Address</td>
<td>Delivery Method</td>
<td>View Trade Secret</td>
<td>Service List Name</td>
</tr>
<tr>
<td>------------</td>
<td>-----------</td>
<td>---------------</td>
<td>--------------</td>
<td>---------</td>
<td>----------------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Alan</td>
<td>Muller</td>
<td><a href="mailto:alan@greendel.org">alan@greendel.org</a></td>
<td>Energy &amp; Environmental Consulting</td>
<td>1110 West Avenue Red Wing, MN 55066</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Carl</td>
<td>Nelson</td>
<td><a href="mailto:cnelson@mncee.org">cnelson@mncee.org</a></td>
<td>Center for Energy and Environment</td>
<td>212 3rd Ave N Ste 560 Minneapolis, MN 55401</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>J</td>
<td>Newberger</td>
<td><a href="mailto:Jnewberger1@yahoo.com">Jnewberger1@yahoo.com</a></td>
<td>State Rep</td>
<td>14225 Balsam Blvd Becker, MN 55308</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>David</td>
<td>Niles</td>
<td><a href="mailto:david.niles@avantenergy.com">david.niles@avantenergy.com</a></td>
<td>Minnesota Municipal Power Agency</td>
<td>220 South Sixth Street Suite 1300 Minneapolis, Minnesota 55402</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Carol A.</td>
<td>Overland</td>
<td><a href="mailto:overland@legalectric.org">overland@legalectric.org</a></td>
<td>Legalectric - Overland Law Office</td>
<td>1110 West Avenue Red Wing, MN 55066</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Gayle</td>
<td>Prest</td>
<td><a href="mailto:gayle.prest@minneapolismn.gov">gayle.prest@minneapolismn.gov</a></td>
<td>City of Mpls Sustainability</td>
<td>350 South 5th St, #315 Minneapolis, MN 55415</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Greg</td>
<td>Pruszinske</td>
<td><a href="mailto:gpruszinske@ci.becker.mn.us">gpruszinske@ci.becker.mn.us</a></td>
<td>City of Becker</td>
<td>Box 250 12060 Sherburne Ave Becker, Minnesota 55308</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Kevin</td>
<td>Reuther</td>
<td><a href="mailto:kreuther@mncenter.org">kreuther@mncenter.org</a></td>
<td>MN Center for Environmental Advocacy</td>
<td>26 E Exchange St, Ste 206 St. Paul, MN 551011667</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>First Name</td>
<td>Last Name</td>
<td>Email</td>
<td>Company Name</td>
<td>Address</td>
<td>Delivery Method</td>
<td>View Trade Secret</td>
<td>Service List Name</td>
</tr>
<tr>
<td>------------</td>
<td>-----------</td>
<td>-------</td>
<td>--------------</td>
<td>---------</td>
<td>----------------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Larry L.</td>
<td>Schedin</td>
<td><a href="mailto:Larry@LLSResources.com">Larry@LLSResources.com</a></td>
<td>LLS Resources, LLC</td>
<td>332 Minnesota St, Ste W1390 St. Paul, MN 55101</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Janet</td>
<td>Shaddix Elling</td>
<td><a href="mailto:jshaddix@janetshaddix.com">jshaddix@janetshaddix.com</a></td>
<td>Shaddix And Associates</td>
<td>7400 Lyndale Ave S Ste 190 Richfield, MN 55423</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Ken</td>
<td>Smith</td>
<td><a href="mailto:ken.smith@districtenergy.com">ken.smith@districtenergy.com</a></td>
<td>District Energy St. Paul Inc.</td>
<td>76 W Kellogg Blvd St. Paul, MN 55102</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Joshua</td>
<td>Smith</td>
<td><a href="mailto:joshua.smith@sierraclub.org">joshua.smith@sierraclub.org</a></td>
<td>Prairie Island Indian Community</td>
<td>85 Second St FL 2 San Francisco, California 94105</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Jessie</td>
<td>Smith</td>
<td><a href="mailto:jseim@piic.org">jseim@piic.org</a></td>
<td>Prairie Island Indian Community</td>
<td>5636 Sturgeon Lake Rd Welch, MN 55089</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Beth H.</td>
<td>Soholt</td>
<td><a href="mailto:bsoholt@windonthewires.org">bsoholt@windonthewires.org</a></td>
<td>Wind on the Wires</td>
<td>570 Asbury Street Suite 201 St. Paul, MN 55104</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Anna</td>
<td>Sommer</td>
<td><a href="mailto:anna@sommerenergy.com">anna@sommerenergy.com</a></td>
<td>Sommer Energy LLC</td>
<td>PO Box 766 Grand Canyon, AZ 86023</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Mark</td>
<td>Spurr</td>
<td><a href="mailto:mspurr@fvbenergy.com">mspurr@fvbenergy.com</a></td>
<td>International District Energy Association</td>
<td>222 South Ninth St., Suite 825 Minneapolis, Minnesota 55402</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Byron E.</td>
<td>Starns</td>
<td><a href="mailto:byron.starns@stinson.com">byron.starns@stinson.com</a></td>
<td>Stinson Leonard Street LLP</td>
<td>50 S 6th St Ste 2600 Minneapolis, MN 55402</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>First Name</td>
<td>Last Name</td>
<td>Email</td>
<td>Company Name</td>
<td>Address</td>
<td>Delivery Method</td>
<td>View Trade Secret</td>
<td>Service List Name</td>
</tr>
<tr>
<td>------------</td>
<td>-----------</td>
<td>----------------------------</td>
<td>----------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>-----------------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>James</td>
<td>M. Strommen</td>
<td><a href="mailto:jstrommen@kennedy-graven.com">jstrommen@kennedy-graven.com</a></td>
<td>Kennedy &amp; Graven, Chartered</td>
<td>470 U.S. Bank Plaza 250 South Sixth Street</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Minneapolis, MN 55402</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eric</td>
<td>Swanson</td>
<td><a href="mailto:eswanson@winthrop.com">eswanson@winthrop.com</a></td>
<td>Winthrop &amp; Weinstine</td>
<td>225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Douglas</td>
<td>Tiffany</td>
<td><a href="mailto:ttiffa002@umn.edu">ttiffa002@umn.edu</a></td>
<td>University of Minnesota</td>
<td>316d Ruttan Hall 1994 Buford Avenue St. Paul, MN 55108</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Julie</td>
<td>Voeck</td>
<td><a href="mailto:julie.voeck@nee.com">julie.voeck@nee.com</a></td>
<td>NextEra Energy Resources, LLC</td>
<td>700 Universe Blvd Juno Beach, FL 33408</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Samantha</td>
<td>Williams</td>
<td><a href="mailto:swilliams@nrddc.org">swilliams@nrddc.org</a></td>
<td>Natural Resources Defense Council</td>
<td>20 N. Wacker Drive Ste 1600 Chicago, IL 60606</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Cam</td>
<td>Winton</td>
<td><a href="mailto:owinton@mnchamber.com">owinton@mnchamber.com</a></td>
<td>Minnesota Chamber of Commerce</td>
<td>400 Robert Street North Suite 1500 St. Paul, Minnesota 55101</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Daniel</td>
<td>P. Wolf</td>
<td><a href="mailto:dan.wolf@state.mn.us">dan.wolf@state.mn.us</a></td>
<td>Public Utilities Commission</td>
<td>121 7th Place East Suite 350 St. Paul, MN 551012147</td>
<td>Electronic Service</td>
<td>Yes</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>First Name</td>
<td>Last Name</td>
<td>Email</td>
<td>Company Name</td>
<td>Address</td>
<td>Delivery Method</td>
<td>View Trade Secret</td>
<td>Service List Name</td>
</tr>
<tr>
<td>------------</td>
<td>-----------</td>
<td>--------------------------------</td>
<td>----------------------------------------</td>
<td>-----------------------------------</td>
<td>---------------------</td>
<td>-------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Jonathan G.</td>
<td>Zierdt</td>
<td><a href="mailto:jzierdt@greatermankato.com">jzierdt@greatermankato.com</a></td>
<td>Greater Mankato Growth</td>
<td>1961 Premier Dr Ste 100 Mankato, MN 56001</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
<tr>
<td>Patrick</td>
<td>Zomer</td>
<td><a href="mailto:Patrick.Zomer@lawmoss.com">Patrick.Zomer@lawmoss.com</a></td>
<td>Moss &amp; Barnett a Professional Association</td>
<td>150 S. 5th Street, #1200 Minneapolis, MN 55402</td>
<td>Electronic Service</td>
<td>No</td>
<td>OFF_SL_15-21_Official</td>
</tr>
</tbody>
</table>