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March 17, 2014

Burl W. Haar
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: **Recommendations of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E-002/M-13-315

Dear Dr. Haar:

On February 10, 2014, the Minnesota Department of Commerce, Division of Energy Resources (Department) recommended that parties submit their final recommendations in the following docket by March 17, 2014.

In the Matter of a Rate for Large Solar Photovoltaic Installations.

Since our February 10, 2014 letter, the Department has met with Northern States Power d/b/a Xcel Energy (Xcel), the Solar Rate Reform Group (SRRG), and Sundial Solar. Based on our review of the record and discussions with other parties, the Department recommends that the Commission **approve a solar Standby Service capacity credit of \$5.15 per kW/month. In addition, the Department recommends that the Commission approve a starting date of June 1 for each customer's grace period, unless the customer chooses another date.**

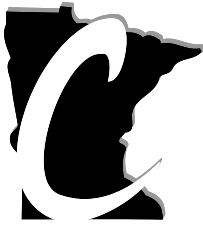
The Department notes that this proposal is supported at this time by various approaches to calculating the credit. The Standby Solar Credit for large solar photovoltaic installations is likely to change in the future as more data is available and/or the Midcontinent Independent System Operator (MISO) establishes more specific capacity values for photovoltaic installations over time.

The Department is available to answer any questions the Commission may have.

Sincerely,

/s/ CHRISTOPHER T. DAVIS
Rates Analyst

CTD/sm
Attachment



BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

SUPPLEMENTAL COMMENTS OF THE
MINNESOTA DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES

DOCKET NO. E002/M-13-315

I. INTRODUCTION

On May 13, 2013, the Commission issued its ORDER SETTING INTERIM RATE AND ESTABLISHING NEW SOLAR RATE DOCKET, in the above-cited docket. In this Order, the Commission established an interim photovoltaic (PV) capacity credit of \$5.15 per kW/month and ordered Northern States Power Company d/b/a Xcel Energy (Xcel) to file a large customer PV rate proposal by October 1, 2013. On October 1, 2013, Xcel filed a letter explaining that the Commission's May 13 Order was issued prior to the passage of legislation establishing the timeline to develop a value of solar methodology. Due to potential overlapping issues between the solar credit and the value-of-solar docket (Docket No. E999/M-14-65), Xcel requested an extension to file the large customer PV rate proposal. Xcel proposed to continue using the interim solar Standby Service capacity credit of \$5.15 per kW/month.

On October 29, 2013, the Minnesota Department of Commerce (Department) submitted comments recommending that the Commission approve Xcel's proposal and to continue the existing interim solar Standby Service capacity credit of \$5.15 per kW/month until the Commission makes a determination on the Value of Solar methodology. Numerous other parties filed comments responding to Xcel's proposal.

On December 9, 2013, the Department submitted further comments, responding to the comments of other parties regarding Xcel's proposal. The Department maintained its position that it was appropriate to continue using the interim solar Standby Service capacity credit of \$5.15 per kW/month. The Department expected to provide its final recommendations by February 14, 2014.

On February 10, 2014 the Department filed a letter indicating that the Department was working with Xcel and the Solar Rate Reform Group (SRRG) to narrow differences in approaches. To help improve all parties' understanding of the complex issues involved in this filing, the Department recommended an additional 30 days for comments.

The Department presents its final recommended solar capacity value below.

I. DEPARTMENT SUPPLEMENTAL COMMENTS

As stated in our December 9, 2013 Supplemental Comments, the Department concludes that calculating the appropriate capacity credit for photovoltaic (PV) installations of greater than 100 kW will require both appropriate methodology and appropriate estimates of the values to be used in the methodology. Below the Department discusses the appropriate method of calculating PV installation contribution to power system capacity requirements during peak periods (measured as a percent of capacity), the value to which the PV capacity value should be applied,¹ and the period during which the percent of capacity value should be applied.²

A. ESTIMATING THE PERCENT OF PV PLANT CAPACITY

There are two reasonable ways to estimate the percent of PV plant capacity. Each of these is discussed below.

1. Effective Load Carrying Capability (ELCC)

In our previous comments the Department recommended using an Effective Load Carrying Capability (ELCC) study as the appropriate way to estimate the capacity value of PV solar installations. The ELCC results in a capacity value which is expressed as a percentage of the PV plant. The Department appreciates Xcel's work on its improvements to the ELCC study. Although the results of its study are limited by lack of data, the Department believes that using ELCC values based on Xcel's October 31, 2013 ELCC study could provide a basis for establishing the solar capacity value.

¹ Xcel contends that the percent of PV plant capacity from the ELCC should be applied to the demand component of the customer's standby rate. Other parties contend that the percent of PV plant capacity should be applied to the Company's avoided capacity cost as represented by the capacity costs of a natural gas fired combustion turbine.

² Some parties contend that the percent of PV plant capacity should be applied during all months. Xcel contends that the percent of PV plant capacity should not be applied during grace periods. Standby service demand charges are applied after the annual grace period. Xcel calculates the grace period from the forced outage rate of its generation fleet (generation fleet Force Outage Rate of 11% times 8760 hours = 964 hours per year).

Table 1 below shows the solar capacity values based on Xcel's October 31, 2014 ELCC.

Table 1: Solar Capacity Values Based on Xcel's October 31, 2013 ELCC

October Updated ELCC Results	2008	2009	2010	Average
Fixed Panel - 180deg Azimuth, 10deg Tilt	31.5%	27.9%	47.1%	35.5%
Fixed Panel - 180deg Azimuth, 30deg Tilt	31.2%	27.9%	43.2%	34.1%
Fixed Panel - 180deg Azimuth, 45deg Tilt	30.3%	26.7%	40.6%	32.5%
Fixed Panel - 200deg Azimuth, 30deg Tilt	31.8%	28.2%	47.6%	35.9%
Fixed Panel average	31.2%	27.7%	44.6%	34.5%
Single Axis Tracking	38.6%	34.5%	57.5%	43.5%

The Department projects that the majority of near term PV development in Minnesota under the solar electricity standard³ will be fixed panel systems including small, large and utility scale systems since these systems are less costly to install. Based on this assumption, the Department recommends using an average of the fixed panel ELCCs, and excluding the single axis tracking value at this time. If other system configurations are used in the future, this method could be revised to reflect such market developments.

Regarding calculation of the average, the Department agrees with Xcel that the Company's data for 2008 and 2009 were atypical. As Xcel stated in its October 31, 2013 Update to ELCC,

Investigating the driving factors behind the ELCC results, we identified weak summer demand as the driving cause of the low ELCC values in 2008 and 2009. As a result of cooler than normal weather and the economic recession, customer demand was unusually low in the summer of 2008 and 2009. With weak summer demand the value of solar's contribution to reliability is diminished. Our perception is that these two years are not normal for the NSP system and that the TMY and 2010 results are more representative of the typical customer demand.

Further, data for 2011 and 2012 are not presently available. Although a proper ELCC study should be based on more than one year of data, for now only one year of valid data, 2010, is available for the ELCC study. In future years the ELCC study should be updated to include additional years of data. Because the data for 2010 reflects information for Minnesota, the Department concludes that an ELCC of 44.6 percent, the average of fixed panel installations for 2010, could be used for any calculations based on the ELCC.

³ Minnesota Statute §216B.1691, subd. 2f.

2. *MISO Method for Intermittent Resources*

Full ELCC is the best practice methodology for determining capacity value of variable generation resources such as PV. However, the ELCC methodology requires detailed power system reliability modeling that incorporates not only detailed characteristics of regional conventional generators and multi-year system load data sets but also high quality, multi-year, multi site PV data sets. These computational challenges have led to the development of methodologies that approximate a full ELCC / Loss of Load Expectation (LOLE) analysis.⁴

Several of the leading methods to approximate ELCC focus on the capacity value during the peak load hours by determining the average capacity factor of the solar or wind plants during system peak load hours. This approach is the most transparent and most easily verified approach to ELCC approximation. The MISO Business Practices Manual (MISO BPM-011, Section 4.2.2.4, page 35)⁵ methodology is an ELCC approximation that uses this approach of capacity value during the peak load hours. In its May 1, 2013 comments the Company also estimated accredited capacity for large solar systems using MISO's method.

Section 4.2.2.4 of the BPM states:

All other Intermittent Generation and Dispatchable Intermittent Resources will have their annual UCAP value determined based on the 3 year historical average output of the resource for hours 1500-1700 EST for the most recent Summer months (June, July, and August).

For systems that are new, upgraded or returning from extended outages, where data does not exist for some or all of the previous 36 months, MISO instructs applicants to submit all operating data for June, July, or August with a minimum of 30 consecutive days, in order to have their new or upgraded capacity registered with MISO.

Table 2 below shows the solar capacity value for various fixed panel and single axis tracking solar installations using the MISO intermittent resource capacity method.

⁴ P Madaeni, R Sioshanis, P Denholm. *Comparison of Capacity Value Methods for Photovoltaics in the Western United States*. National Renewable Energy Laboratory Technical Report. July 2012.

⁵ <https://www.misoenergy.org/Library/BusinessPracticesManuals/Pages/BusinessPracticesManuals.aspx>

Table 2: Solar PV Capacity Value Using Miso Intermittent Capacity Methodology⁶

MISO Rating Methodology	2008	2009	2010	Average
Fixed Panel - 180deg Azimuth, 10deg Tilt	50.3%	45.9%	47.4%	47.9%
Fixed Panel - 180deg Azimuth, 30deg Tilt	51.1%	46.5%	48.2%	48.6%
Fixed Panel - 180deg Azimuth, 45deg Tilt	48.5%	44.1%	45.8%	46.1%
Fixed Panel - 200deg Azimuth, 30deg Tilt	54.7%	49.6%	51.6%	52.0%
Fixed Panel Average	51.1%	46.5%	48.3%	48.6%
1 Axis Tracking	53.8%	47.9%	50.3%	50.7%

The MISO method approximates ELCC by focusing on the solar generation during defined peak periods and should avoid the issues encountered in 2008 and 2009 with Xcel’s ELCC study. Thus, under the MISO intermittent resource method it is appropriate to use the average of the capacity values calculated for 2008-2010. As seen above, the average capacity value is 48.6 percent during the peak three hour windows specified in the MISO procedures.

3. Department Recommendation for Solar Capacity Evaluation

MISO sets a Planning Reserve Margin annually for Xcel, based on a MISO LOLE study. The capacity value for wind generation on the Xcel system has for a number of years been set using an ELCC methodology through MISO’s annual full LOLE study. It is expected that, as solar resources grow in the Midwest and more high quality PV data sets become available, MISO will in future years also calculate the capacity value of PV in the same rigorous LOLE study process. Until then, it is necessary to approximate the capacity value for solar installations.

Based on our analysis and open technical discussion with representatives from the SRRG, Xcel, and Sundial Solar, the Department now recommends that the Commission approve a solar capacity credit based on using the MISO non-wind intermittent methodology. Consequently, at this time, the Department recommends a solar capacity value of 48.6 percent for use in this tariff.

B. ESTIMATING AVOIDED COSTS

Solar installations on the customer side of the meter are similar to energy conservation investments—they reduce the utility’s need to invest in supply-side infrastructure. When evaluating the cost-effectiveness of utility Conservation Improvement Program (CIP) investments, the Department considers the following avoided costs⁷:

⁶ AC Capacity value as a percentage of AC PV plant capacity.

⁷ These same avoided costs are used in the calculation of the Shared Savings DSM financial incentive approved in Docket No. E,G999/CI-08-133.

- Avoided energy,
- Avoided capacity,
- Avoided line losses, and
- Avoided transmission and distribution costs.

Since the purpose of this docket is to calculate the capacity value of solar, avoided energy costs are excluded.

Xcel provided the information about its avoided costs related to capacity in Docket No. E002/GR-10-971. In response to IR No. C13, Xcel stated that the 2013 value for its avoided cost is \$87.04/kW-yr (or \$7.25/kW-month). In response to IR Nos. C20 and C22, Xcel stated that the annual retail transmission related revenue requirement is \$2.81/kW-month for demand-metered customers. In its response, to IR No. C18, Xcel stated that the loss factor on its transmission and distributions systems for a primary voltage customer is 5.7 percent.

Combining these three components (avoided capacity plus avoided transmission, then adding avoided losses) yields an avoided capacity value of \$10.63/kW-month $[(\$7.25 + 2.81) * 1.057 = \$10.63]$.

C. CALCULATING THE SOLAR CAPACITY CREDIT

Based on a MISO accredited capacity calculation of 48.6 percent and avoided costs of \$10.63/kW-month, the Department calculates a solar capacity credit of \$5.17. The value is close to the interim value of \$5.15 per kW. The Department recommends that the Commission approve the continuation of a solar capacity credit of \$5.15 per kW.

D. STANDBY RATE GRACE PERIOD

Xcel's Standby Service Rider, 5-101, is applicable to customers who use an alternative generation source with a capacity greater than 100 kW, where the alternative generation serves all or a portion of customer's electric energy requirements and where the customer chooses to use the Company's electric service to serve that load when the alternative generation is either partly or wholly unavailable. The Rider provides a "grace period" under which each contracted kW receives 964 hours (approximately 40 days) exempted from the demand charge. Currently the grace period commences with the anniversary date of the initial contract. Because Xcel has seasonal demand rates, customers who sign up during the summer are exempted from a higher demand rate than those who sign up during other periods. To treat all customers similarly, the Department proposes that the grace period for all Standby Service solar customers begin on June 1, unless the customer opts out.

III. DEPARTMENT RECOMMENDATIONS

The Department recommends that the Commission approve a final Standby Service capacity credit of \$5.15 per kW. In addition, the Department recommends that the Commission approve a June 1 start period for all customer grace periods, unless the customer chooses to opt out of that start date.

/sm

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
Comments**

Docket No. E002/M-13-315

Dated this 17th day of **March 2014**

/s/Sharon Ferguson

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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Doug	Shoemaker	dougs@mnRenewables.org	MRES	2928 5th Avenue South Minneapolis, MN 55408	Paper Service	No	SPL_SL_13-315_Solar Stakeholders List
Chanti	Sourignavong	chantipal.sourignavong@honeywell.com	Honeywell	1985 Douglas Drive North MN10-111A Golden Valley, MN 55422-3992	Paper Service	No	SPL_SL_13-315_Solar Stakeholders List
Erin	Stojan Ruccolo	ruccolo@fresh-energy.org	Fresh Energy	408 Saint Peter St Ste 220 Saint Paul, MN 55102-1125	Electronic Service	No	SPL_SL_13-315_Solar Stakeholders List
James M.	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered	470 U.S. Bank Plaza 200 South Sixth Street Minneapolis, MN 55402	Electronic Service	No	SPL_SL_13-315_Solar Stakeholders List
Deb	Sundin	deb.sundin@xcelenergy.com	Xcel Energy	414 Nicollet Mall Minneapolis, MN 55401	Electronic Service	No	SPL_SL_13-315_Solar Stakeholders List
SaGonna	Thompson	Regulatory.Records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	SPL_SL_13-315_Solar Stakeholders List
Lise	Trudeau	lise.trudeau@state.mn.us	Department of Commerce	85 7th Place East Suite 500 Saint Paul, MN 55101	Electronic Service	No	SPL_SL_13-315_Solar Stakeholders List
Jason	Willett	jason.willett@metc.state.mn.us	Metropolitan Council	390 Robert St N Saint Paul, MN 55101-1805	Electronic Service	No	SPL_SL_13-315_Solar Stakeholders List
Daniel	Williams	DanWilliams.mg@gmail.com	Powerfully Green	11451 Oregon Avenue N Champlin, MN 55316	Electronic Service	No	SPL_SL_13-315_Solar Stakeholders List
Steven	Wishart	steven.w.wishart@xcelenergy.com	Xcel Energy	7th Floor 414 Nicollet Mall Minneapolis, MN 554011993	Electronic Service	No	SPL_SL_13-315_Solar Stakeholders List

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Michael	Allen	michael.allen@allenergysolar.com	All Energy Solar	721 W 26th st Suite 211 Minneapolis, Minnesota 55405	Electronic Service	No	SPL_SL_13-315_Interested Parties
Julia	Anderson	Julia.Anderson@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	Electronic Service	Yes	SPL_SL_13-315_Interested Parties
John	Aune	johna@bluehorizonsolar.com	Blue Horizon Energy	7246 Washington Ave S Eden Prairie, MN 55344	Paper Service	No	SPL_SL_13-315_Interested Parties
Gail	Baranko	gail.baranko@xcelenergy.com	Xcel Energy	414 Nicollet Mall7th Floor Minneapolis, MN 55401	Electronic Service	No	SPL_SL_13-315_Interested Parties
William A.	Blazar	bblazar@mnchamber.com	Minnesota Chamber Of Commerce	Suite 1500 400 Robert Street North St. Paul, MN 55101	Electronic Service	No	SPL_SL_13-315_Interested Parties
Joel	Cannon	jcannon@tenksolar.com	Tenk Solar, Inc.	9549 Penn Avenue S Bloomington, MN 55431	Electronic Service	No	SPL_SL_13-315_Interested Parties
John J.	Carroll	jcarroll@newportpartners.com	Newport Partners, LLC	9 Cushing, Suite 200 Irvine, California 92618	Electronic Service	No	SPL_SL_13-315_Interested Parties
Aakash	Chandarana	Aakash.Chandara@xcelenergy.com	Xcel Energy	414 Nicollet Mail 5th Floor Minneapolis, MN 55401	Electronic Service	No	SPL_SL_13-315_Interested Parties
Steve W.	Chriss	Stephen.chriss@walmart.com	Wal-Mart	2001 Southeast 10th St. Bentonville, AZ 72716-5530	Paper Service	No	SPL_SL_13-315_Interested Parties
Ian	Dobson	ian.dobson@ag.state.mn.us	Office of the Attorney General-RUD	Antitrust and Utilities Division 445 Minnesota Street, BRM Tower St. Paul, MN 55101	Electronic Service 1400	Yes	SPL_SL_13-315_Interested Parties

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 500 Saint Paul, MN 551012198	Electronic Service	No	SPL_SL_13-315_Interested Parties
Benjamin	Gerber	bgerber@mnychamber.com	Minnesota Chamber of Commerce	400 Robert Street North Suite 1500 St. Paul, Minnesota 55101	Electronic Service	No	SPL_SL_13-315_Interested Parties
Elizabeth	Goodpaster	bgoodpaster@mncenter.org	MN Center for Environmental Advocacy	Suite 206 26 East Exchange Street St. Paul, MN 551011667	Electronic Service	No	SPL_SL_13-315_Interested Parties
Lloyd	Grooms	lgrooms@winthrop.com	Winthrop and Weinstine	Suite 3500 225 South Sixth Street Minneapolis, MN 554024629	Electronic Service	No	SPL_SL_13-315_Interested Parties
Burl W.	Haar	burl.haar@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 551012147	Electronic Service	Yes	SPL_SL_13-315_Interested Parties
Sam	Hanson	shanson@briggs.com	Briggs and Morgan, PA	2200 IDS Center 80 South Eighth Street Minneapolis, MN 55402	Electronic Service	No	SPL_SL_13-315_Interested Parties
Jack	Hays	jack.hays@westwoodps.com	Westwood Professional Services	7699 Anagram Drive Eden Prairie, MN 55344	Electronic Service	No	SPL_SL_13-315_Interested Parties
Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law	2265 Roswell Road Suite 100 Marietta, GA 30062	Electronic Service	No	SPL_SL_13-315_Interested Parties
Linda	Jensen	linda.s.jensen@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota Street St. Paul, MN 551012134	Electronic Service	Yes	SPL_SL_13-315_Interested Parties

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Richard	Johnson	Rick.Johnson@lawmoss.com	Moss & Barnett	90 South 7th Street Suite #4800 Minneapolis, MN 554024129	Electronic Service	No	SPL_SL_13- 315_Interested Parties
Michael	Kampmeyer	mkampmeyer@a-e-group.com	AEG Group, LLC	260 Salem Church Road Sunfish Lake, Minnesota 55118	Electronic Service	No	SPL_SL_13- 315_Interested Parties
Mara	Koeller	mara.n.koeller@xcelenergy.com	Xcel Energy	414 Nicollet Mall 5th Floor Minneapolis, MN 55401	Electronic Service	No	SPL_SL_13- 315_Interested Parties
Jon	Kramer	jk2surf@aol.com	Sundial Solar	4708 york ave. S Minneapolis, MN 55410	Electronic Service	No	SPL_SL_13- 315_Interested Parties
John	Lindell	agorud.ecf@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	SPL_SL_13- 315_Interested Parties
Matthew P	Loftus	matthew.p.loftus@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 5 Minneapolis, MN 55401	Electronic Service	No	SPL_SL_13- 315_Interested Parties
Rebecca	Lundberg	rebecca.lundberg@powerfullygreen.com	Powerfully Green	11451 Oregon Ave N Champlin, MN 55316	Electronic Service	No	SPL_SL_13- 315_Interested Parties
Paula	Maccabee	Pmaccabee@justchangela w.com	Just Change Law Offices	1961 Selby Avenue St. Paul, MN 55104	Paper Service	No	SPL_SL_13- 315_Interested Parties
Pam	Marshall	pam@energycents.org	Energy CENTS Coalition	823 7th St E St. Paul, MN 55106	Electronic Service	No	SPL_SL_13- 315_Interested Parties
Mary	Martinka	mary.a.martinka@xcelenergy.com	Xcel Energy Inc	414 Nicollet Mall 7th Floor Minneapolis, MN 55401	Electronic Service	No	SPL_SL_13- 315_Interested Parties

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Andrew	Moratzka	apmoratzka@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	SPL_SL_13- 315_Interested Parties
Martin	Morud	mmorud@trunorthsolar.com	Tru North Solar	5115 45th Ave S Minneapolis, MN 55417	Electronic Service	No	SPL_SL_13- 315_Interested Parties
Donna	Pickard	dpickard@aladdinsolar.com	Aladdin Solar	1215 Lilac Lane Excelsior, MN 55331	Electronic Service	No	SPL_SL_13- 315_Interested Parties
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	Electronic Service	No	SPL_SL_13- 315_Interested Parties
Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates	Ste 122 9100 W Bloomington Frwy Bloomington, MN 55431	Paper Service	Yes	SPL_SL_13- 315_Interested Parties
Gary	Shaver	N/A	Silicon Energy	3506 124th St NE Marysville, WA 98271	Paper Service	No	SPL_SL_13- 315_Interested Parties
Chanti	Sourignavong	chantipal.sourignavong@honeywell.com	Honeywell	1985 Douglas Drive North MN10-111A Golden Valley, MN 55422-3992	Paper Service	No	SPL_SL_13- 315_Interested Parties
James M.	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered	470 U.S. Bank Plaza 200 South Sixth Street Minneapolis, MN 55402	Electronic Service	No	SPL_SL_13- 315_Interested Parties
SaGonna	Thompson	Regulatory.Records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	SPL_SL_13- 315_Interested Parties
Kari L	Valley	kari.l.valley@xcelenergy.com	Xcel Energy Service Inc.	414 Nicollet Mall FL 5 Minneapolis, MN 55401	Electronic Service	No	SPL_SL_13- 315_Interested Parties

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Scott M.	Wilensky	scott.wilensky@xcelenergy.com	Xcel Energy	7th Floor 414 Nicollet Mall Minneapolis, MN 554011993	Electronic Service	No	SPL_SL_13- 315_Interested Parties
Daniel	Williams	DanWilliams.mg@gmail.com	Powerfully Green	11451 Oregon Avenue N Champlin, MN 55316	Electronic Service	No	SPL_SL_13- 315_Interested Parties