



Le Sueur County, MN

Thursday, July 14, 2016

Regular session

Item 1

Novel Energy Solutions/Vetter Sec 9

Staff Contact: Kathy Brockway or Michelle Mettler

STAFF REPORT

GENERAL INFORMATION

APPLICANT: NOVEL ENERGY SOLUTIONS **OWNER:** BRIAN, KEVIN, & TIMOTHY VETTER

911 ADDRESS: 34716 480TH ST. Kasota MN 56050

PROJECT DESCRIPTION: Establish a 1MW solar garden in an Agricultural "A" District

ZONING ORDINANCE SECTIONS: Section 8

AG DISTRICT PURPOSE: The Agriculture (A) District is established for areas where agriculture uses are seen as the best and highest long term use of the land. The land itself needs to be preserved for primarily agricultural activities. These areas should avoid existing cities, residential zones and subdivisions. They should be large contiguous land areas with mostly prime soils. Rezoning should only be considered on the zone's borders in order to maintain the Zoning integrity of the District. Dwellings that are allowed should be on the edges of the open farmland where possible or utilize existing abandoned farm sites. The total number of Dwellings shall not exceed sixteen (16) per section of land with the exception of Transfer of Development Right and lots of record. Transfer of development rights may be utilized to exceed the permitted housing density of one-dwelling per quarter-quarter section (40 acres), provided that the density does not exceed four dwellings per quarter-quarter section in the receiving quarter-quarter section. Lots of Record, shall be exempt from density standards.

GOALS AND POLICIES: The current Land Use Plan as adopted in 2009, does not make reference to the use of solar energy or any other type of renewable energy in Le Sueur County.

SITE INFORMATION

LOCATION: 9.96 acre parcel located in the SE1/4 SW1/4, Section 9, Kasota Township.

ZONING: Agricultural "A" District

GENERAL SITE DESCRIPTION: Farmland

ACCESS: New access off County Road 480th (County Road 101) per Asst. County Engineer.

EXISTING LAND USE WITHIN ¼ MILE:

North:	Residential	South:	Agricultural
East:	Residential	West:	Residential

TOWNSHIP BOARD NOTIFICATION

The applicant has contacted Joe Kienlen, Kasota Township Officer on December 11, 2015.

NATURAL RESOURCES INFORMATION

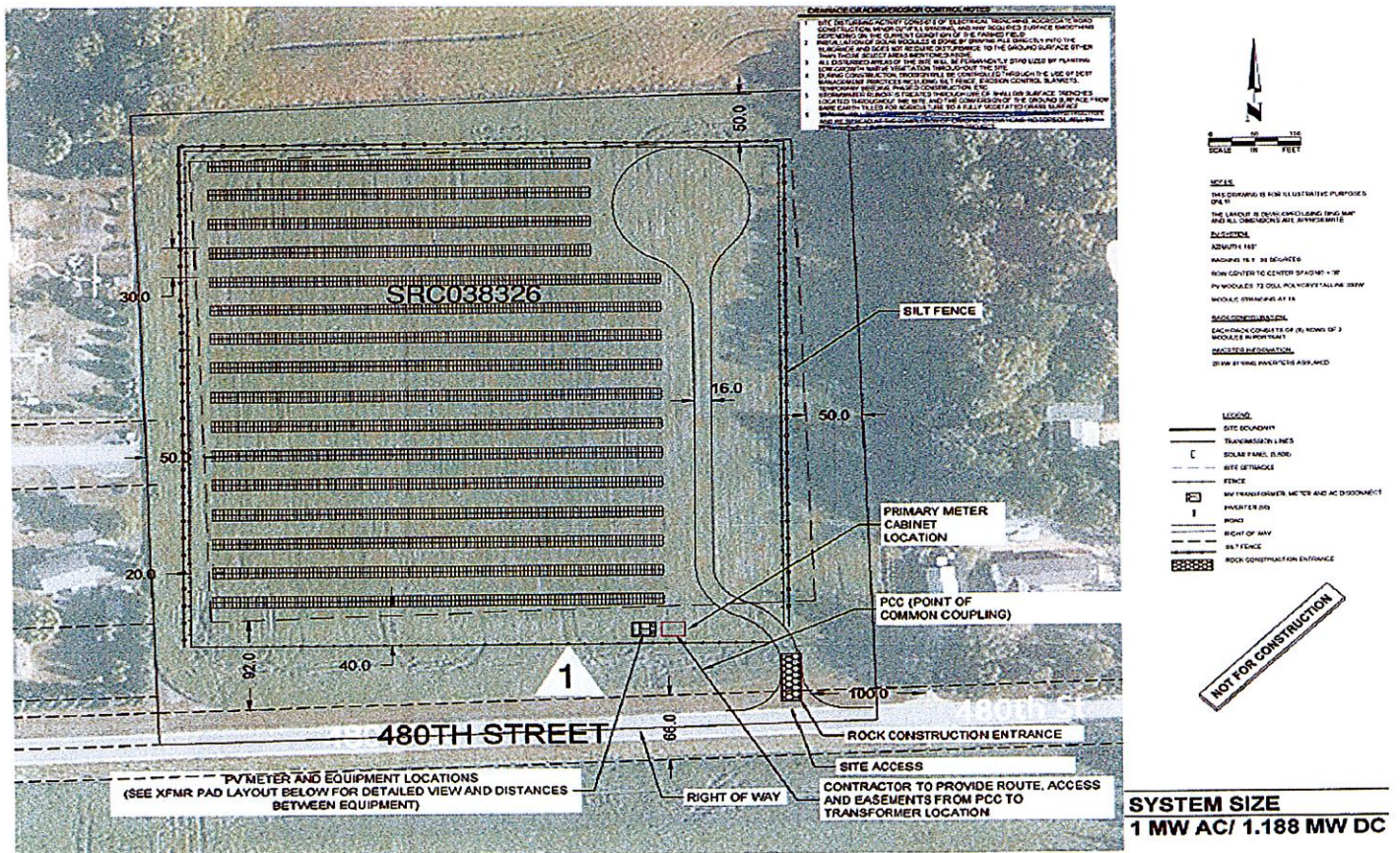
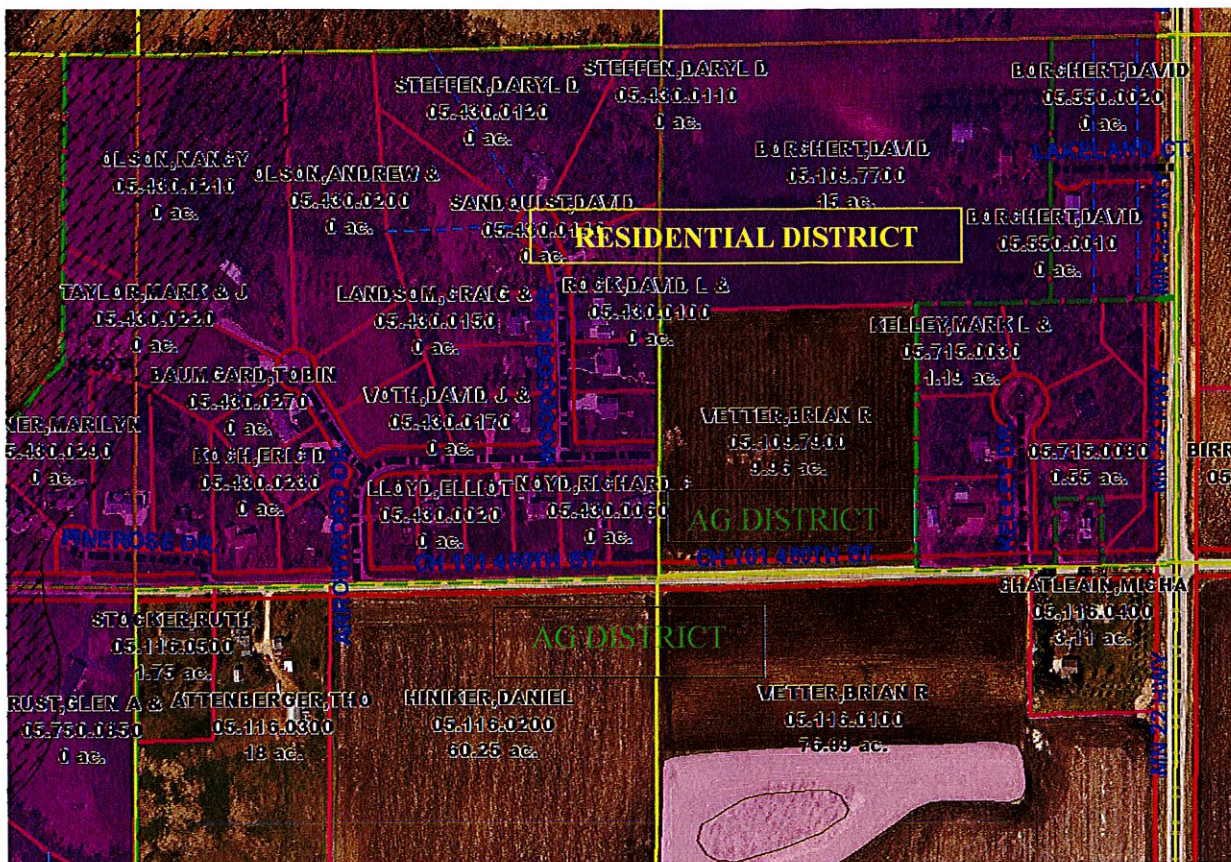
SHORELAND: The proposal is not located within the Shoreland District.

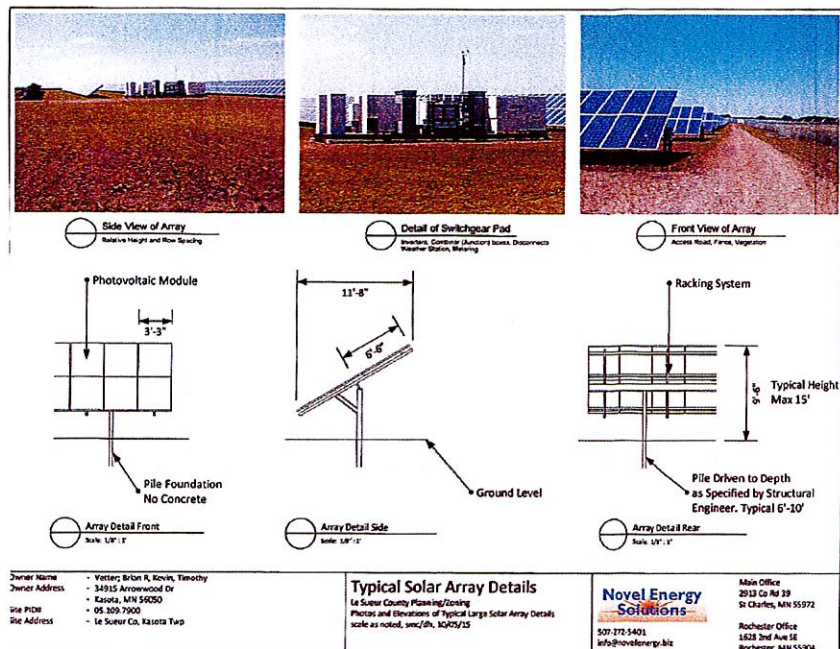
WETLANDS: According to the National Wetlands Inventory, No wetlands located in the quarter-quarter section where the project is proposed. *Wetland Delineation Report on file with the Department.*

ATTACHMENTS

Application, Narrative, Interconnection Agreement, Maps, Aerial, Power Point Presentation

SITE PLAN/AERIAL PHOTO





PLANNING AND ZONING COMMISSION CONSIDERATIONS

The Planning Commission and staff shall consider possible adverse effects of the proposed conditional use and what additional requirements may be necessary to reduce such adverse effects. Its judgment shall be based upon the following factors to include, but not limited to:

1. Relationship to County plans.
2. *The geographical area involved.*
3. *Whether such use will negatively affect surrounding properties in the area in which it is proposed.*
4. *The character of the surrounding area.*
5. The demonstrated need for such use.
6. Whether the proposed use would cause odors, dust, flies, vermin, smoke, gas, noise, or vibration or would impose hazards to life or property in the neighborhood.
7. *Whether such use would inherently lead to or encourage disturbing influences in the neighborhood.*
8. *Whether stored equipment or materials would be screened and whether there would be continuous operation within the visible range of surrounding residences.*
9. Abatement of Environmental Hazards as regulated in this Ordinance
10. Other factors impacting the public health, safety and welfare.

PLANNING AND ZONING COMMISSION CONDITIONS

The Planning Commission shall recommend such conditions relating to the granting of said Conditional Use Permit, as they deem necessary to carry out the intent and purpose of this Ordinance or recommend that the request be denied. Such recommendation shall be in writing. The conditions may include, but are not limited to the following:

1. Increasing the required lot size or yard dimension.
2. Limiting the height, size, or location of the structures.
3. Controlling the location, size, and number of vehicle access points.
4. Increasing the street width.
5. Increasing the number of required off-street parking space.
6. Limiting the number, size, location, or lighting of signs.
7. Requiring diking, fencing, screening, landscaping or other facilities to protect adjacent or nearby property.
8. Designating sites for open space.

PLANNING AND ZONING COMMISSION FINDINGS

Based on the information submitted by the applicant, contained in this report, and as required by the Le Sueur County Zoning Ordinance, the following findings have been developed for this request:

(Please circle one for each item: Agree, Disagree, Not Applicable.)

- 1. The conditional use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminishes and impairs property values within the immediate vicinity.*
- 2. The establishment of the conditional use will not impede the normal and orderly development and improvement of surrounding vacant property for uses predominant in the area.*
- 3. Adequate utilities, access roads, drainage and other facilities have been or are being provided.*
- 4. Adequate measures have been or will be taken to provide sufficient off-street parking and loading space to serve the proposed use.*
- 5. Adequate measures have been or will be taken to prevent and control offensive odor, fumes, dust, noise and vibration, so that none of these will constitute a nuisance, and to control lighted signs and other lights in such a manner that no disturbance to neighboring properties will result.*
- 6. Is the Conditional Use Permit consistent with and supported by the statement of purposes, policies, goals and objectives in the Ordinance?*
- 7. Is the Conditional Use Permit consistent with the Comprehensive Land Use Plan?*

Recommend (circle one) approval / denial / table / of Conditional Use Permit.

Le Sueur County

Conditional Use Application

I. Applicant:

Name Duane Hebert / Novel Energy Solutions
Mailing Address 1628 2nd Ave SE
City Rochester State MN Zip 55904
Phone # 507-961-3350 Phone # _____

II. Landowner:

Name Brian, Kevin & Timothy Vetter
Mailing Address 34915 Arrowood Dr
City Kasota State MN Zip 56050
Property Address 34716 480th St.
City Kasota State MN Zip 56050
Phone # 507-380-5657 Phone # _____

III. Parcel Information:

Parcel Number 05.109.7900 Parcel Acreage 9.96
Attach Full Legal Description (**NOT** abbreviated description from tax statement)
Township 109 Section 9
Subdivision _____ Lot _____ Block _____

IV. Township Notification: Township must be notified of proposed use prior to application.

Kasota Township notified on 12-11-15
(Township Name) (Date)
Board Member Joe Kienlen regarding the proposed use.
(Name)

V. Quantities and Submittal Formats:

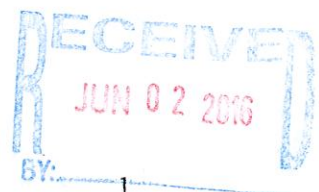
- One (1) reproducible 8.5" x 11" copy of the request and all other supporting documents.
- Twenty three (23) copies must be submitted, if any documents are in color, an aerial, or larger than 8.5" x 11" in size.
- Electronic version of any supporting documents *if available*.
- Additional copies may be requested as deemed necessary by the Department.
- Application must be made **in person** by the applicant and/or landowner no later than 12 P.M. on the date of application deadline.
- Appointment is necessary.
- Applications will not be accepted by mail.**

VI. Fees: Must be paid at the time of application.

Conditional Use Permit \$ 750 After-The-Fact fee is **doubled.**
Filing Fee \$ 46

Additional Fees:

Special Meeting \$ 2,000
After-The-Fact Penalty \$ 1,500 OR 10% of improvement, whichever is greater



VII. Type of Request:

- | | |
|--|--|
| <input type="checkbox"/> Self Service Storage | <input type="checkbox"/> Value Added Agriculture |
| <input type="checkbox"/> School/Church/Cemetery | <input type="checkbox"/> Antique Sales/Service/Repair |
| <input type="checkbox"/> Retail Nursery/Greenhouse | <input type="checkbox"/> Substation/Transmission Lines etc. |
| <input type="checkbox"/> School/Church/Cemetery | <input checked="" type="checkbox"/> Other <u>Solar array</u> |

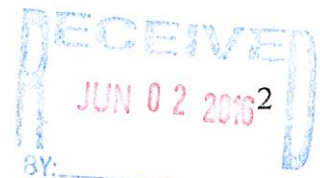
VIII. Description of Request:

- a. A full description of request with detailed information must be attached.
- b. Complete the following in relationship to the proposed Conditional Use Permit.

1. PROPOSED DAYS AND HOURS OF OPERATION: NA
2. ESTIMATED NUMBER OF PERSONS TO ATTEND PLACE OF BUSINESS/LOCATION ON A DAILY OR WEEKLY BASIS: NA
3. LIST OF PUBLIC HEALTH PLANS:
 - i. Water Supply: NA
 - ii. Toilet facilities: NA
 - iii. Solid Waste Collection: NA
4. FIRE PREVENTION: _____
5. SECURITY PLANS: 6' security fence
6. RETAIL SALES: NA
7. FOOD OR ALCOHOL SERVED OR FOR SALE: NA
8. DESCRIBE IF THE APPLICANT REQUESTS THE COUNTY TO PROVIDE ANY SERVICES OR COUNTY PERSONNEL: (For example, pedestrian and/or vehicular traffic control.) NA
9. SOUND AMPLIFICATION, PUBLIC ADDRESS SYSTEM, PLAYING OF MUSIC: NA
10. EXTERIOR LIGHTING: one shell light for Xcel + responders at main shutoff
11. PARKING AND LOADING: temporary during construction
12. SIGNAGE: safety signs required by state electric code
13. ROAD ACCESS: (Approved by the road authority) address assigned by county
14. CERTIFICATE OF INSURANCE: see attached inter connection agreement
15. MEET ALL APPLICABLE COUNTY STATE & FEDERAL REGULATIONS: (For example additional licensing and/or permitting) state electrical code/NIC XI. Part 11

IX. Site Plan: Shall include but not limited to the following:

- | | | | |
|---------------------|-----------|-----------------------|----------------------------|
| • North point | • Lake | • Existing Structures | • Septic system |
| • Setbacks | • River | • Proposed Structures | • Well |
| • Property Lines | • Wetland | • Lot Dimensions | • Access (size & location) |
| • Road Right-Of-Way | • Stream | • Ponds | • Easements |
- Parking (Size & location-if applicable to application)
 - Landscape, screening and buffering (if applicable to application)
 - Location of significant trees to be removed (if applicable to application)



- ☒ a. Description of Request-See Part VIII for full details and requirements.
- ☐ b. Site Plan-See Part IX for full details and requirements.
- ☒ c. Full legal description-Not abbreviated description from tax statement.
- ☒ d. Access approval-Attach approval in writing from proper road authority.
- ☒ e. Township Notification-See Part IV for details and requirements.
- ☐ f. Septic System Compliance Inspection
- ☒ g. Erosion control plan-Attach completed and signed plan including map.
- ☒ h. Floor plans and/or blue prints

XI. Procedure:

The Planning & Zoning Commission shall hold a public hearing on the proposed Conditional Use Permit at a scheduled Planning and Zoning Commission meeting.

The Planning and Zoning Commission is an advisory board to the County Board of Commissioners and will make a recommendation to the County Board.

The Department shall report the findings and the recommendations of the Planning Commission to the County Board for final decision.

Action by the County Board shall be a majority vote of its members.

The Department shall notify the applicant and/or landowner in writing of the County Board decision.

A certified copy of the Conditional Use Permit shall be filed with the Le Sueur County Recorder by the Department.

XII. Signatures:

I hereby certify with my signature that all data contained herein as well as all supporting data are true and correct to the best of my knowledge.

Brian Vetter
Applicant signature

12-11-15
Date 12-14-15

I hereby certify with my signature that all data contained herein as well as all supporting data are true and correct to the best of my knowledge.

Brian Vetter
Property Owner signature

12-11-15
Date

OFFICE USE ONLY

Request: 1 MW Solar Garden

Pre-App Date <u>6-2-16</u>	Lake Classification <u>1</u>	Feedlot	500' 1000' <u>N</u>
Meeting Date <u>7-14-16</u>	Lake <u>240</u>	Wetland Type	1-2 3-8 <u>N</u>
60 Day <u>8-1-16</u>	FEMA Panel # 27079CD	Water courses	<u>Y</u> <u>N</u>
Zoning District <u>A</u>	Flood Zone <u>X-outside</u>	Bluff	<u>Y</u> <u>N</u>

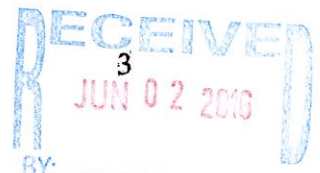
<input checked="" type="checkbox"/> Request Description	<input checked="" type="checkbox"/> Access Approval	<input checked="" type="checkbox"/> Septic	Comp Insp / Design
<input type="checkbox"/> Site Plan	<input checked="" type="checkbox"/> Erosion Control Plan	<input checked="" type="checkbox"/> Meeting	<u>Reg</u> / ATF / Spec
<input checked="" type="checkbox"/> Full Legal	<input type="checkbox"/> Blue Prints	<input type="checkbox"/> Fee	\$ <u>7960-</u>
<input type="checkbox"/> Ordinance	<input type="checkbox"/> Other <u>Desktop Rev</u>	<input type="checkbox"/> Penalty	\$

☒ Application Complete

[Signature]
Planning & Zoning Department Signature

6-2-16
Date

16142
Permit #



LE SUEUR COUNTY CONDITIONAL USE PERMIT CRITERIA

Permit # 16142

Name of Applicant: NOVEL ENERGY SOLUTIONS

Conditional Use Permit #: 16142

Name of Property Owner: BRIAN, KEVIN & TIMOTHY VETTER

Conditional Use Permit Request: TO ALLOW THE APPLICANT TO CONSTRUCT A 1 MW SOLAR GARDEN

1. The conditional use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminishes and impairs property values within the immediate vicinity.

	CR	AG	PT	DR	BB	JD	SO	SK	DK	DRY	TOTAL
1.											

Explain _____

2. The establishment of the conditional use will not impede the normal and orderly development and improvement of surrounding vacant property for uses predominant in the area.

	CR	AG	PT	DR	BB	JD	SO	SK	DK	DRY	TOTAL
2.											

Explain _____

3. Adequate utilities, access roads, drainage and other facilities have been or are being provided.

	CR	AG	PT	DR	BB	JD	SO	SK	DK	DRY	TOTAL
3.											

Explain _____

4. Adequate measures have been or will be taken to provide sufficient off-street parking and loading space to service the proposed use.

	CR	AG	PT	DR	BB	JD	SO	SK	DK	DRY	TOTAL
4.											

Explain _____

5. Adequate measures have been or will be taken to prevent and control offensive odor, fumes, dust, noise and vibration, so that none of these will constitute a nuisance, and to control lighted signs and other lights in such a manner that no disturbance to neighboring properties will result.

	CR	AG	PT	DR	BB	JD	SO	SK	DK	DRY	TOTAL
5.											

Explain _____

6. Is the Conditional Use Permit consistent with and supported by the statement of purposes, policies, goal and objectives in the Ordinance?

	CR	AG	PT	DR	BB	JD	SO	SK	DK	DRY	TOTAL
6.											

Explain _____

7. Is the Conditional use permit consistent with the Comprehensive Plan?

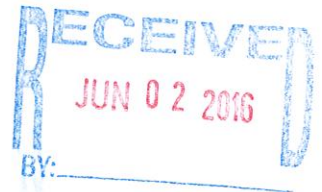
	CR	AG	PT	DR	BB	JD	SO	SK	DK	DRY	TOTAL

Explain _____

If all answers are "YES" by a majority of the Planning Commission, the criteria for granting of the Conditional Use Permit request have been met. The Conditional Use Permit will maintain the goals of safety, health and the general welfare of the public.

Date: _____ APPROVED _____ DENIED _____ PZ Chairperson _____

COUNTY BOARD MEETING DATE _____



Attachment A

364109

No. 6 continued

Sec. 17, thence East 330 feet, thence South 198 feet, thence West 115.5 feet, thence South 247.5 feet, thence West approximately 198 feet to the center of County Road #21, thence North to beginning, Sec. 17, T109N, R26W, containing 2.625 acres.

7.

The East Half of the Southwest Quarter (E 1/2 SW 1/4), Section 17, Township 109 North, Range 26 West, Le Sueur County, Minnesota, excepting therefrom the following described tract: That part of the Southwest Quarter of Section 17, Township 109 North, Range 26 West, Le Sueur County, Minnesota, described as: Commencing at the south quarter corner of Section 17; thence North 01 degrees 05 minutes 13 seconds West (assumed bearing) along the north-south centerline of Section 17, a distance of 2635.35 feet to the center of Section 17; thence South 89 degrees 35 minutes 17 seconds West, along the east-west centerline of Section 17 a distance of 342.52 feet to a point on the westerly 50.00 foot right-of-way line of the Chicago, Milwaukee, St. Paul and Pacific Railway Company; thence continuing South 89 degrees 35 minutes 17 seconds West, along the east-west centerline of Section 17 a distance of 1974.75 feet to the northwest corner of the east 70.0 acres of the North Half of the Southwest Quarter of Section 17; thence South 01 degrees 05 minutes 13 seconds East, along the west line of said east 70.0 acres, and parallel with the north-south centerline of Section 17 a distance of 674.00 feet; thence North 89 degrees 35 minutes 17 seconds East, and parallel with the east-west centerline of Section 17 a distance of 678.94 feet; thence South 01 degrees 05 minutes 13 seconds East, along a line parallel with the north-south center line of Section 17 a distance of 941.26 feet to the point of beginning; thence continuing South 01 degrees 05 minutes 13 seconds East, along said parallel line, 1015.16 feet to a point on the South line of the Southwest Quarter of Section 17; thence North 89 degrees 45 minutes 37 seconds East, along said south line a distance of 1021.38 feet to a point on the westerly 50.00 foot right-of-way line of Chicago, Milwaukee, St. Paul and Pacific Railway Company; thence North 04 degrees 52 minutes 12 seconds East, along said right-of-way line, 1035.85 feet to the point of intersection with a line which bears North 88 degrees 54 minutes 47 seconds East from the point of beginning; thence South 88 degrees 54 minutes 47 seconds West, 1128.77 feet to the point of beginning. Said tract contains 25.25 acres, subject to any and all easements of record.

8.

The Seller conveys to the Buyer an undivided one-half interest in the following described real estate: The South Half of the Southeast Quarter of the Southwest Quarter of Section 9, and the East Half of the Northwest Quarter of Section 16-109-26 except those portions described as follows, to-wit: Beginning at a point 183 feet West of where the common boundary line between Sections 9 and 16 intersects the line connecting the centers of Section 9 and 16, then 120 feet West along the same common boundary line, then North at 90 degrees 167 feet, then East at 90 degrees 167 feet, then East at 90 degrees 120 feet, and then South at 90 degrees 67 feet to the point of beginning. Also excepting the North 368 feet of the East 368 feet of the Northeast Quarter of the Northeast Quarter of the Northwest Quarter (NE 1/4 NE 1/4 NW 1/4) of Section 16, Township 109 North, Range 26 West, containing 3.1 acres, more or less. Also excepting that portion described as Rued Subdivision, described as follows: That part of the East 660.00 feet of the South Half of the Southeast Quarter of the Southwest Quarter of Section 9 Township 109 North Range 26 West,

RECEIVED
DEC 14 2015
BY: _____

RECEIVED
JUN 02 2016
BY: _____

No. 8 continued

described as follows, to-wit:

Beginning at the South Quarter Corner of Section 9; thence South 87 degrees 57 minutes 32 seconds West (bearing basis from State Plane Coordinates — Le Sueur County Datum) along the South line of the Southwest Quarter of Section 9 a distance of 184.86 feet to a point distant 183.00 feet west of the intersection of the South line of Section 9 with a line connecting the Centers of Sections 9 and 16; thence North 02 degrees 02 minutes 28 seconds West, at right angles to the South line of the Southwest Quarter of Section 9 a distance of 167.00 feet; thence South 87 degrees 57 minutes 32 seconds West, along a line parallel with the South line of the Southwest Quarter of Section 9 a distance of 120.00 feet; thence South 02 degrees 02 minutes 28 seconds East, 167.00 feet to a point on the South line of the Southwest Quarter of Section 9; thence South 87 degrees 57 minutes 32 seconds West, along said South line, 355.40 feet to a point on the West line of the East 660.00 feet of the South Half of the Southeast Quarter of the Southwest Quarter of Section 9; thence North 00 degrees 26 minutes 06 seconds West, along said West line, 656.30 feet to a point on the North line of the South Half of the Southeast Quarter of the Southwest Quarter of Section 9; thence North 88 degrees 00 minutes 34 seconds East, along said North line, 660.24 feet to the point on the North/South center line of Section 9; thence South 00 degrees 26 minutes 06 seconds East, along said North/South center line of Section 9 the same being the center of Minnesota Trunk Highway No. 22, a distance of 655.72 feet to the point of beginning. Containing 9.479 acres.

The following described parcels located in the County of Blue Earth, State of Minnesota:

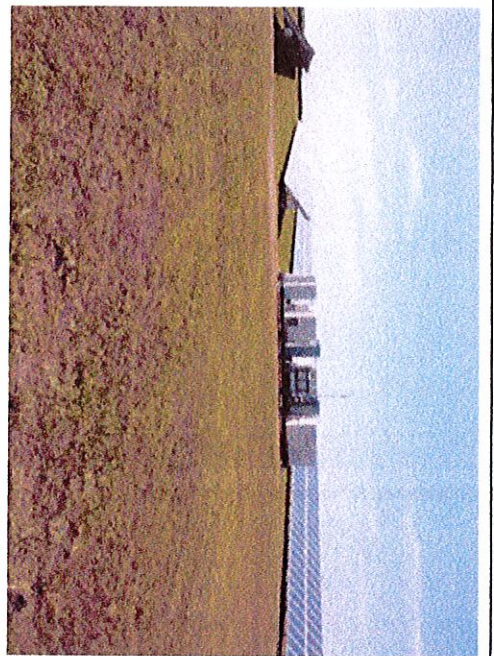
The Seller conveys to the Buyer an undivided one-half interest in the following described real estate:

That certain tract or parcel of land lying within the Northeast Quarter of the Southeast Quarter (NE 1/4 SE 1/4), the Northwest Quarter of the Southeast Quarter (NW 1/4 SE 1/4), the Southwest Quarter of the Southeast Quarter (SW 1/4 SE 1/4), the Southeast Quarter of the Southwest Quarter (SE 1/4 SW 1/4), and the Northeast Quarter of the Southwest Quarter (NE 1/4 SW 1/4) all lying in Section Twenty (20), Township One Hundred Nine (109) North, Range Twenty-six (26) West circumscribed as follows, to-wit:

Commencing at the point of intersection of the East Right of Way line of the Chicago, St. Paul, Minneapolis and Omaha Railroad with the South line of Section 20, Township 109, Range 26, thence running Northerly along the said R.W. line to the center line of County Aid Road No. 123, thence Easterly and Northerly along said center line 890 feet, thence South 75°20' East 1125 feet, thence South 58° East 130 feet, thence East 934 feet to the center line of a stone arch culvert and the center line of the Township Road, thence South 19° East to the Westerly Right of Way Line of the Chicago, Great Western Railroad, thence Southwesterly along the said Right of Way line to the South line of the Northeast Quarter of the Southeast Quarter of Section 20, Township 109, Range 26, thence West on line to the Northeast corner of the Southwest Quarter of the Southeast Quarter (SW 1/4 SE 1/4), thence South on line to the South line of the said Section 20, Township 109, Range 26, thence West on line to the place of beginning.

RECEIVED
DEC 14 2015
BY: _____

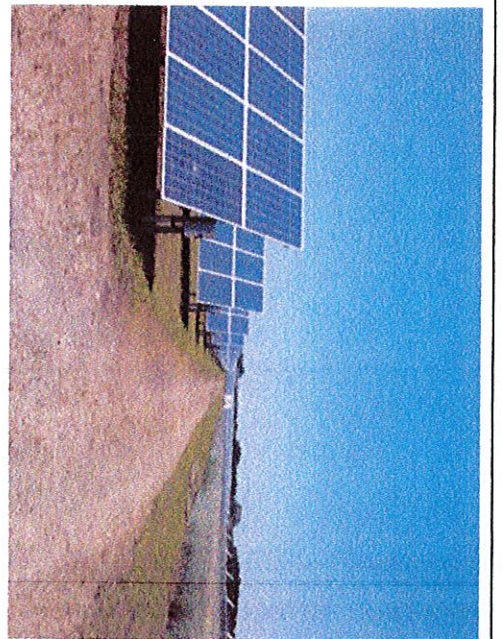
RECEIVED
JUN 02 2016
BY: _____



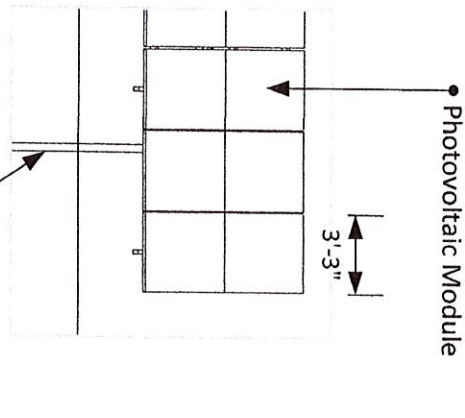
Side View of Array
Relative Height and Row Spacing



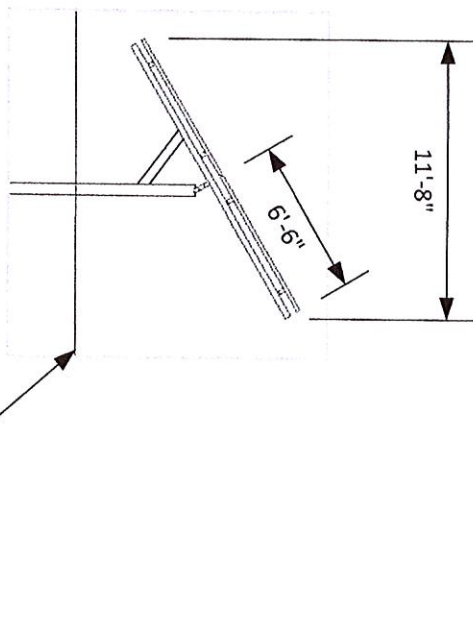
Detail of Switchgear Pad
Inverters, Combiner (Junction) boxes, Disconnects
Weather Station, Metering



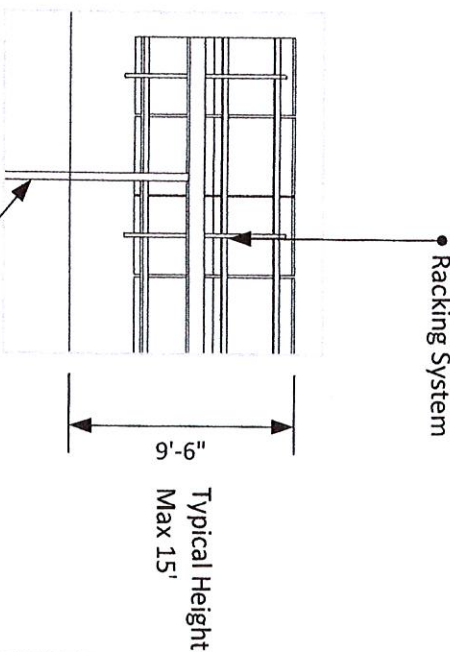
Front View of Array
Access Road, Fence, Vegetation



Array Detail Front
Scale: 1/8" = 1'



Array Detail Side
Scale: 1/8" = 1'



Array Detail Rear
Scale: 1/8" = 1'

Pile Foundation
No Concrete

Ground Level

Pile Driven to Depth
as Specified by Structural
Engineer. Typical 6'-10'

Owner Name
Owner Address

Site PID#
Site Address

- Vetter, Brian R, Kevin, Timothy
- 34915 Arrowwood Dr
- Kasota, MN 56050
- 05.109.7900
- Le Sueur Co, Kasota Twp

Typical Solar Array Details

Le Sueur County Planning/Zoning
Photos and Elevations of Typical Large Solar Array Details
scale as noted, smc/dh, 10/05/15



507-272-5401
info@novelenergy.biz

Main Office
2913 Co Rd 39
St Charles, MN 55972
Rochester Office
1628 2nd Ave SE
Rochester, MN 55904

Vetter 480th Street 1MW Megawatt Solar Garden

A Novel Energy Solutions Project

Introduction

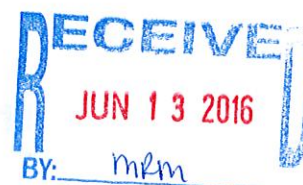
Novel Energy Solutions (NES) works to make affordable clean energy available to farms, companies, non-profit organizations, and individuals alike.

We understand that changing government policies and rapid technological developments can make even a small clean energy project appear overwhelming. Our experienced team helps communities make sense of available clean energy technologies, utility incentives, government programs, and financing options. We will assist in devising and implementing a clean energy plan that will both reduce your community's carbon footprint and keep electric utility dollars local.

Community Solar Gardens are supported by the State of Minnesota as a renewable energy supply. The Xcel Energy program was approved by the State of Minnesota as part of the renewable energy jobs package in 2013. The purpose of constructing a community solar garden (solar array) will be to generate offsite solar energy that will be connected directly to the electric grid for the direct benefit of subscribers to the solar garden.

This proposed site is constructed to produce one megawatt (1MW) of electric generation. The electrical energy will be distributed directly to the existing electrical grid for subscribers to the energy produced by the system. The impact to the area is anticipated to be low. Construction and setup are not invasive. The system will reduce the carbon footprint and greenhouse gas emissions of the end users equal to 321 tons of waste hauled to landfills, over two million passenger vehicle miles driven or 896 metric tons of greenhouse gas emissions. Subscribers to the community solar garden will save millions of dollars over the 25 year life of the system which can be saved and spent locally in support of the local economy.

Community solar gardens offer numerous benefits to the community. These multi-million dollar construction projects create jobs, and enhance the tax base. NES works with local contractors for various components of the project as needed. Subscribers have an opportunity to keep electric dollars in the area to support the local economy. Land owners have a new option that brings value to their property without impacting the underlying nature of the land. Land owners and the community have an opportunity to be leaders in renewable energy that sets an example for others to follow, and leaves a positive lasting legacy. Distributed solar generation, energy produced at multiple locations across the grid helps prevent line loss and dependence on carbon-based fuel sources. Careful siting standards protects the integrity of the land, increases production which increases local revenues and savings, and ensures positive neighbor relations.



Solar panels and systems have been used in the United States for over forty years and have gained in popularity as the cost of solar energy becomes competitive with traditional fossil fuels, and because of the environmental benefits. Solar systems are more widely found on the east and west coasts of the United States due to higher electric costs than Minnesota and the Midwest. Solar systems have been found to be good neighbor land use due to their passive nature, no negative impact on neighbor property values, and benefits to the environment and local economy. The proposed solar systems will not change the underlying nature of the land.

Project Description

The parcel is owned by Brian R., Kevin, and Timothy Vetter

PID#051097900 – Sec 9 Twp 109 Range 26

Legal Description: S 20 AC OF E ½ OF SW ¼ LESS E 660.24 FT

9.96 acres in the Agriculture Zoning District

Parcel Description: Parcel is agricultural use. Surrounding property is a mix of agricultural and residential. Residential properties on the east and west of the parcel are partially bordered by trees, and homes generally face away from the proposed solar array. Existing trees will mitigate direct visual impact, and proposed screening will further mitigate the view. Entire site has less than 4' of elevation change.

Site access will be off 480th at a Le Sueur County approved address and coordinated with the Le Sueur County Highway Engineer.

Equipment

Novel Energy Systems uses only Tier-1, 300-320 Watt, multicrystalline solar panels. Bloomberg New Energy Finance rates solar panels in tiers based on a variety of factors including financeability. All tier-1 panels used have a 25 year warranty. Panels will be tilted at a 30 degree angle, and not exceed 15 feet in height. Panels will feed inverters which ultimately connect to the electric grid at a point of interconnection located at 480th Street. All equipment complies with the Minnesota State Electric Code. Panels are fixed tilt, non-reflective with a south facing orientation.

Posts will be pounded or screwed into the ground at a depth adequate to handle engineered loads and mitigate frost heave. Posts can be pulled from the ground at the end of the system's useful life. Racking, panel, and inverter manufacturers will be site specific depending on engineering, topography and array layout. Xcel Energy will provide final approval of interconnection equipment including

transformers, meters, disconnects, utility poles and wires as required by the company's interconnection tariff. All equipment is engineered to meet industry, state and federal standards.

Transformers and related equipment will be placed on concrete slab on grade sized 21'x14'. Xcel Energy required poles will be standard electric utility poles with overhead wires. All non-Xcel Energy equipment, materials, supplies, concrete, etc. can be removed at the end of the useful life of the project.

All equipment must meet Xcel Energy standards for safety and interconnection, and UL listed. Program requirements include adequate levels of insurance coverage, signed interconnection agreement as required by the MN Public Utilities Commission for 25 years and continual production monitoring.

Site Appearance & Impact

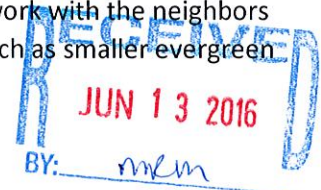
The parcel will consist of a 1MW Solar Garden and 3,050 solar panels. The installation will include rows of solar panel with rows separated by 19 feet. The attached layout provides the proposed layout which is subject to engineering and final Xcel approval. The final layout will continue to meet all Le Sueur County requirements and performance standards.

Through all of our projects, NES works with the property owner and permitting authority on any screening and buffering required by Ordinance or preferred by the property owner if multiple options are available. Absent specific requests from Le Sueur County, Kasota Township, or the property owner a 6' chain linked fence will be installed surrounding the entire site. Gated access will be provided with a key code for Xcel Energy and emergency response personnel.

The very level terrain prevents the need for grade and fill for the solar panels. Grade and fill will only occur at the cement pad for the electrical gear, and some work at the main access point to the site. Posts pounded or screwed in the ground of various lengths will accommodate the minimal terrain change without the need for grade and fill activities.

Following construction of the arrays and any other project requirements, vegetation is established to ensure soil stabilization, improve storm water quality, and for site beautification. Low Maintenance Turf MNDOT 260 or similar seed mix is utilized. Native grasses or specific pollinator plantings will be considered upon request of the property owner as long as solar production and maintenance is not compromised. Once established, this site will filtrate surface waters and minimize erosion even better than traditional crop lands. On-going maintenance to control weeds or unsightly conditions will be performed by or contracted by NES. Being a Minnesota owned and operated company provides greater assurance of proper site maintenance.

A viewshed analysis will be performed on neighboring properties to determine if screening is needed. Where screening is needed, NES will add slats to the fence, however we will work with the neighbors and the property owner in the event other screening options are preferred such as smaller evergreen



trees or bushes that blend into the local flora. Plantings of coniferous trees not less than 5' tall (will grow to 9' tall at full growth) will be planted outside the fence on the east and west boundaries where if desired by the neighbors where no existing vegetation separates the array from the neighboring properties.

Hydrological Features

There are no identified wetlands per the MN DNR Public Waters Inventory or National Wetland Inventory Maps. Storm water management will be handled by the current best practices. Because of minimal elevation change an NPDES permit will not be required as less than 1 acre of land will be disturbed per NPDES regulations. Silt fencing will be placed on both sides of the access road in the event of wet weather during construction.

Geology and Soils

Novel Energy Solutions has completed research relating to the soil types and depth as identified in the Minnesota Geological Survey Surficial Geologic Mapping Mosaic and/or direct borings. This will determine bedrock depth and identify all soils in the project scope. This data will be utilized in the engineering of the posts and racking to ensure adequate wind, snow, and other load factors. Soil review and analysis shows excellent soil types for a solar array.

Potential to Effect the Environment and Public Health

This project is focused on bring additional green energy to a large number of people in Minnesota. The proposed solar array is passive with only small fans in the inverters to prevent overheating, and are designed to capture the sun's rays, not reflect them. Solar panels have an equivalent glare factor as a body of water. Potential neighbor glare issues will be handled through project screening on a case by case basis. Research on potential environmental and public health issues will be through the State of Minnesota and the Federal government data bases to ensure compliance. The addition of year-round ground cover will provide improved storm water control over traditional row cropping providing improved soil retention and greater water infiltration.

Decommissioning & Restoration Plan

Within ninety (90) days of the end of the project useful life, decommissioning will include the removal of all of the solar arrays, cables, electrical components, accessory structures, fencing and other ancillary facilities owned by the solar garden. Since this project includes the establishment of vegetation on site, the soil will be excellent for agricultural utilization upon decommissioning. At year 26, there is almost equal salvage value in the panels and equipment than the costs associated with removing the system.

Detailed decommissioning includes:

- All cables and conduit will be removed
- PV modules will be removed from racking sold or transported to a recycling facility
- Racking equipment will be dismantled and removed, and either re-used or sold for scrap
- Inverters, transformers, switchgear, etc. will be re-sold or scrapped per industry best practices and regulations
- Concrete foundations will be broken down and removed
- The security fence will be removed
- The site will be returned to its current state

Conclusion

We are excited to complete this project in a strong partnership with the Vettters and Le Sueur County. Novel Energy Solutions is committed to following best practices and all state, federal and local rules and regulations to develop a community solar garden providing the many benefits to the local community.



Mettler, Michelle

From: Schultz, Michael
Sent: Thursday, June 02, 2016 2:00 PM
To: Mettler, Michelle
Subject: RE: Proposed Solar Garden-Need delineation?

This property **does not look to have any wetlands**. If they have to have a setback from the property line, I would recommend they do not have any wetland in this field.

Let me know if you need more info.

Michael Schultz | Senior District Technician
Le Sueur SWCD | 181 W. Minnesota St. | Le Center, MN 56057
p. (507) 357-4879, ext 3 | c. (952) 807-3423 | mschultz@co.le-sueur.mn.us

www.lesueurswcd.org ■ www.co.le-sueur.mn.us



From: Mettler, Michelle
Sent: Thursday, June 02, 2016 11:03 AM
To: Schultz, Michael
Subject: Proposed Solar Garden-Need delineation?

LE SUEUR COUNTY HIGHWAY DEPARTMENT

Application For Access Driveway or Entrance Permit

C.S.A.H./Co. Hwy. No. 480th St. Name of Twp. Kasota

SKETCH PROPERTY, PRESENT AND PROPOSED DRIVEWAY AND RELATION TO COUNTY HIGHWAY.

Name of Applicant: Duane Hebert Telephone No.: (507) 961-3300

Address: 1628 2nd Ave SE Rochester, MN 55904

Name of Property Owner: Brian Vetter Telephone No.: (507) 380-5657

Address: 34915 Arrowood Dr.

Location: Co Hwy. No.: 480th St in Le Sueur Co. 770 ^{feet} Miles N-S-E-W of Hwy 22
(circle one) (Specify Road, or intersection)

Legal Description of Property 9.56 AC S 20 AC OF E 1/2 OF SW 1/4 LESS E 660.29 FT

Purpose of Driveway: Farm Residence _____ Field _____ Other X

Is a Building to be Constructed: Yes _____ No X What kind _____

Possible replacement cost of this pipe will be the responsibility of the owner: (Yes) No
(Circle One)

Will the Building be Temporary: _____ Permanent _____

Distance from center of highway to front of building is NA feet.

Is land higher? _____ lower? _____ or level? X with highway.
(show feet & inches) (show feet & inches)

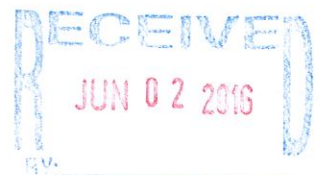
Number of present driveways to property 0 Date Proposed driveway will be needed 6-1-16

Give exact location to Proposed Driveway to Property: (Give lath to mark center of Proposed Driveway)

see attached

I, We, the undersigned, herewith make application for permission to construct the access driveway at the above location, said driveway to be constructed to conform with the standards of the Minnesota Highway Department and to any special provisions included in the permit. It is agreed that all work will be done to the satisfaction of the Le Sueur County Highway Department. It is further agreed that no work in connection with this application will be started until the application is approved and the permit issued.

Access drives onto any public roads shall require a review by the Road Authority. The Road Authority shall determine the appropriate location, size, and design of such access drives and may limit the number of access drives in the interest of public safety.



Access drives which traverse wooded, steep, or open field areas shall be constructed and maintained to a minimum ten (10) foot width base material depth sufficient to support access by emergency vehicles and have an unobstructed width of not less than fourteen (14) feet and an unobstructed vertical clearance of not less than thirteen (13) feet, six (6) inches. Access drives outside the road rights of ways shall not exceed twelve percent (12%) grade unless approved by the local fire chief.

Access drives shall have a twenty (20) foot long flat grade directly adjacent to the road that drive accesses.

All lots or parcels with dwellings shall have direct adequate physical access for emergency vehicles along the frontage of the lot or parcel from either an existing or dedicated public roadway.

All roads serving more than one (1) lot or parcel with dwellings shall be built to township road specifications or at least sixty six (66) feet wide with a minimum driving surface width of twenty-four (24) feet.

Access drives in excess of one hundred fifty (150) feet shall provide a minimum turn-around of forty (40) feet in width by forty (40) feet in length.

BE IT RESOLVED: That the County Highway Engineer is hereby authorized and instructed to control farm and field entrances on all County State Aide Highways, including roads scheduled for new construction, under the following regulations.

- A: One field and one farm entrance shall be allowed per owner or approved additional access at no cost to owner.
- B: A permit shall be required on all additional entrance requests.
- C: All new culverts and aprons on additional entrance requests shall be furnished by the private owner, and constructed according to the Engineer's specifications.
- D: All new culvert materials and aprons shall become the property of the County Highway Department and entrances shall be maintained by same.
- E: There shall be no distinction for entrances with or without culvert.
- F: The relocation of existing entrances shall be accomplished at the private owner's expense and according to the Engineer's specifications, except where the County is proved negligent.

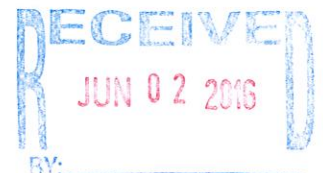
BE IT RESOLVED: That the design standards for County Roads be the same as those currently listed in State Aid Rules for County State Aid Highways.

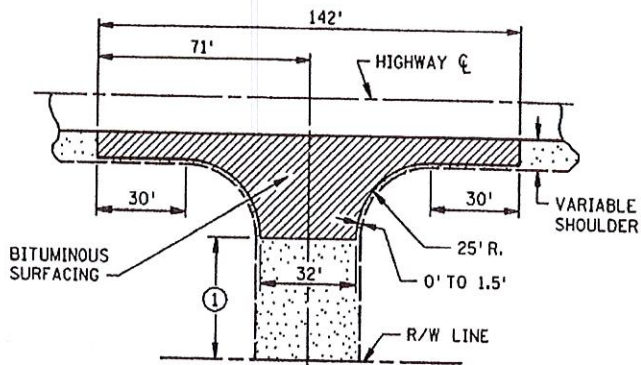
3-2-16

Date

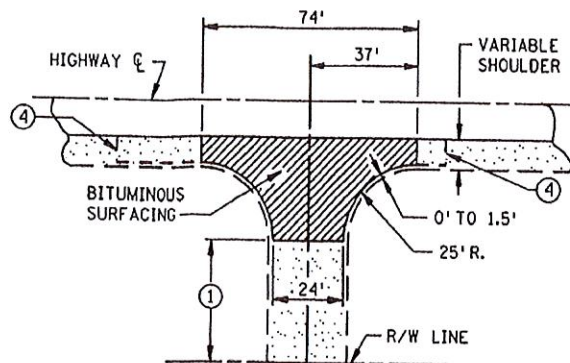


Signature of Applicant

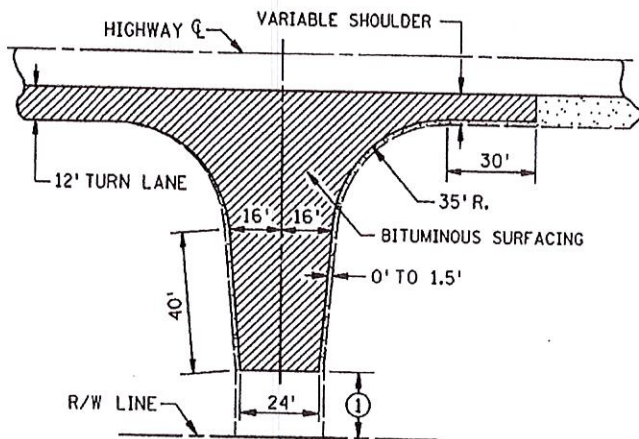




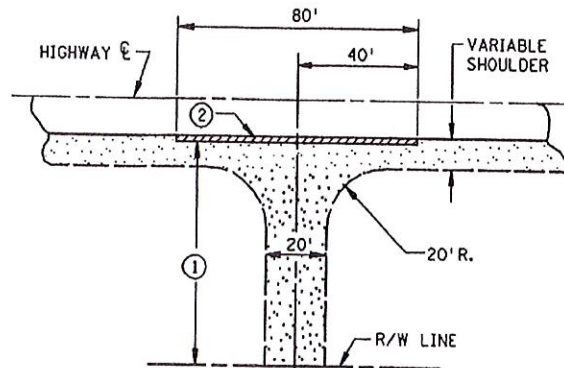
COMMERCIAL - INDUSTRIAL - FARM ENTRANCES



RURAL RESIDENTIAL ENTRANCE

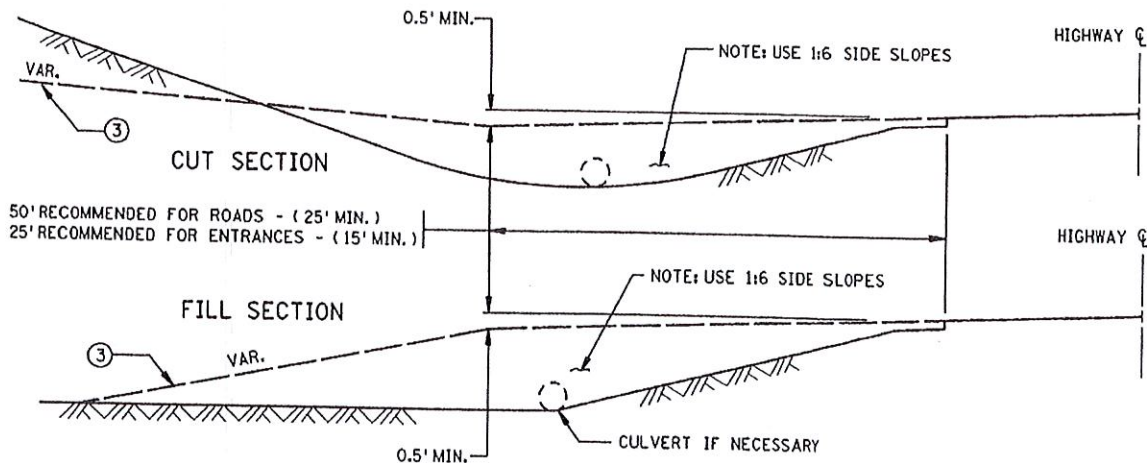


LOW VOLUME ROAD



FIELD ENTRANCES

- ① SURFACING TO MATCH EXISTING CONDITIONS, WHERE THERE IS NO SURFACING, PLACE GRAVEL BEYOND BITUMINOUS SURFACING TO R/W LINE.
- ② PLACE 2 FT. WIDE BITUMINOUS SURFACING AS DIRECTED BY ENGINEER.
- ③ 8% MAXIMUM COMMERCIAL; 15% MAXIMUM RESIDENTIAL.
- ④ THE USE OF PAVING SIMILAR TO COMMERCIAL ENTRANCES MAY BE APPROPRIATE FOR SOME RESIDENCES - AS SHOWN IN PLANS OR DIRECTED BY THE ENGINEER.



CROSS SECTIONS

APPROVED SEPT. 27, 2012

[Signature]
STATE DESIGN ENGINEER

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

APPROACHES AND ENTRANCES
RECOMMENDED STANDARDS

SPECIFICATION
REFERENCE

STANDARD
PLATE
NO.

9000E

JUN 02 2016

Northern States Power Company, a Minnesota corporation
and wholly owned subsidiary of Xcel Energy Inc.
Minneapolis, Minnesota 55401

MINNESOTA ELECTRIC RATE BOOK - MPUC NO. 2

**DISTRIBUTED GENERATION STANDARD
INTERCONNECTION AND POWER PURCHASE TARIFF (Continued)**

Section No. 10
Original Sheet No. 113

APPENDIX E: Interconnection Agreement

**State of Minnesota
Proposed Interconnection Agreement**

For the Interconnection of Extended Parallel Distributed Generation Systems With Electric Utilities

This Generating System Interconnection Agreement is entered into by and between Xcel Energy,
"Northern States Power Company, a Minnesota corporation" and the Interconnection Customer "Novel Energy Solutions". The
Interconnection Customer and Xcel Energy are sometimes also referred to in this Agreement jointly as "Parties" or
individually as "Party".

In consideration of the mutual promises and obligations stated in this Agreement and its attachments, the Parties
agree as follows:

I. SCOPE AND PURPOSE

- A. Establishment of Point of Common Coupling. This Agreement is intended to provide for the Interconnection Customer to interconnect and operate a Generation System with a total Nameplate Capacity of 10MWs or less in parallel with Xcel Energy at the location identified in Exhibit C and shown in the Exhibit A one-line diagram.
- B. This Agreement governs the facilities required to and contains the terms and condition under which the Interconnection Customer may interconnect the Generation System to Xcel Energy. This Agreement does not authorize the Interconnection Customer to export power or constitute an agreement to purchase or wheel the Interconnection Customer's power. Other services that the Interconnection Customer may require from Xcel Energy, or others, may be covered under separate agreements.
- C. To facilitate the operation of the Generation System, this agreement also allows for the occasional and inadvertent export of energy to Xcel Energy. The amount, metering, billing and accounting of such inadvertent energy exporting shall be governed by Exhibit D (Operating Agreement). This Agreement does not constitute an agreement by Xcel Energy to purchase or pay for any energy, inadvertently or intentionally exported, unless expressly noted in Exhibit D or under a separately executed power purchase agreement (PPA).
- D. This agreement does not constitute a request for, nor the provision of any transmission delivery service or any local distribution delivery service.
- E. The Technical Requirements for interconnection are covered in a separate Technical Requirements document known as, the "State of Minnesota Distributed Generation Interconnection Requirements", a copy of which has been made available to the Interconnection Customer and incorporated and made part of this Agreement by this reference.

(Continued on Sheet No. 10-114)

Date Filed: 11-02-05

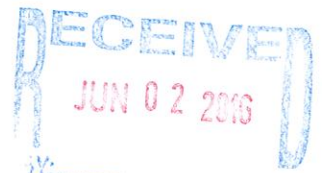
By: Cynthia L. Leshner
President and CEO of Northern States Power Company

Effective Date: 02-01-07

Docket No. E002/GR-05-1428

Order Date: 09-01-06

S:\General-Offices-GO-01\PSF\RA\Rates\Current\Mn_elec\Me_10_113.doc



Northern States Power Company, a Minnesota corporation
and wholly owned subsidiary of Xcel Energy Inc.
Minneapolis, Minnesota 55401

MINNESOTA ELECTRIC RATE BOOK - MPUC NO. 2

**DISTRIBUTED GENERATION STANDARD
INTERCONNECTION AND POWER PURCHASE TARIFF (Continued)**

Section No. 10
Original Sheet No. 114

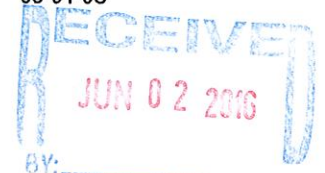
APPENDIX E: Interconnection Agreement (Continued)

II. DEFINITIONS

- A. "Area EPS" is an electric power system (EPS) that serves Local EPS's. For the purpose of this agreement, the Xcel Energy system is the Area EPS. Note: Typically, Xcel Energy has primary access to public rights-of-way, priority crossing of property boundaries, etc.
- B. "Area EPS Operator" is the entity that operates the electric power system. For purpose of this agreement, Xcel Energy is the Area EPS Operator.
- C. "Dedicated Facilities" is the equipment that is installed due to the interconnection of the Generation System and not required to serve other Xcel Energy customers.
- D. "EPS" (Electric Power System) are facilities that deliver electric power to a load. Note: This may include generation units.
- E. "Extended Parallel" means the Generation System is designed to remain connected with Xcel Energy for an extended period of time.
- F. "Generation" is any device producing electrical energy, i.e., rotating generators driven by wind, steam turbines, internal combustion engines, hydraulic turbines, solar, fuel cells, etc.; or any other electric producing device, including energy storage technologies.
- G. "Generation Interconnection Coordinator" is the person or persons designated by Xcel Energy to provide a single point of coordination with the Applicant for the generation interconnection process.
- H. "Generation System" is the interconnected generator(s), controls, relays, switches, breakers, transformers, inverters and associated wiring and cables, up to the Point of Common Coupling.
- I. "Interconnection Customer" is the party or parties who will own/operate the Generation System and are responsible for meeting the requirements of the agreements and Technical Requirements. This could be the Generation System applicant, installer, owner, designer, or operator.
- J. "Local EPS" is an electric power system (EPS) contained entirely within a single premises or group of premises.
- K. "Nameplate Capacity" is the total nameplate capacity rating of all the Generation included in the Generation System. For this definition the "standby" and/or maximum rated kW capacity on the nameplate shall be used.

(Continued on Sheet No. 10-115)

Date Filed: 11-02-05 By: Cynthia L. Leshner Effective Date: 02-01-07
President and CEO of Northern States Power Company
Docket No. E002/GR-05-1428 Order Date: 09-01-06
S:\General-Offices-GO-01\PSF\RA\Rates\Current\Mn_elec\Me_10_114.doc



Northern States Power Company, a Minnesota corporation
and wholly owned subsidiary of Xcel Energy Inc.
Minneapolis, Minnesota 55401

MINNESOTA ELECTRIC RATE BOOK - MPUC NO. 2

**DISTRIBUTED GENERATION STANDARD
INTERCONNECTION AND POWER PURCHASE TARIFF (Continued)**

Section No. 10
Original Sheet No. 115

APPENDIX E: Interconnection Agreement (Continued)

II. DEFINITIONS (Continued)

- L. "Point of Common Coupling" is the point where the Local EPS is connected to Xcel Energy
- M. "Point of Delivery" is the point where the energy changes possession from one party to the other. Typically this will be where the metering is installed but it is not required that the Point of Delivery is the same as where the energy is metered
- N. "Technical Requirements" are the State of Minnesota Requirements for Interconnection of Distributed Generation

III. DESCRIPTION OF INTERCONNECTION CUSTOMER'S GENERATION SYSTEM

- A) A description of the Generation System, including a single-line diagram showing the general arrangement of how the Interconnection Customer's Generation System is interconnected with Xcel Energy's distribution system, is attached to and made part of this Agreement as Exhibit A. The single-line diagram shows the following:
 - 1) Point of Delivery (if applicable)
 - 2) Point of Common Coupling
 - 3) Location of Meter(s)
 - 4) Ownership of the equipment
 - 5) Generation System total Nameplate Capacity 950 +/- 10% KW kW
 - 6) Scheduled operational (on-line) date for the Generation System.

IV. RESPONSIBILITIES OF THE PARTIES

- A) The Parties shall perform all obligations of this Agreement in accordance with all applicable laws and regulations, operating requirements and good utility practices.
- B) Interconnection Customer shall construct, operate and maintain the Generation System in accordance with the applicable manufacture's recommend maintenance schedule, the Technical Requirements and in accordance with this Agreement.

(Continued on Sheet No. 10-116)

Date Filed: 11-02-05

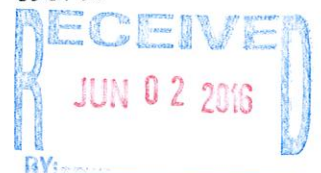
By: Cynthia L. Leshner
President and CEO of Northern States Power Company

Effective Date: 02-01-07

Docket No. E002/GR-05-1428

Order Date: 09-01-06

S:\General-Offices-GO-01\PSF\RA\Rates\Current\Mn_elec\Me_10_115.doc



Northern States Power Company, a Minnesota corporation
and wholly owned subsidiary of Xcel Energy Inc.
Minneapolis, Minnesota 55401

MINNESOTA ELECTRIC RATE BOOK - MPUC NO. 2

**DISTRIBUTED GENERATION STANDARD
INTERCONNECTION AND POWER PURCHASE TARIFF (Continued)**

Section No. 10
Original Sheet No. 116

APPENDIX E: Interconnection Agreement (Continued)

IV. RESPONSIBILITIES OF THE PARTIES (Continued)

- C) Xcel Energy shall carry out the construction of the Dedicated Facilities in a good and workmanlike manner, and in accordance with standard design and engineering practices.

V. CONSTRUCTION

The Parties agree to cause their facilities or systems to be constructed in accordance with the laws of the State of Minnesota and to meet or exceed applicable codes and standards provided by the NESC (National Electrical Safety Code), ANSI (American National Standards Institute), IEEE (Institute of Electrical and Electronic Engineers), NEC (National Electrical Code), UL (Underwriter's Laboratory), Technical Requirements and local building codes and other applicable ordinances in effect at the time of the installation of the Generation System.

A) Charges and payments

The Interconnection Customer is responsible for the actual costs to interconnect the Generation System with Xcel Energy, including, but not limited to any Dedicated Facilities attributable to the addition of the Generation System, Xcel Energy labor for installation coordination, installation testing and engineering review of the Generation System and interconnection design. Estimates of these costs are outlined in Exhibit B. While estimates, for budgeting purposes, have been provided in Exhibit B, the actual costs are still the responsibility of the Interconnection Customer, even if they exceed the estimated amount(s). All costs, for which the Interconnection Customer is responsible for, must be reasonable under the circumstances of the design and construction.

1) Dedicated Facilities

- a) During the term of this Agreement, Xcel Energy shall design, construct and install the Dedicated Facilities outlined in Exhibit B. The Interconnection Customer shall be responsible for paying the actual costs of the Dedicated Facilities attributable to the addition of the Generation System.
- b) Once installed, the Dedicated Facilities shall be owned and operated by Xcel Energy, and all costs associated with the operating and maintenance of the Dedicated Facilities, after the Generation System is operational, shall be the responsibility of Xcel Energy, unless otherwise agreed.
- c) By executing this Agreement, the Interconnection Customer grants permission for Xcel Energy to begin construction and to procure the necessary facilities and equipment to complete the installation of the Dedicated Facilities, as outlined in Exhibit B. If for any reason, the Generation System project is canceled or modified, so that any or all of the Dedicated Facilities are not required, the Interconnection Customer shall be responsible for all costs incurred by Xcel Energy,

(Continued on Sheet No. 10-117)

Date Filed: 11-02-05

By: Cynthia L. Leshner

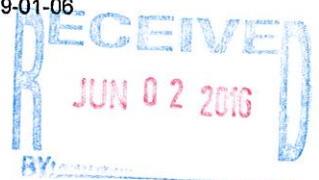
Effective Date: 02-01-07

President and CEO of Northern States Power Company

Docket No. E002/GR-05-1428

Order Date: 09-01-06

S:\General-Offices-GO-01\PSF\RA\Rates\Current\Mn_elec\Mn_10_116.doc



Northern States Power Company, a Minnesota corporation
and wholly owned subsidiary of Xcel Energy Inc.
Minneapolis, Minnesota 55401

MINNESOTA ELECTRIC RATE BOOK - MPUC NO. 2

**DISTRIBUTED GENERATION STANDARD
INTERCONNECTION AND POWER PURCHASE TARIFF (Continued)**

Section No. 10
Original Sheet No. 117

APPENDIX E: Interconnection Agreement (Continued)

V. CONSTRUCTION (Continued)

including, but not limited to the additional costs to remove and/or complete the installation of the Dedicated Facilities. The Interconnection Customer may, for any reason, cancel the Generation System project, so that any or all of the Dedicated Facilities are not required to be installed. The Interconnection Customer shall provide written notice to Xcel Energy of cancellation. Upon receipt of a cancellation notice, Xcel Energy shall take reasonable steps to minimize additional costs to the Interconnection Customer, where reasonably possible.

2) Payments

- a) The Interconnection Customer shall provide reasonable adequate assurances of credit, including a letter of credit or personal guaranty of payment and performance from a creditworthy entity acceptable under Xcel Energy credit policy and procedures for the unpaid balance of the estimated amount shown in Exhibit B.
- b) The payment for the costs outlined in Exhibit B, shall be as follows:
 - i. 1/3 of estimated costs, outlined in Exhibit B, shall be due upon execution of this agreement.
 - ii. 1/3 of estimated costs, outlined in Exhibit B, shall be due prior to initial energization of the Generation System, with Xcel Energy.
 - iii. Remainder of actual costs, incurred by Xcel Energy, shall be due within 30 days from the date the bill is mailed by Xcel Energy after project completion.

VI. DOCUMENTS INCLUDED WITH THIS AGREEMENT

- A) This agreement includes the following exhibits, which are specifically incorporated herein and made part of this Agreement by this reference: *(if any of these Exhibits are deemed not applicable for this Generation System installation, they may be omitted from the final Agreement by Xcel Energy.)*
 - 1) Exhibit A – Description of Generation System and single-line diagram. This diagram shows all major equipment, including, visual isolation equipment, Point of Common Coupling, Point of Delivery for Generation Systems that intentionally export, ownership of equipment and the location of metering.

(Continued on Sheet No. 10-118)

Date Filed: 11-02-05

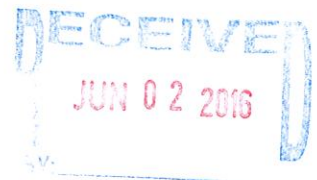
By: Cynthia L. Leshner
President and CEO of Northern States Power Company

Effective Date: 02-01-07

Docket No. E002/GR-05-1428

Order Date: 09-01-06

S:\General-Offices-GO-01\PSF\RA\Rates\Current\Mn_elec\Me_10_117.doc



Northern States Power Company, a Minnesota corporation
and wholly owned subsidiary of Xcel Energy Inc.
Minneapolis, Minnesota 55401

MINNESOTA ELECTRIC RATE BOOK - MPUC NO. 2

**DISTRIBUTED GENERATION STANDARD
INTERCONNECTION AND POWER PURCHASE TARIFF (Continued)**

Section No. 10
Original Sheet No. 118

APPENDIX E: Interconnection Agreement (Continued)

VI. DOCUMENTS INCLUDED WITH THIS AGREEMENT (Continued)

- 2) Exhibit B – Estimated installation and testing costs payable by the Interconnection Customer. Included in this listing shall be the description and estimated costs for the required Dedicated Facilities being installed by Xcel Energy for the interconnection of the Generation System and a description and estimate for the final acceptance testing work to be done by Xcel Energy.
- 3) Exhibit C – Engineering Data Submittal – A standard form that provides the engineering and operating information about the Generation System.
- 4) Exhibit D – Operating Agreement – This provides specific operating information and requirements for this Generation System interconnection. This Exhibit has a separate signature section and may be modified, in writing, from time to time with the agreement of both parties.
- 5) Exhibit E – Maintenance Agreement – This provides specific maintenance requirements for this Generation System interconnection. This Exhibit has a separate signature section and may be modified, in writing, from time to time with the agreement of both parties.

VII. TERMS AND TERMINATION

- A) This Agreement shall become effective as of the date when both the Interconnection Customer and Xcel Energy have both signed this Agreement. The Agreement shall continue in full force and effect until the earliest date that one of the following events occurs:
 - 1) The Parties agree in writing to terminate the Agreement; or
 - 2) The Interconnection Customer may terminate this agreement at any time, by written notice to Xcel Energy, prior to the completion of the final acceptance testing of the Generation System by Xcel Energy. Once the Generation System is operational, then VII.A.3 applies. Upon receipt of a cancellation notice, Xcel Energy shall take reasonable steps to minimize additional costs to the Interconnection Customer, where reasonably possible.
 - 3) Once the Generation System is operational, the Interconnection Customer may terminate this agreement after 30 days written notice to Xcel Energy, unless otherwise agreed to within the Exhibit D, Operating Agreement; or

(Continued on Sheet No.10-119)

Date Filed: 11-02-05

By: Cynthia L. Leshner

Effective Date: 02-01-07

President and CEO of Northern States Power Company

Docket No. E002/GR-05-1428

Order Date: 09-01-06

S:\General-Offices-GO-01\PSF\RA\Rates\Current\Mn_elec\Me_10_118.doc

RECEIVED
JUN 02 2013
BY: _____

**DISTRIBUTED GENERATION STANDARD
INTERCONNECTION AND POWER PURCHASE TARIFF
(Continued)**

Section No. 10
1st Revised Sheet No. 119

APPENDIX E: Interconnection Agreement (Continued)

VII. TERMS AND TERMINATION

- 4) Xcel Energy may terminate this agreement after 30 days written notice to the Interconnection Customer if:
- a) The Interconnection Customer fails to interconnect and operate the Generation System per the terms of this Agreement; or
 - b) The Interconnection Customer fails to take all corrective actions specified in Xcel Energy's written notice that the Generation System is out of compliance with the terms of this Agreement, within the time frame set forth in such notice, or
 - c) If the Interconnection Customer fails to complete Xcel Energy's final acceptance testing of the generation system within 24 months of the date proposed under section III.A.6.
- B) Upon termination of this Agreement the Generation System shall be disconnected from Xcel Energy. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing, at the time of the termination.

T

VIII. OPERATIONAL ISSUES

Each Party will, at its own cost and expense, operate, maintain, repair and inspect, and shall be fully responsible for, the facilities that it now or hereafter may own, unless otherwise specified.

- A) Technical Standards: The Generation System shall be installed and operated by the Interconnection Customer consistent with the requirements of this Agreement; the Technical Requirements; the applicable requirements located in the National Electrical Code (NEC); the applicable standards published by the American National Standards Institute (ANSI) and the Institute of Electrical and Electronic Engineers (IEEE); and local building and other applicable ordinances in effect at the time of the installation of the Generation System.
- B) Right of Access: At all times, Xcel Energy's personnel shall have access to the disconnect switch of the Generation System for any reasonable purpose in connection with the performance of the obligations imposed on it by this Agreement, to meet its obligation to operate the electric power system safely and to provide service to its customers. If necessary for the purposes of this Agreement, the Interconnection Customer shall allow Xcel Energy access to Xcel Energy's equipment and facilities located on the premises.

(Continued on Sheet No. 10-120)

Date Filed: 11-03-10 By: Judy M. Pofert Effective Date: 09-01-12
President and CEO of Northern States Power Company, a Minnesota corporation
Docket No. E002/GR-10-971 Order Date: 05-14-12

S:\General-Offices-GO-01\PSF\RA\Rates\Current\Wm_elec\Me_10_119_r01.doc



Northern States Power Company, a Minnesota corporation
and wholly owned subsidiary of Xcel Energy Inc.
Minneapolis, Minnesota 55401

MINNESOTA ELECTRIC RATE BOOK - MPUC NO. 2

DISTRIBUTED GENERATION STANDARD

INTERCONNECTION AND POWER PURCHASE TARIFF (Continued)

Section No. 10
Original Sheet No. 120

APPENDIX E: Interconnection Agreement (Continued)

VIII. OPERATIONAL ISSUES (Continued)

- C) Electric Service Supplied: will supply the electrical requirements of the Local EPS that are not supplied by the Generation System. Such electric service shall be supplied, to the Interconnection Customer's Local EPS, under the rate schedules applicable to the Customer's class of service as revised from time to time by Xcel Energy.
- D) Operation and Maintenance: The Generation System shall be operated and maintained, by the Interconnection Customer in accordance with the Technical Standards and any additional requirements of Exhibit D and Exhibit E, attached to this document, as amended, in writing, from time to time.
- E) Cooperation and Coordination: Both Xcel Energy and the Interconnection Customer shall communicate and coordinate their operations, so that the normal operation of the electric power system does not unduly effect or interfere with the normal operation of the Generation System and the Generation System does not unduly effect or interfere with the normal operation of the electric power system. Under abnormal operations of either the Generation System or the Xcel Energy system, the responsible Party shall provide reasonably timely communication to the other Party to allow mitigation of any potentially negative effects of the abnormal operation of their system.
- F) Disconnection of Unit: Xcel Energy may disconnect the Generation System as reasonably necessary, for termination of this Agreement; non-compliance with this Agreement; system emergency, imminent danger to the public or Xcel Energy personnel; routine maintenance, repairs and modifications to the electric power system. When reasonably possible, Xcel Energy shall provide prior notice to the Interconnection Customer explaining the reason for the disconnection. If prior notice is not reasonably possible, Xcel Energy shall after the fact, provide information to the Interconnection Customer as to why the disconnection was required. It is agreed that Xcel Energy shall have no liability for any loss of sales or other damages, including all consequential damages for the loss of business opportunity, profits or other losses, regardless of whether such damages were foreseeable, for the disconnection of the Generation System per this Agreement. Xcel Energy shall expend reasonable effort to reconnect the Generation System in a timely manner and to work towards mitigating damages and losses to the Interconnection Customer where reasonably possible.
- G) Modifications to the Generation System: When reasonably possible the Interconnection Customer shall notify Xcel Energy, in writing, of plans for any modifications to the Generation System interconnection equipment, including all information needed by Xcel Energy as part of the review described in this paragraph, at least twenty (20) business days prior to undertaking such modification(s). Modifications to any of the interconnection equipment, including, all interconnection required protective systems, the generation control systems, the transfer switches/breakers, interconnection protection VT's & CT's, and Generation System capacity, shall be included in the notification to Xcel Energy. When reasonably possible the

(Continued on Sheet No. 10-121)

Date Filed: 11-02-05

By: Cynthia L. Leshner

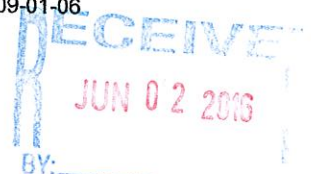
Effective Date: 02-01-07

President and CEO of Northern States Power Company

Docket No. E002/GR-05-1428

Order Date: 09-01-06

S:\General-Offices-GO-01\PSF\RA\Rates\Current\Mn_elec\Me_10_120.doc



Northern States Power Company, a Minnesota corporation
and wholly owned subsidiary of Xcel Energy Inc.
Minneapolis, Minnesota 55401

MINNESOTA ELECTRIC RATE BOOK - MPUC NO. 2

**DISTRIBUTED GENERATION STANDARD
INTERCONNECTION AND POWER PURCHASE TARIFF (Continued)**

Section No. 10
Original Sheet No. 121

APPENDIX E: Interconnection Agreement (Continued)

VIII. OPERATIONAL ISSUES (Continued)

Interconnection Customer agrees not to commence installation of any modifications to the Generating System until Xcel Energy has approved the modification, in writing, which approval shall not be unreasonably withheld. Xcel Energy shall have a minimum of five (5) business days to review and respond to the planned modification. Xcel Energy shall not take longer than a maximum of ten (10) business days, to review and respond to the modification after the receipt of the information required to review the modifications. When it is not reasonably possible for the Interconnection Customer to provide prior written notice, the Interconnection Customer shall provide written notice to Xcel Energy as soon as reasonably possible, after the completion of the modification(s).

- H) Permits and Approvals: The Interconnection Customer shall obtain all environmental and other permits lawfully required by governmental authorities prior to the construction of the Generation System. The Interconnection Customer shall also maintain these applicable permits and compliance with these permits during the term of this Agreement.

IX. LIMITATION OF LIABILITY

- A) Each Party shall at all times indemnify, defend, and save the other Party harmless from any and all damages, losses, claims, including claims and actions relating to injury or death of any person or damage to property, costs and expenses, reasonable attorneys' fees and court costs, arising out of or resulting from the Party's performance of its obligations under this agreement, except to the extent that such damages, losses or claims were caused by the negligence or intentional acts of the other Party.
- B) Each Party's liability to the other Party for failure to perform its obligations under this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any punitive, incidental, indirect, special, or consequential damages of any kind whatsoever, including for loss of business opportunity or profits, regardless of whether such damages were foreseen.
- C) Notwithstanding any other provision in this Agreement, with respect to Xcel Energy's provision of electric service to any customer including the Interconnection Customer, the Xcel Energy's liability to such customer shall be limited as set forth in Xcel Energy's tariffs and terms and conditions for electric service, and shall not be affected by the terms of this Agreement.

X. DISPUTE RESOLUTION

- A) Each Party agrees to attempt to resolve all disputes arising hereunder promptly, equitably and in a good faith manner.

(Continued on Sheet No. 10-122)

Date Filed: 11-02-05

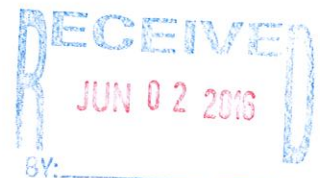
By: Cynthia L. Leshner
President and CEO of Northern States Power Company

Effective Date: 02-01-07

Docket No. E002/GR-05-1428

Order Date: 09-01-06

S:\General-Offices-GO-01\PSF\RA\Rates\Current\Mn_elec\Me_10_121.doc



Northern States Power Company, a Minnesota corporation
and wholly owned subsidiary of Xcel Energy Inc.
Minneapolis, Minnesota 55401

MINNESOTA ELECTRIC RATE BOOK - MPUC NO. 2

**DISTRIBUTED GENERATION STANDARD
INTERCONNECTION AND POWER PURCHASE TARIFF (Continued)**

Section No. 10
Original Sheet No. 122

APPENDIX E: Interconnection Agreement (Continued)

X. DISPUTE RESOLUTION (Continued)

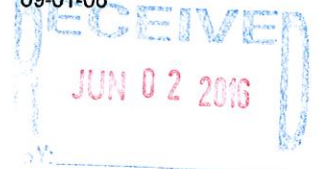
- B) In the event a dispute arises under this Agreement, and if it cannot be resolved by the Parties within thirty (30) days after written notice of the dispute to the other Party, the Parties agree to submit the dispute to mediation by a mutually acceptable mediator, in a mutually convenient location in the State of Minnesota. The Parties agree to participate in good faith in the mediation for a period of 90 days. If the parties are not successful in resolving their disputes through mediation, then the Parties may refer the dispute for resolution to the Minnesota Public Utilities Commission (MPUC), which shall maintain continuing jurisdiction over this Agreement.

XI. INSURANCE

- A) At a minimum, In connection with the Interconnection Customer's performance of its duties and obligations under this Agreement, the Interconnection Customer shall maintain, during the term of the Agreement, general liability insurance, from a qualified insurance agency with a B+ or better rating by "Best" and with a combined single limit of not less than:
- 1) Two million dollars (\$2,000,000) for each occurrence, if the Gross Nameplate Rating of the Generation System is greater than 250kW.
 - 2) One million dollars (\$1,000,000) for each occurrence if the Gross Nameplate Rating of the Generation System is between 40kW and 250kW.
 - 3) Three hundred thousand (\$300,000) for each occurrence if the Gross Nameplate Rating of the Generation System is less than 40kW.
 - 4) Such general liability insurance shall include coverage against claims for damages resulting from (i) bodily injury, including wrongful death; and (ii) property damage arising out of the Interconnection Customer's ownership and/or operating of the Generation System under this agreement.
- B) The general liability insurance required shall, by endorsement to the policy or policies, (a) include Xcel Energy as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that Xcel Energy shall not by reason of its inclusion as an additional insured incur liability to the insurance carrier for the payment of premium for such insurance; and (d) provide for thirty (30) calendar days' written notice to Xcel Energy prior to cancellation, termination, alteration, or material change of such insurance.

(Continued on Sheet No. 10-123)

Date Filed: 11-02-05 By: Cynthia L. Leshner Effective Date: 02-01-07
President and CEO of Northern States Power Company
Docket No. E002/GR-05-1428 Order Date: 09-01-06
S:\General-Offices-GO-01\PSF\RA\Rates\Current\Mn_elecMe_10_122.doc



Northern States Power Company, a Minnesota corporation
and wholly owned subsidiary of Xcel Energy Inc.
Minneapolis, Minnesota 55401

MINNESOTA ELECTRIC RATE BOOK - MPUC NO. 2

**DISTRIBUTED GENERATION STANDARD
INTERCONNECTION AND POWER PURCHASE TARIFF (Continued)**

Section No. 10
Original Sheet No. 123

APPENDIX E: Interconnection Agreement (Continued)

XI. INSURANCE (Continued)

- C) If the Generation System is connected to an account receiving residential service from Xcel Energy and its total generating capacity is smaller than 40kW, then the endorsements required in Section XI.B shall not apply.
- D) The Interconnection Customer shall furnish the required insurance certificates and endorsements to Xcel Energy prior to the initial operation of the Generation System. Thereafter, Xcel Energy shall have the right to periodically inspect or obtain a copy of the original policy or policies of insurance
- E) Evidence of the insurance required in Section XI.A. shall state that coverage provided is primary and is not excess to or contributing with any insurance or self-insurance maintained by Xcel Energy.
- F) If the Interconnection Customer is self-insured with an established record of self-insurance, the Interconnection Customer may comply with the following in lieu of Section XI.A – E:
 - 1) Interconnection Customer shall provide to Xcel Energy, at least thirty (30) days prior to the date of initial operation, evidence of an acceptable plan to self-insure to a level of coverage equivalent to that required under section XI.A.
 - 2) If Interconnection Customer ceases to self-insure to the level required hereunder, or if the Interconnection Customer is unable to provide continuing evidence of its ability to self-insure, the Interconnection Customer agrees to immediately obtain the coverage required under Section XI.A.
- G) Failure of the Interconnection Customer or Xcel Energy to enforce the minimum levels of insurance does not relieve the Interconnection Customer from maintaining such levels of insurance or relieve the Interconnection Customer of any liability.
- H) All insurance certificates, statements of self-insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued and submitted to the Generation Interconnection Coordinator assigned.

XII. MISCELLANEOUS

A) FORCE MAJEURE

- 1) An event of Force Majeure means any act of God, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any curtailment, order,

(Continued on Sheet No. 10-124)

Date Filed: 11-02-05

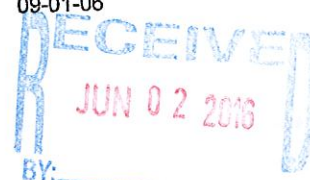
By: Cynthia L. Leshner
President and CEO of Northern States Power Company

Effective Date: 02-01-07

Docket No. E002/GR-05-1428

Order Date: 09-01-06

S:\General-Offices-GO-01\PSF\RA\Rates\Current\Mn_elec\Me_10_123.doc



Northern States Power Company, a Minnesota corporation
and wholly owned subsidiary of Xcel Energy Inc.
Minneapolis, Minnesota 55401

MINNESOTA ELECTRIC RATE BOOK - MPUC NO. 2

**DISTRIBUTED GENERATION STANDARD
INTERCONNECTION AND POWER PURCHASE TARIFF (Continued)**

Section No. 10
Original Sheet No. 124

APPENDIX E: Interconnection Agreement (Continued)

XII. MISCELLANEOUS (Continued)

regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. An event of Force Majeure does not include an act of negligence or intentional wrongdoing. Neither Party will be considered in default as to any obligation hereunder if such Party is prevented from fulfilling the obligation due to an event of Force Majeure. However, a Party whose performance under this Agreement is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations hereunder.

- 2) Neither Party will be considered in default of any obligation hereunder if such Party is prevented from fulfilling the obligation due to an event of Force Majeure. However, a Party whose performance under this Agreement is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations hereunder.

B) NOTICES

- 1) Any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person or sent by first class mail, postage prepaid, to the person specified below:

- a) Generation Interconnection Coordinator assigned Solar*Rewards Community, Attn: Kevin Cray
1800 Larimer Street, Suite 1500
Denver, CO 80202
SRCMN@xcelenergy.com
- b) If to Interconnection Customer: Novel Energy Solutions, Attn: Mena Kaehler
23913 County Road 39
St. Charles, MN 55972
info@NovelEnergy.biz

- 2) A Party may change its address for notices at any time by providing the other Party written notice of the change, in accordance with this Section.
- 3) The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party's notice to the other Party.

(Continued on Sheet No. 10-125)

Date Filed: 11-02-05

By: Cynthia L. Leshner

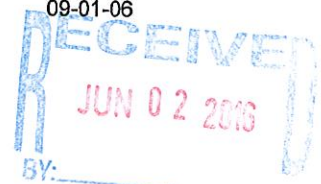
Effective Date: 02-01-07

President and CEO of Northern States Power Company

Docket No. E002/GR-05-1428

Order Date: 09-01-06

S:\General-Offices-GO-01\PSFRA\Rates\Current\Mn_elecMe_10_124.doc



Northern States Power Company, a Minnesota corporation
and wholly owned subsidiary of Xcel Energy Inc.
Minneapolis, Minnesota 55401

MINNESOTA ELECTRIC RATE BOOK - MPUC NO. 2

**DISTRIBUTED GENERATION STANDARD
INTERCONNECTION AND POWER PURCHASE TARIFF (Continued)**

Section No. 10
Original Sheet No. 125

APPENDIX E: Interconnection Agreement (Continued)

C) ASSIGNMENT

The Interconnection Customer shall not assign its rights nor delegate its duties under this Agreement without Xcel Energy's written consent. Any assignment or delegation the Interconnection Customer makes without Xcel Energy's written consent shall not be valid. Xcel Energy shall not unreasonably withhold its consent to the Generating Entities assignment of this Agreement.

D) NON-WAIVER

None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

E) GOVERNING LAW AND INCLUSION OF XCEL ENERGY'S TARIFFS AND RULES.

- 1) This Agreement shall be interpreted, governed and construed under the laws of the State of Minnesota as if executed and to be performed wholly within the State of Minnesota without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.
- 2) The interconnection and services provided under this Agreement shall at all times be subject to the terms and conditions set forth in the tariff schedules and rules applicable to the electric service provided by Xcel Energy, which tariff schedules and rules are hereby incorporated into this Agreement by this reference.
- 3) Notwithstanding any other provisions of this Agreement, Xcel Energy shall have the right to unilaterally file with the MPUC, pursuant to the MPUC's rules and regulations, an application for change in rates, charges, classification, service, tariff or rule or any agreement relating thereto.

F) AMENDMENT AND MODIFICATION

This Agreement can only be amended or modified by a writing signed by both Parties.

G) ENTIRE AGREEMENT

This Agreement, including all attachments, exhibits, and appendices, constitutes the entire Agreement between the Parties with regard to the interconnection of the Generation System of the Parties at the Point(s) of Common Coupling expressly provided for in this Agreement and supersedes all prior agreements.

(Continued on Sheet No. 10-126)

Date Filed: 11-02-05

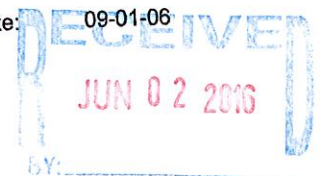
By: Cynthia L. Leshner
President and CEO of Northern States Power Company

Effective Date: 02-01-07

Docket No. E002/GR-05-1428

Order Date: 09-01-06

S:\General-Offices-GO-01\PSF\RA\Rates\Current\Mn_elec\Me_10_125.doc



Northern States Power Company, a Minnesota corporation
and wholly owned subsidiary of Xcel Energy Inc.
Minneapolis, Minnesota 55401

MINNESOTA ELECTRIC RATE BOOK - MPUC NO. 2

**DISTRIBUTED GENERATION STANDARD
INTERCONNECTION AND POWER PURCHASE TARIFF (Continued)**

Section No. 10
Original Sheet No. 126

APPENDIX E: Interconnection Agreement (Continued)

G) ENTIRE AGREEMENT (Continued)

or understandings, whether verbal or written. It is expressly acknowledged that the Parties may have other agreements covering other services not expressly provided for herein, which agreements are unaffected by this Agreement. Each party also represents that in entering into this Agreement, it has not relied on the promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the incorporated attachments, exhibits and appendices.

H) CONFIDENTIAL INFORMATION

Except as otherwise agreed or provided herein, each Party shall hold in confidence and shall not disclose confidential information, to any person (except employees, officers, representatives and agents, who agree to be bound by this section). Confidential information shall be clearly marked as such on each page or otherwise affirmatively identified. If a court, government agency or entity with the right, power, and authority to do so, requests or requires either Party, by subpoena, oral disposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Party with prompt notice of such request(s) or requirements(s) so that the other Party may seek an appropriate protective order or waive compliance with the terms of this Agreement. In the absence of a protective order or waiver the Party shall disclose such confidential information which, in the opinion of its counsel, the party is legally compelled to disclose. Each Party will use reasonable efforts to obtain reliable assurance that confidential treatment will be accorded any confidential information so furnished.

I) NON-WARRANTY

Neither by inspection, if any, or non-rejection, nor in any other way, does Xcel Energy give any warranty, expressed or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, installed or maintained by the Interconnection Customer or leased by the Interconnection Customer from third parties, including without limitation the Generation System and any structures, equipment, wires, appliances or devices appurtenant thereto.

J) NO PARTNERSHIP

This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

(Continued on Sheet No. 10-127)

Date Filed: 11-02-05

By: Cynthia L. Leshar

Effective Date: 02-01-07

President and CEO of Northern States Power Company

Docket No. E002/GR-05-1428

Order Date: 09-01-06

S:\General-Offices-GO-01\PSFRA\Rates\Current\Mn_efecMe_10_126.doc

RECEIVED
JUN 02 2013

Northern States Power Company, a Minnesota corporation
and wholly owned subsidiary of Xcel Energy Inc.
Minneapolis, Minnesota 55401

MINNESOTA ELECTRIC RATE BOOK - MPUC NO. 2

**DISTRIBUTED GENERATION STANDARD
INTERCONNECTION AND POWER PURCHASE TARIFF (Continued)**

Section No. 10
Original Sheet No. 127

APPENDIX E: Interconnection Agreement (Continued)

XIII. SIGNATURES

IN WITNESS WHEREOF, the Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives. This Agreement is effective as of the last date set forth below.

Interconnection Customer

By: Mena Kaehler

Name: Mena Kaehler

Title: Mother of the Groom

Date: 10-30-15

Xcel Energy

By: Joel Limoges

Name: Joel Limoges

Title: Manager, Area Engineering

Date: 2/11/16

(Continued on Sheet No. 10-128)

Date Filed: 11-02-05

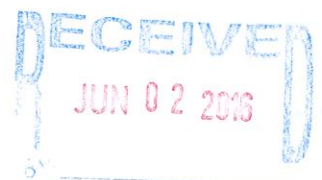
By: Cynthia L. Leshner
President and CEO of Northern States Power Company

Effective Date: 02-01-07

Docket No. E002/GR-05-1428

Order Date: 09-01-06

S:\General-Offices-GO-01\PSF\RA\Rates\Current\Mn_elec\Me_10_127.doc



Vetter CSGs – Le Sueur County

Community Solar Garden (CSG)



6/13/2016

www.novelenergy.biz

Community Solar Garden (CSG)

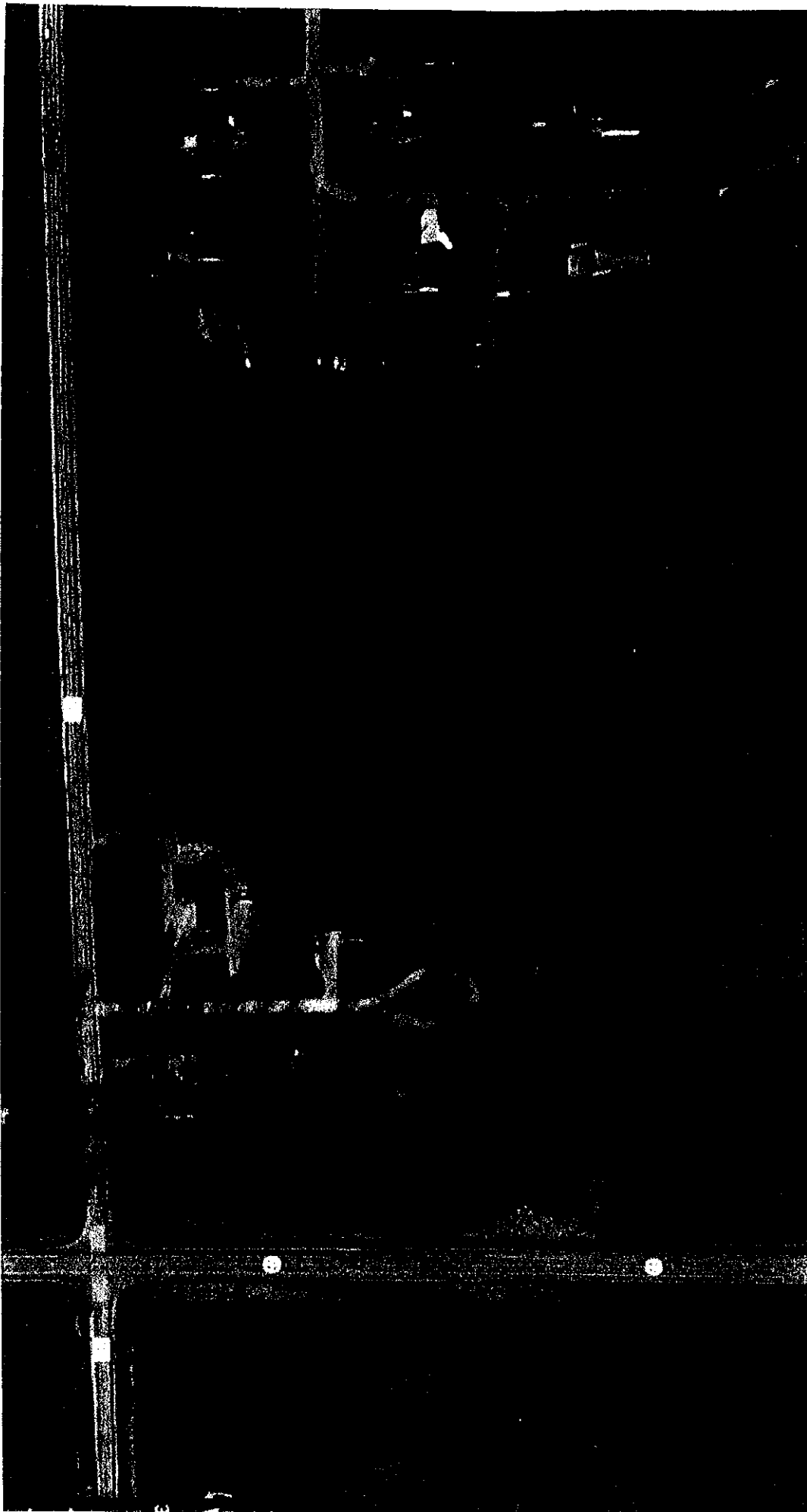
- Centrally located solar array
- Authorized in 2013, project applications accepted in December, 2014
- Designed to make solar energy accessible to more people
- Xcel Energy service area only
- Xcel Energy customers can subscribe for a portion of the system production
- Subscribers can be residential, commercial, non-profit, or government
- Vetter CSGs - Subscribers must be in Le Sueur County or contiguous county (Scott, Rice, Sibley, Nicollet, Blue Earth, Waseca)
- No individual subscriber can subscribe for more than 40% of total system production
- 1 megawatt size limit per CSG, but 5 – 1 megawatt sized projects can be co-located – site limited to 800kW due to substation capacity
- Keeps electric \$ local to support the local economy

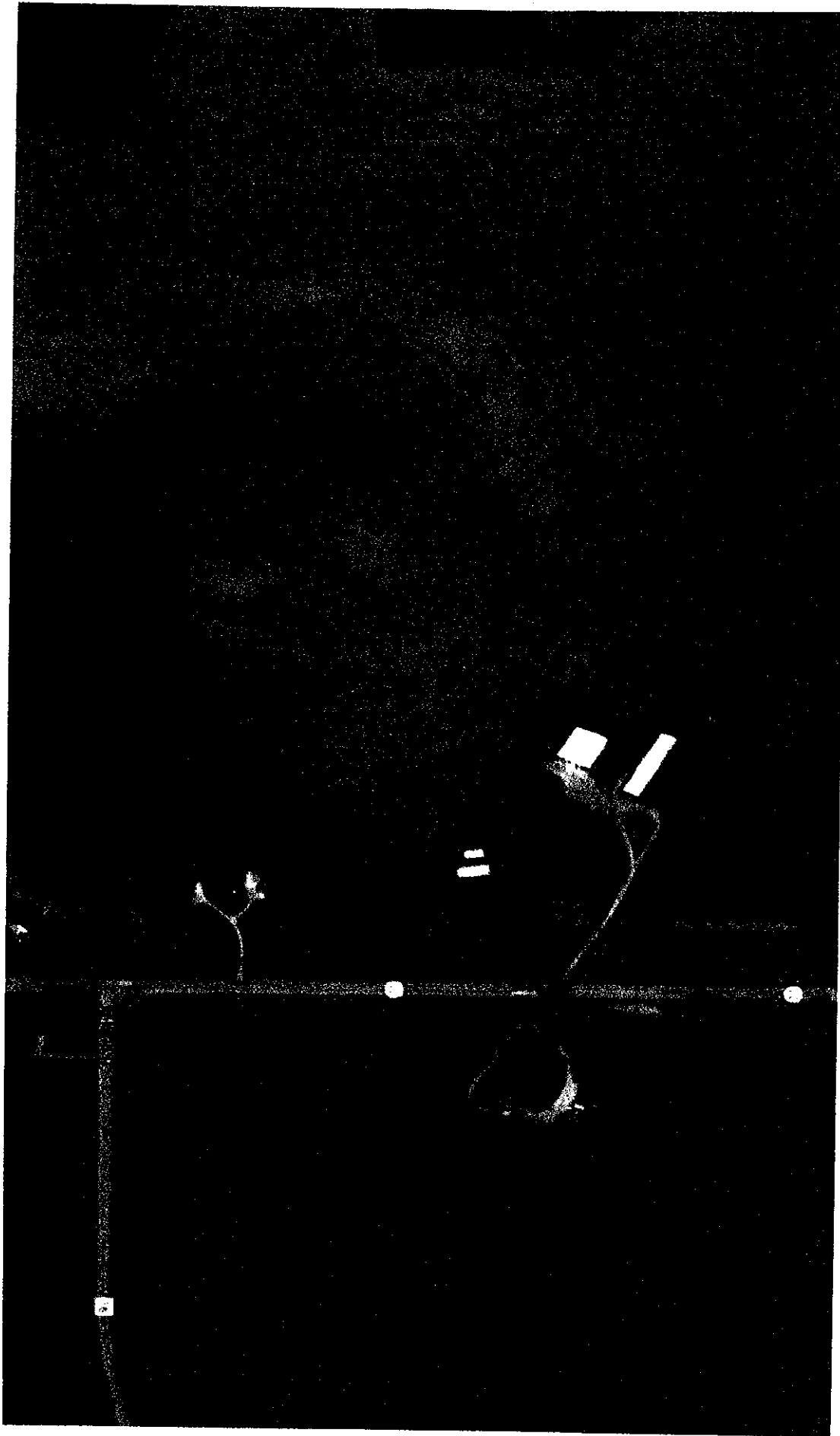
☐ Minnesota is one of only a hand full states allowing community solar gardens

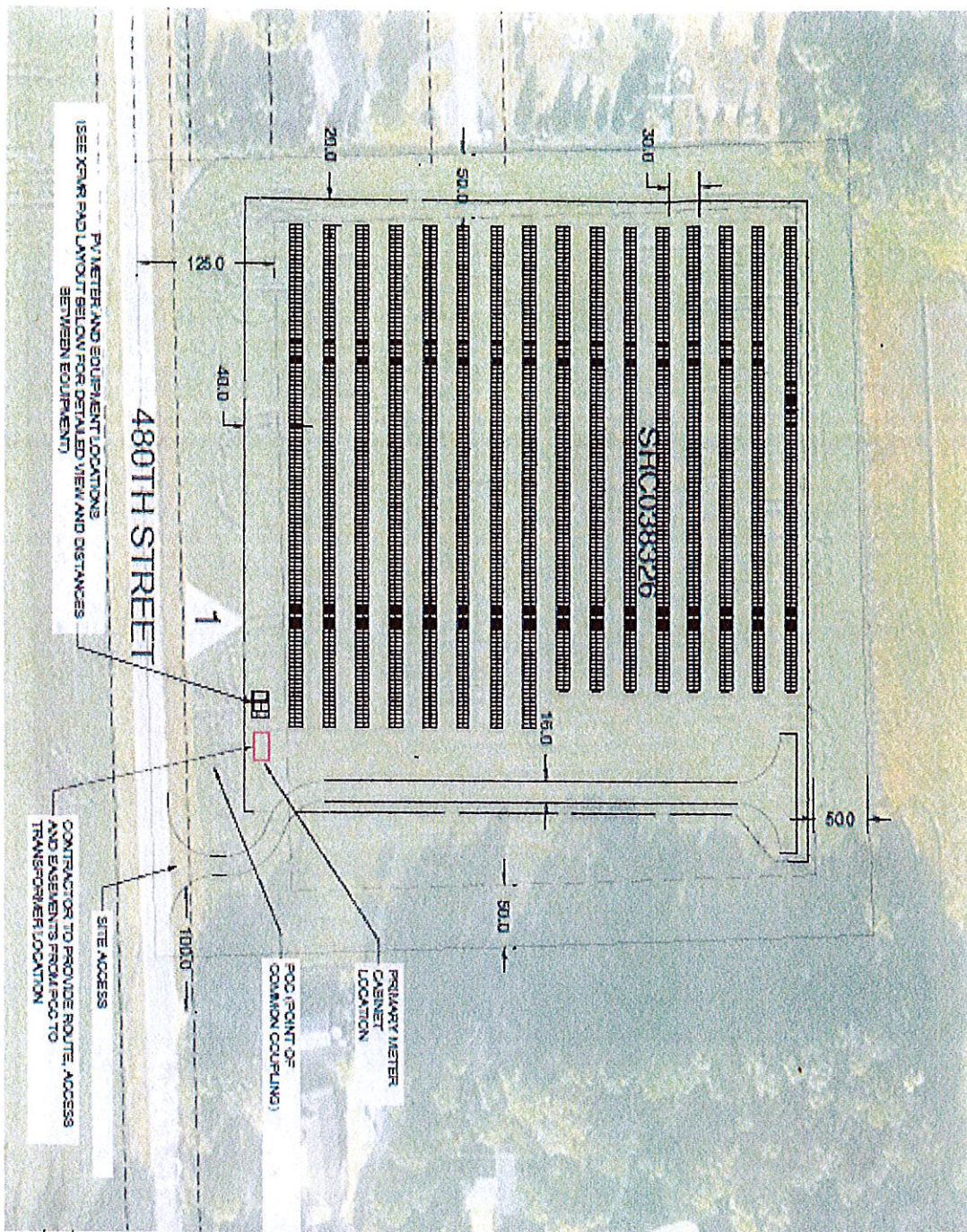
Vetter CSGs

- Project sites on 480th just west of Hwy 22, and off Hwy 22 by existing hog barns
- 1 megawatt at 480th, and 2 megawatts at the hog barns to be installed
- Ideal sites due to proximity to grid interconnection and flat land
- 3 megawatts will produce enough electricity for over 500 homes each year
- Panels and hardware attached to posts pounded or screwed into the ground – removed at end of useful life - no impact on underlying land
- Panels have 25 year warranties, with life expectancy in excess of 35 years
- Production agreement with Xcel Energy is for 25 years
- Fencing and other buffers minimize impact on neighboring properties
- Non-reflective panels prevent glare concerns
- Operational in fall, 2016 or spring, 2017

☐ 3MW solar will save subscribers millions of dollars over life of the system.







SYSTEM SIZE
1 MW AC / 1.188 MW DC

PROJECT NUMBER
E-101-01

NOT FOR CONSTRUCTION

DATE	12/15/15
BY	100
REVISION	1
DESCRIPTION	1
DATE	12/15/15

PROFESSIONAL CERTIFICATION

PRELIMINARY

PV SITE LAYOUT

LOCATION

480TH STREET

RASOTIA, MN

LE SUEUR COUNTY

PROJECT

480TH STREET

RASOTIA, MN

LE SUEUR COUNTY

PROJECT

480TH STREET

RASOTIA, MN

LE SUEUR COUNTY

PROJECT

480TH STREET

RASOTIA, MN

LE SUEUR COUNTY

PROJECT

480TH STREET

RASOTIA, MN

LE SUEUR COUNTY

PROJECT

480TH STREET

RASOTIA, MN

LE SUEUR COUNTY

PROJECT

480TH STREET

RASOTIA, MN

LE SUEUR COUNTY

PROJECT

480TH STREET

RASOTIA, MN

LE SUEUR COUNTY

PROJECT

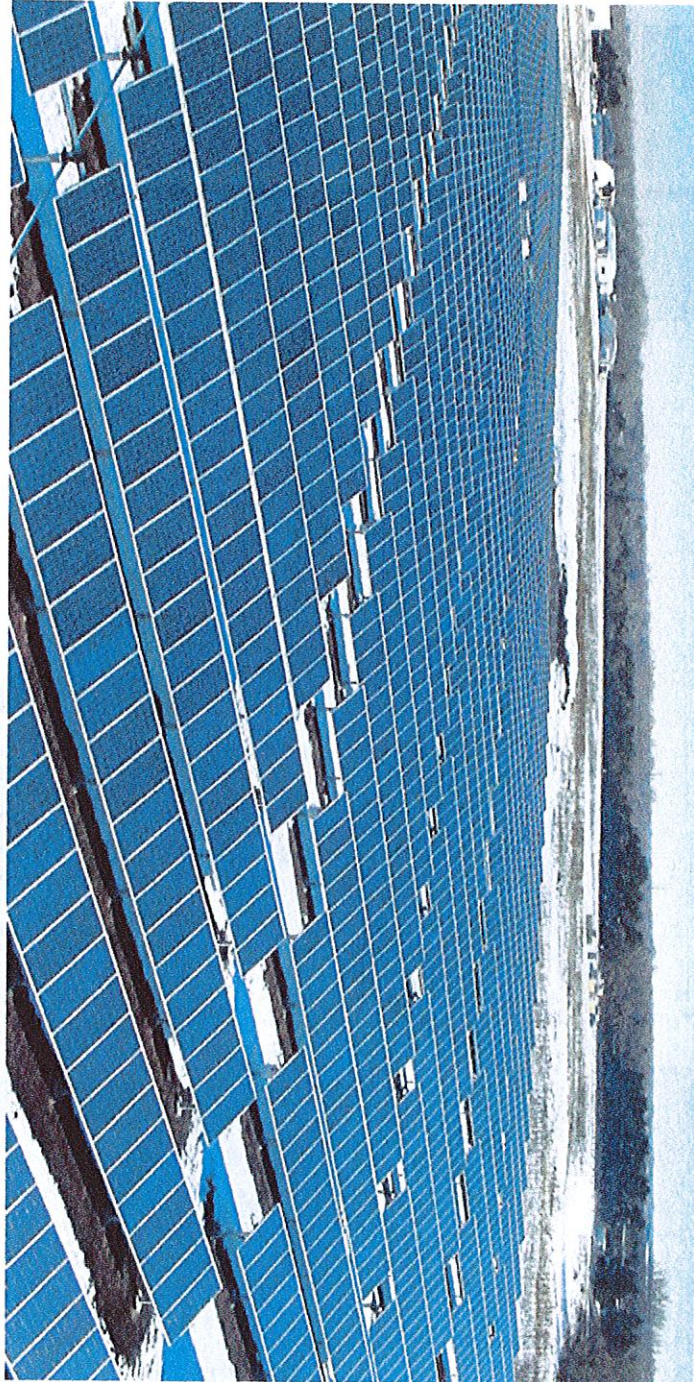
480TH STREET

RASOTIA, MN

LE SUEUR COUNTY

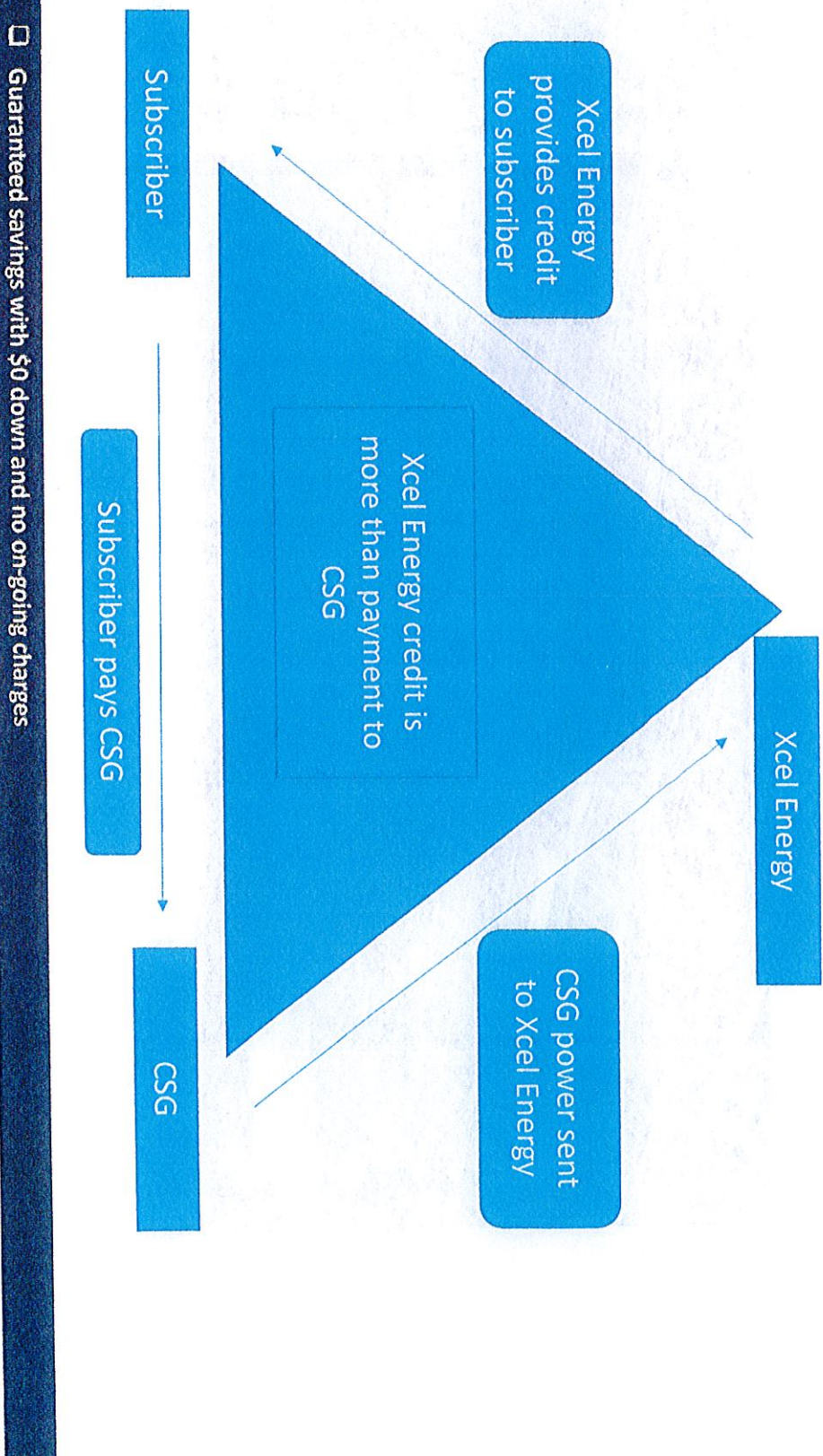


CSG Photo



☐ Sample CSG photo

CSG Transaction Flow



Zoning

- Le Sueur County Conditional Use Permit per County Ordinance
- Interconnected to existing power lines on 480th and on Hwy 22
- 6' safety fence around entire array
- 10' maximum height
- Due south orientation
- No moving parts, no noise, similar reflectivity as water
- Best practices during construction and low growth planting underneath enhances storm water quality
- Work with township, county, and neighbors on appropriate buffer
- System monitored remotely
- Lifetime operation and maintenance

☐ Community solar gardens make good neighbors

Novel Energy Solutions

- Minnesota owned and operated company
- Provide complete energy management services
- Experience with hundreds of solar installations
- Specialize in agriculture, commercial, community solar gardens, and rural Minnesota solar efforts
- Minnesota based company helping build local Minnesota economies through electric savings

☐ NES is proud to serve the people of Minnesota