AGENDA
SHAKOPEE PUBLIC UTILITIES COMMISSION
REGULAR MEETING
March 21, 2022
at 5:00 PM

To watch this meeting live click or copy the link: https://tinyurl.com/SPU-YouTube-Live

1. **Call to Order** at 5:00pm in the SPU Service Center, 255 Sarazin Street
   1a) Roll Call

2. **Communications**

3. **Consent Agenda**
   C=> 3a) Approval of March 7, 2022 Minutes (GD)
   C=> 3b) Approval of March 21, 2022 Agenda (KM)
   C=> 3c) March 4, 2022 Warrant List
   Account Credit Request/Deposit Refunds (KW)
   C=> 3d) March 21, 2022 Warrant List (KW)
   C=> 3e) Monthly Dashboard as of February 2022 (LS)
   C=> 3f) Preliminary December 2021 and Preliminary January 2022 Financials (KW)
   C=> 3g) Tank 8 In Service – Advisory (LS)
   C=> 3h) Res#2022-08 Resolution Approving Shakopee Public Utilities Commission's Governing the Interconnection of Cogeneration & Small Power Production Facilities (JA)
   C=> 3i) Res#2022-09 Resolution Approving Shakopee Public Utilities Commission's Cogeneration and Small Power Tariff (JA)
   C=> 3j) City Project No. 21-001 Maras Street, 12th Avenue, Hanson Avenue (JA)
   C=> 3k) DR Horton Exchange Agreement and Completion of Closing Under Exchange Agreement (JA)

4. **Liaison Report** (JB)

5. **Public Comment Period.** The public comment period provides an opportunity for the public to address the Commission on items that are not on the agenda. Comments should **not** exceed five minutes. The SPU President may adjust that time limit based upon the number of persons seeking to comment. This comment period may not be used to make personal attacks, to air personality grievances, or for political endorsements or campaigns. The public comments are intended for informational purposes only; Commissioners will not enter into a dialogue with commenters, and questions from Commissioners will be for clarification only.

6. **General Manager Report**
   6a) General Manager Report – Verbal (GD)

7. **Reports: Water Items**
   7a) Water System Operations Report – Verbal (LS)
   7b) Backflow Prevention and Cross-Connection Policy Presentation and Adoption (LS)

8. **Reports: Electric Items**
   8a) Electric System Operations Report – Verbal (BC)
   8b) West Shakopee Substation 15kV Switchgear and Control Building Bid Award (JA)

9. **Reports: Human Resources**

10. **Reports: General**
   10a) Marketing/Customer Service Report – Verbal (SW)
   10b) IT Project Update (JK)

11. **Items for Future Agendas**

12. **Tentative Dates for Upcoming Meetings****
   - March 29, 2022 - Joint Meeting w/City at City Hall
   - April 4, 2022
   - April 18, 2022
   - May 2, 2022
   - May 16, 2022

13. **Adjournment**

MINUTES OF THE
SHAKOPEE PUBLIC UTILITIES COMMISSION
March 7, 2022
Regular Meeting

1. Call to Order. President Mocol called the March 7, 2022 meeting of the Shakopee Public Utilities Commission to order at 5:00 PM. President Mocol, Vice President Fox, Commissioner Brennan, Commissioner Krieg, and Commissioner Letourneau were present.

2. Communications. Vice President Fox noted that he was asked about electric vehicle rates.

3. Approval of Consent Agenda. Vice President Fox moved approval of the Consent Agenda: (a) February 22, 2022 Minutes; (b) March 7, 2022 Agenda; (c) March 7, 2022 Warrant List, (d) MMPA February Meting Update; (e) Res#2022-07 Resolution Approving Payment for the Pipe Oversizing Cost on the Watermain Project: Whispering Waters 1st Addition. Commissioner Letourneau seconded the motion. Ayes: Mocol, Fox, Brennan, Krieg, and Letourneau. Nays: None. Motion carried.

4. Liaison Report. Commissioner Brennan reported that the City Council approved plans for the West End lift station project, as well as the Southern Shakopee Alternative Urban Areawide Review.

5. Public Comment Period. No public comments were offered.

6. General Manager Report. Greg Drent, General Manager, provided an update on current SPU projects, including the revised Employee Handbook, which is being reviewed by Flaherty and Hood, West End development planning, the NISC agreement, and SPU's Remote Working Policy. He noted a recent phone call scam in which the caller pretended to be SPU staff seeking payment. Mr. Drent also noted that he is working with City Administrator Bill Reynolds to plan a joint meeting with the City Council; the Commission discussed March 29th as a potential date.

7. Water Report. Lon Schemel, Water Superintendent, reported that SPU is researching a lab to provide PFAS testing in September. He noted that he received samples for water aging from the USGS. Mr. Schemel reported that SPU started filling Tank #8.

8. Bid Results and Estimates for Well 23. Mr. Schemel stated that SPU opened sealed bids on February 28th and received three responses. Paul Herubin, Project Engineer, Sambatek, explained that the bid process allowed bidders to present options for all three methods of installing a well. Mr. Herubin stated that he investigated the past work of the apparent low bidder, Traut Companies, and was satisfied. He recommended awarding the contract to Traut Companies in the amount of $389,209. In response to a question from Commissioner Brennan, Mr. Adams clarified that although this well was not originally planned for 2022, due to increased growth, SPU

accelerated the timing of the project. Motion by Vice President Fox to award the contract for Well #23 to Traut Companies, in the amount of $389,209. Commissioner Krieg seconded the motion. Ayes: Mocol, Fox, Brennan, Krieg, and Letourneau. Nays: None. Motion carried.

9. City Project No. 21-001 Maras Street, 12th Avenue, Hanson Avenue. Joseph Adams, Director of Planning and Engineering, reported that the City opened bids on March 4, 2022 and is in the process of evaluating them. Although City staff stressed that it was premature to release the full responses at this time, Mr. Adams verified that the watermain portion of the responses fall within SPU's CIP budget. Vice President Fox moved to support the City in awarding bids for this project. Commissioner Krieg seconded the motion. Ayes: Mocol, Fox, Brennan, Krieg, and Letourneau. Nays: None. Motion carried.

10. Electric Report. Brad Carlson, Electrical Superintendent, reported that two outages occurred since the last Commission meeting. He also provided an update on current projects, including tree trimming, Windermere 5th Addition, Trademark, and 3-phase transformer at the Old Shakopee Mall. Mr. Carlson noted that SPU and MVEC held a joint meeting with about 25 representatives to discuss the transfer of service territory.

11. MMPA Wholesale Power Contract. Mr. Drent provided some background information of the 12-member municipal power agency and on SPU's existing wholesale contract with MMPA. He noted that MMPA is exploring 100% renewable energy sources and potential new projects, which may require bonding. Mr. Drent explained that these additional costs for MMPA will likely result in a requested extension of the wholesale power contract. No action is required at this time.

12. Customer Service/Marketing Update. Sharon Walsh, Director of Key Accounts/Marketing/ Special Projects, noted that she has made static clings for Energy Star appliances and is working with local retailers to display them. She reported on updates to the website and Facebook posts regarding Tank #8. Ms. Walsh explained that the phone scam pretending to be SPU staff has occurred several times in the last six months, and that she has created an informational post to clarify SPU practices and how customers can identify a genuine SPU call. She noted that SPU plans to schedule a blood drive that will be open to the public.

13. Smart Switch Program. Mr. Drent provided an overview of the Smart Switch Program, in which participating customers receive $12/year credit and SPU may cycle the home air conditioner for certain periods to manage the system peak demand. Mr. Drent explained that the annual costs of the program, including software, are $51,904 while the savings to SPU on its wholesale power costs are $29,343. He discussed incorporating action on the program into the 2023 CIP to allow sufficient notice to customers. Vice President Fox moved to discontinue the program in 2023 and asked staff to bring back recommendations on phase-out procedures. Commissioner Letourneau seconded the motion. Ayes: Mocol, Fox, Brennan, Krieg, and Letourneau. Nays: None. Motion carried.

14. Adjourn. Motion by Commissioner Letourneau, seconded by Vice President Fox, to adjourn to the Monday, March 21, 2022 meeting, Ayes: Mocol, Fox, Brennan, Krieg, and Letourneau. Nays: None. Motion carried.

Greg Drent, Commission Secretary

Proposed As Consent Item **3b**

AGENDA
SHAKOPEE PUBLIC UTILITIES COMMISSION
REGULAR MEETING
March 21, 2022
at 5:00 PM

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4. **Liaison Report** (JB)

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   - April 18, 2022
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   - May 16, 2022

13. **Adjournment**

SHAKOPEE PUBLIC UTILITIES COMMISSION

Warrant List
Account Credit Request/Deposit Refunds
March 4, 2022

By direction of the Shakopee Public Utilities Commission, the Secretary does hereby authorize the following warrants drawn upon the Treasury of Shakopee Public Utilities Commission:

AEIKENS, ADRIANNE & ALEXANDER	$42.44
ARBOR LANDING LLC	$10.48
ARLINGTON RIDGE APTS	$9.70
AVANA ADDISON	$60.28
BATHAM PROPERTIES LLC	$1.28
BLUE HOLDINGS LLC	$10.72
BMO HARRIS BANK	$628.02
BOURGEOIS, ABBEY	$25.25
BUESGENS, SARAH	$55.59
CLARK, MIKAYLA	$6.98
CLIFTON TOWNHOMES	$38.54
COUNTRY VILLAGE APARTMENTS	$44.43
CULHANE, DANIEL P	$9,785.11
DECO SHAKOPEE LLC	$2.61
DUONG, THI TUYET NHUNG	$125.37
GILLESPIE, CASEY	$20.57
GOBAH, PRINCESS	$54.69
GUTIERREZ, ISIDORO D	$766.43
HAJI, HABIBA	$13.56
HENDRICKSON, NICHOLAS W	$38.36
HENNEN, ELLEN	$15.94
HOLCOMB, ALICIA MARIE	$117.42
IVES-GRAEN, KIANNA	$53.68
KALLEVIG, PAMELA	$28.66
KRONAIZL, MICHAEL	$79.11
LATCHMAN, DARMINDRA & DEVI	$82.80
LIBERTY BRUSH MFG LLC	$565.32
LOPEZ, BIANCA	$1.29
LYNUM, DAVID	$73.29
MACHADO, LEONARDO	$30.85
MACZUGA, MICHELLE	$14.46
MCFARLANE, PATRICK & MARCY	$29.87
MITCHELL, ALICE M	$17.06
MOHAMED, FADUMO	$507.75
PURE AIR	$38.42
Q CARRIERS INC	$1,141.60
REVOLORIO BARRIENTOS, NORMAN J	$60.91
RODRIGUEZ SANCHEZ, GLENI MARIE	$25.32
UNG, PHUONG & MICHAEL	$46.89
VEIGEL, ANTHONY	$30.42
VICTOROVICH, PAVEL LYAKH	$8.04
WARPEHA, ADAM	$32.78
WEISS, TRAVIS & BECKY	$25.32
WESTON PONDS COURTHOMES	$130.60
ZILLOW HOMES INC	$104.80
ZILLOW INC	$87.99
	$15,091.00

Presented for approval by: Director of Finance & Administration

Approved by General Manager

Approved by Commission President

SHAKOPEE PUBLIC UTILITIES COMMISSION

WARRANT LISTING

March 21, 2022

By direction of the Shakopee Public Utilities Commission, the Secretary does hereby authorize the following warrants drawn upon the Treasury of Shakopee Public Utilities Commission:

American Messaging Services, LLC	$3,108.68
ABDO LLP	$23,492.50
ALTEC INDUSTRIES, INC	$2,630.48
AMARIL UNIFORM CO.	$2,709.87
AMERICAN NATL BANK_ACH MASTERCARD	$21,342.59
APPLE FORD OF SHAKOPEE	$183.05
APPLIANCE SERVICE & SALES CTR, INC.	$322.06
ARROW ACE HARDWARE	$32.83
B & B TRANSFORMER INC	$19,327.00
BERLIN PACKAGING LLC	$70.70
BERNDTSON, ROBERT	$181.35
BEST BUY FOR BUSINESS	$52.47
BOLTON & MENK, INC	$5,517.00
BRODEN, ANDREW	$500.00
CDW LLC	$407.90
CENTERPOINT ENERGY	$1,316.52
CITY OF SHAKOPEE	$5,700.95
CITY OF SHAKOPEE	$476,918.56
CITY OF SHAKOPEE	$249,000.00
CITY OF SHAKOPEE	$350.00
CITY OF SHAKOPEE	$1,031.08
COMCAST CABLE COMMUNICATIONS, INC.	$2.25
CUSTOMER CONTACT SERVICES	$367.18
DACAST INC.	$799.00
ECKHOFF, RODNEY	$500.00
FERGUSON US HOLDINGS, INC.	$5,602.79
FLAHERTY & HOOD, PA	$2,000.00
FRERICHS CONSTRUCTION	$250.00
FRONTIER ENERGY, INC.	$4,456.18
FURTHER	$403.50
GLYNN, MARTIN	$504.84
GOPHER STATE ONE-CALL	$234.90
HENNEN'S AUTO SERVICE, INC.	$99.30
HOTSY EQUIPMENT OF MINNESOTA	$844.50
HR SPECIALIST-EMPLOYMT LAW	$211.00
IMPACT MAILING OF MINNESOTA, INC.	$13,799.90
INTERSTATE POWER SYSTEMS INC	$2,254.15
JOHN GREGORY JOHNSON - KATAMA TECHNOLOGIES	$6,737.50
KELTGEN, JAMES	$3,219.84
KLEIN, BONNIE	$50.00
KRB DEVELOPMENT VIII LLC	$32,259.39
LARSON DATA COMMUNICATIONS	$12,198.23
LE, DAI	$50.00
LENNAR	$214.76
MACHT, JAMES	$175.00
MATHESON TRI-GAS, INC	$93.39
MCGRANN SHEA CARNIVAL	$13,822.50
MINN DEPT OF COMMERCE	$9,902.95
MINN VALLEY TESTING LABS INC	$577.00
MMPA c/o Avant Energy	$2,917,792.14
MMUA	$930.00
MN AWWA	$300.00
MN DEPT OF REVENUE ACH PAYMENTS	$245,921.00
MYERS, TONY	$456.04
NAPA AUTO PARTS	$10.73
NEVILLE, GERRY	$153.86
NICHOLS, WILLIAM	$150.00
NICKOLAY, CINDY	$151.52
NORTHERN STATES POWER CO.	$4,183.41
NPL CONSTRUCTION COMPANY	$9,600.00
PAYMENTUS CORPORATION	$27,732.65
PLUNKETT'S PEST CONTROL, INC.	$46.45
QUADIENT, INC.- FORMERLY NEOPOST	$1,465.00
RDO EQUIPMENT CO. - POWERPLAN	$175.02
ROTERT, JUSTIN	$250.00
RW Beck Group,Inc, Leidos Eng. LLC	$62,124.75
SADIG, HATIM	$350.00
SAMBATEK	$5,595.00
SCOTT COUNTY RECORDERS OFFICE	$46.00
SHAKOPEE POST OFFICE	$398.00
SHORT ELLIOTT HENDRICKSON INC	$13,682.00
SKOUG, MICHAEL	$179.99
SOLAR SHIELD, INC.	$407.00
SOUTHWEST NEWS MEDIA DBA DIV. OF RED	$394.68
SPUC-PETTY CASH	$400.00
STOCKER, JORDAN	$150.00
TRI-STATE BOBCAT INC.	$27.57
TRIPLETT, GREG	$136.31
TYCO FIRE & SECURITY (US) MGMT INC. (JOHNSON CON	$2,209.74
VERIZON WIRELESS	$1,823.57
VISION METERING, LLC	$640.00
WADE, JIM	$500.00
WERNER, PAUL	$500.00
WILLEMSSEN, KELLEY	$649.80
XCEL ENERGY	$2,615.58

SHAKOPEE PUBLIC UTILITIES COMMISSION

WARRANT LISTING

March 21, 2022

By direction of the Shakopee Public Utilities Commission, the Secretary does hereby authorize the following warrants drawn upon the Treasury of Shakopee Public Utilities Commission:

YESENKO, JOEL	$50.00
	$4,228,023.25

Kelly Willemssen

Presented for approval by: Director of Finance & Administration

Approved by General Manager

Approved by Commission President

SHAKOPEE PUBLIC UTILITIES COMMISSION

WARRANT LISTING

March 21, 2022

By direction of the Shakopee Public Utilities Commission, the Secretary does hereby authorize the following warrants drawn upon the Treasury of Shakopee Public Utilities Commission:

American Messaging Services, LLC	$3,108.68	Feb and March Answering service
ABDO LLP	$23,492.50	Software Consulting
ALTEC INDUSTRIES, INC	$2,630.48	Service repairs on 611 & Trailer connection receptacles
AMARIL UNIFORM CO.	$2,709.87	FR Clothing for Elec. Dept. employees
AMERICAN NATL BANK_ACH MASTERCARD	$21,342.59	Feb.credit card statement
APPLE FORD OF SHAKOPEE	$183.05	Water dept. oil change & check up
APPLIANCE SERVICE & SALES CTR. INC.	$322.06	filers for refridgerators
ARROW ACE HARDWARE	$32.83	Duct Seal,Comp Plug, screw& Concr Patch
B & B TRANSFORMER INC	$19,327.00	Single phase transformers
BERLIN PACKAGING LLC	$70.70	Case of 24 Clear Boston Round with 22-400
BERNDTSON, ROBERT	$70.70	Black Phenolic - Water dept.
BEST BUY FOR BUSINESS	$181.35	146 Miles reimb.
BOLTON & MENK, INC	$52.47	TV walmount
BRODEN, ANDREW	$5,517.00	WO#2568 SPU West End Lower Bluff Trunk
CDW LLC	$500.00	2022 Res. Cooling & Heating
CENTERPOINT ENERGY	$407.90	Microsoft office 365
CITY OF SHAKOPEE	$1,316.52	SPU bldg gas usage & 10th Ave.
CITY OF SHAKOPEE	$5,700.95	Feb. Fuel usage
CITY OF SHAKOPEE	$476,918.56	Feb. SW($364,359.31) & SD ($112,559.25)
CITY OF SHAKOPEE	$249,000.00	March PILOT Fee
CITY OF SHAKOPEE	$350.00	R.O.W. permits (several)
CITY OF SHAKOPEE	$1,031.08	March Storm drainage/SPU Properties
COMCAST CABLE COMMUNICATIONS, INC.	$2.25	Cable bill for lunchrooms
CUSTOMER CONTACT SERVICES	$367.18	Answering Service 3/8-4/4/22
DACAST INC.	$799.00	Annual Silver 3/7/22-3/7/23
ECKHOFF, RODNEY	$500.00	2022 Res. Cooling & Heating
FERGUSON US HOLDINGS, INC.	$5,602.79	New locator $953.59 and WO#2451 - Meter horns $4649.20
FLAHERTY & HOOD, PA	$2,000.00	Handbook review personnel policies
FRERICHS CONSTRUCTION	$250.00	Hydrant Meter taken out refund
FRONTIER ENERGY, INC.	$4,456.18	Prof. service thru 3/31/22 & P3 Subscription
FURTHER	$403.50	March Adm. Fees & Dependent reimb.
GLYNN, MARTIN	$504.84	Reimb. for School in Rochester
GOPHER STATE ONE-CALL	$234.90	Feb. Locates
HENNEN'S AUTO SERVICE, INC.	$99.30	Elec. Dept. oil change
HOTSY EQUIPMENT OF MINNESOTA	$844.50	car wash soap for wash bay
HR SPECIALIST-EMPLOYMT LAW	$211.00	Yearly HR Specialist Employment Law
IMPACT MAILING OF MINNESOTA, INC.	$13,799.90	Collection letters thru 2/28
INTERSTATE POWER SYSTEMS INC	$2,254.15	Worked on generator & Inspection
JOHN GREGORY JOHNSON - KATAMA TECHNOLOGIES	$6,737.50	WO#2472 AMI Phase 2 project
KELTGEN, JAMES	$3,219.64	Zoom acct. renewal reimb.
KLEIN, BONNIE	$50.00	2022 Res. Energy Star Appliance Rebate
KRB DEVELOPMENT VIII LLC	$32,259.39	WO#2476 -Wtr Main oversizing Whispering Waters 1
LARSON DATA COMMUNICATIONS	$12,198.23	WO#2259 Water dept. radio,surge protector
LE, DAI	$50.00	2022 Water Sense Toilet
LENNAR	$214.76	Refund of 4 temp service fees not used
MACHT, JAMES	$175.00	2022 Star Clothes Washer rebate
MATHESON TRI-GAS, INC	$93.39	Argon Gas
MCGRANN SHEA CARNIVAL	$13,822.50	WO#2377 - $673.75-Wes Sub. - Purchase Agreement thru Jan. WO#2545-$673.75-Land exchange agreement thru Jan. 31, $5230.00 - Municipal and Regulatory Matters thru Jan., $6475.00 - Municipal and Regulatory Matters thru Feb., WO#2377 - $192.50- West Sub -Purchase agreement thru Feb., WO#2545 - $577.50- Land exchange agreement.,
MINN DEPT OF COMMERCE	$9,902.95	4th Qtr Fiscal Year 2022 Indirect Assess
MINN VALLEY TESTING LABS INC	$577.00	Nitrate & Nitrite
MMPA c/o Avant Energy	$2,917,792.14	Feb. Power bill
MMUA	$930.00	2022 Sub School 4/5-7 for J.S. & J.S.
MN AWWA	$300.00	Registrationfor B.R. & R.B. Op. school - Water dept.
MN DEPT OF REVENUE ACH PAYMENTS	$245,921.00	Feb. Sales & Use Tax
MYERS, TONY	$456.04	Wet/Dry Vacuum and Floor scrubber rental
NAPA AUTO PARTS	$10.73	Squeegee
NEVILLE, GERRY	$153.86	69 Miles reimbursed
NICHOLS, WILLIAM	$150.00	2022 Water Sense Toilet
NICKOLAY, CINDY	$151.52	259 Miles reimb.
NORTHERN STATES POWER CO.	$4,183.41	Feb. Power bill
NPL CONSTRUCTION COMPANY	$9,600.00	WO#2570 - Direct Bore 480 feet
PAYMENTUS CORPORATION	$27,732.65	Feb. Transfer Fee
PLUNKETT'S PEST CONTROL, INC.	$46.45	General Pest Control Valley Park Dr. S
QUADIENT, INC.- FORMERLY NEOPOST	$1,465.00	Base charge for letter opener base
RDO EQUIPMENT CO. - POWERPLAN	$175.02	Teeth for unit #623
ROTERT, JUSTIN	$250.00	Safety boot reimb.
RW Beck Group,Inc, Leidos Eng. LLC	$62,124.75	WO# 2483 - Feb. inv.-SPU West Shak. Sub Design
SADIG, HATIM	$350.00	2022 Res. Cooling & Heating
SAMBATEK	$5,595.00	WO#2525 - SPU Well #23-Prof. service thru 2/12/22
SCOTT COUNTY RECORDERS OFFICE	$46.00	Record Release Water Cap.chg Doran Cante
SHAKOPEE POST OFFICE	$398.00	PO Box 540 Annual Renewal

SHAKOPEE PUBLIC UTILITIES COMMISSION

WARRANT LISTING

March 21, 2022

By direction of the Shakopee Public Utilities Commission, the Secretary does hereby authorize the following warrants drawn upon the Treasury of Shakopee Public Utilities Commission:

SHORT ELLIOTT HENDRICKSON INC	$13,682.00	Bill thru 2/26/22 WO#2484 - $27.50-Southwest Logistics, WO#2492- $1134.50 - Summerland Place 1st Addition, WO#2476 - $5800 - Whispering Waters, WO#2516 - $4480.00 - Valley Crest (Schneider Property), WO#2517 - $1120.00 Core Crossing (Southbridge), WO#2312 - $1120.00 - Shakopee Flats
SKOUG, MICHAEL	$179.99	Reimb. for Boot allowance
SOLAR SHIELD, INC.	$407.00	Window tint for drive thru
SOUTHWEST NEWS MEDIA DBA DIV. OF RED	$394.68	Feb. legals
SPUC-PETTY CASH	$400.00	Add'l bank bag for drive up drawer
STOCKER, JORDAN	$150.00	Reimb. for D.O.T. exam
TRI-STATE BOBCAT INC.	$27.57	Elec. Block Trk #625
TRIPLETT, GREG	$136.31	97 Miles reimb.
TYCO FIRE & SECURITY (US) MGMT INC. (JOHNSON CO	$2,209.74	Annual Contract 4/1/22-3/31/23
VERIZON WIRELESS	$1,823.57	Cell phone usage 1/24-2/23/22
VISION METERING, LLC	$640.00	LEVER METER RINGS
WADE, JIM	$500.00	2022 Res. Cooling & Heating
WERNER, PAUL	$500.00	2022 Res. Cooling & Heating
WILLEMSSEN, KELLEY	$649.80	Membership renewal - MGFOA & Star Trib. renewal
XCEL ENERGY	$2,615.58	Amberglen gas usage & Valley Park Dr.
YESENKO, JOEL	$50.00	2022 - Res. Energy Star Appliance
	$4,228,023.25	

Presented for approval by: Director of Finance & Administration

Approved by General Manager

Approved by Commission President

Proposed As Consent Item 3e

Monthly Water Dashboard

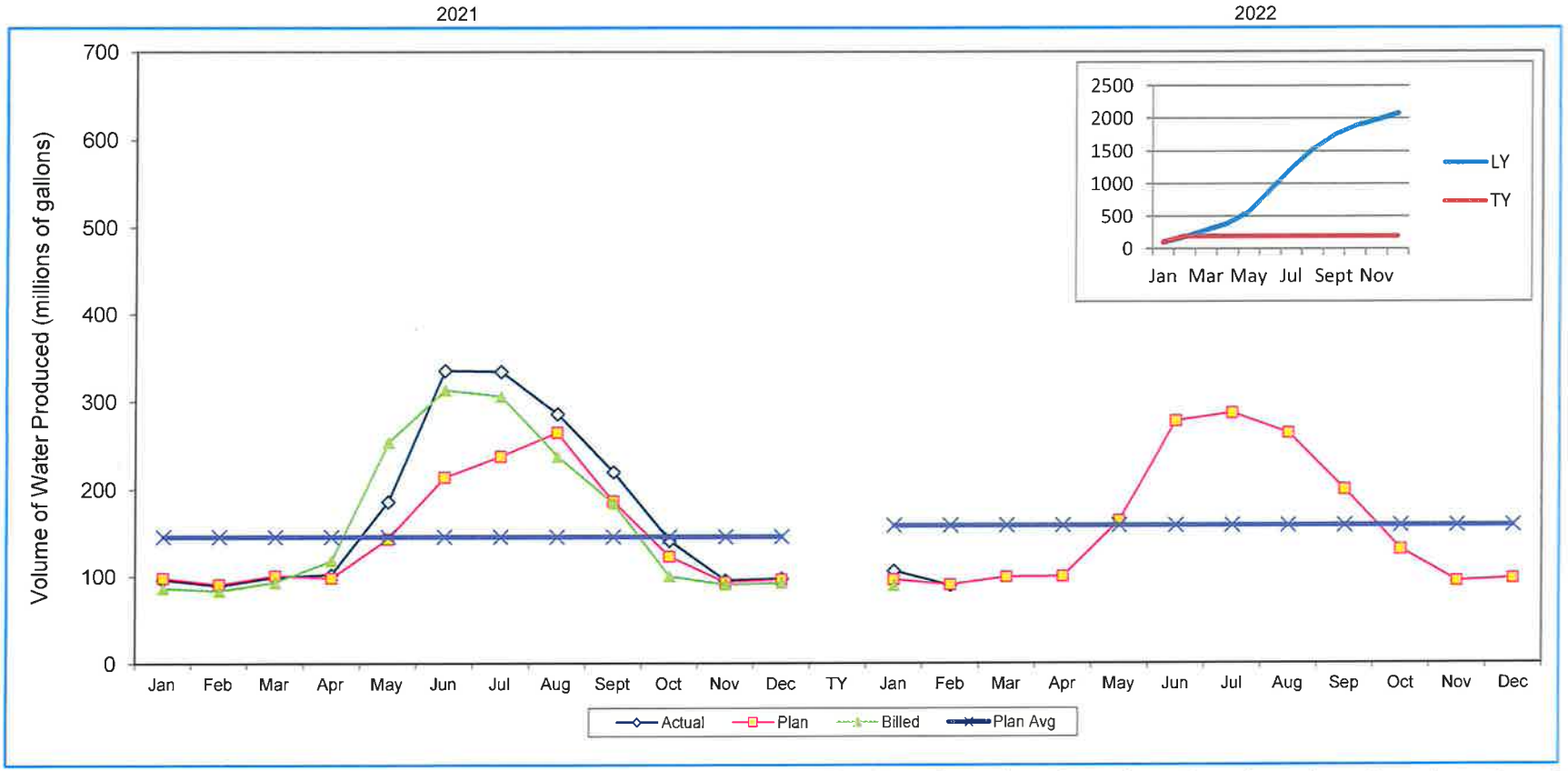
As of: February 2022 Shakopee Public Utilities Commission

ALL VALUES IN MILLIONS OF GALLONS

Element/Measure Water Pumped/Metered

Last 6 months actuals	220	141	95	97	106	89

Monthly Avg	
2019	139
2020	150
2021	173



LY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Actual	96	89	99	102	186	335	334	286	220	141	95	97
Plan	98	91	101	98	143	214	238	265	187	123	93	96
YTD % *												
Billed	86	83	93	118	254	313	306	238	184	100	90	92

TY	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	106	89										
	96	90	99	100	164	278	287	264	200	131	94	97
	110%	105%										
	89											

* Actual gallons pumped vs. Plan

Proposed As Consent Item 3f

Shakopee Public Utilities

PO Box 470 • 255 Sarazin Street
Shakopee, Minnesota 55379
Main 952.445-1988 • Fax 952.445-7767
www.shakopeeutilities.com

DATE: March 17, 2022

TO: Greg Drent, General Manager

FROM: Kelley Willemssen, Director of Finance & Administration

SUBJECT: Preliminary December 2021 & January 2022 Financials

Current Status

As part of the December 31, 2021 and January 31, 2022 financial reports, we continued the practice of providing a component of analytical review. For the Water and Electric Operating Revenue and Expense budget to actual and the Water and Electric Revenue and Expense report ending for each respective period, you will see comments at the bottom of each page. In addition to the analytical review, there are a few important points to note.

- The 2021 Audit kicked off on March 9. Three auditors from Clifton Larson Allen (CLA) worked with SPU staff onsite for three days. The process went smoothly. The auditors are working on their independent audit report and preparations of the final 12/31/2021 financials is underway.

- The budget for January 2022 is projected on an annual basis rather than a monthly basis so the information in the financial report equates to 8% of the annual budget.

- Clifton Larson Allen(CLA) will present the 2021 Financials at the April 18th commission meeting

Included in this report are the following statements:

- Combined Statement of Revenues, Expenses and Changes in Fund Net Position
- Electric Operating Revenue and Expense – Budget to Actual (with analytics)
- Water Operating Revenue and Expense– Budget to Actual (with analytics)
- Combined Statement of Revenue and expense and Net Assets
- Electric Operating Revenue and Expense Comparing December 31, 2021 to 2020 Actual numbers (with analytics)
- Water Operating Revenue and Expense Comparing December 31, 2021 to 2020 Actual numbers (with analytics)

Request

The Commission is requested to accept the Preliminary Financial Reports for the periods ending 12/31/2021 & 1/31/2022.

SHAKOPEE PUBLIC UTILITIES
COMBINED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN FUND NET POSITION

	Year to Date Actual - December 2021			Year to Date Budget - December 2021			Electric		Water		Total Utility	
							YTD Actual v. Budget B/(W)		YTD Actual v. Budget B/(W)		YTD Actual v. Budget B/(W)	
	Electric	Water	Total Utility	Electric	Water	Total Utility	$	%	$	%	$	%
OPERATING REVENUES	$ 52,690,835	6,604,786	59,295,620	45,771,732	5,402,310	51,174,042	6,919,103	15.1%	1,202,476	22.3%	8,121,578	15.9%
OPERATING EXPENSES						-						
Operation, Customer and Administrative	44,612,542	3,539,505	48,152,048	40,880,739	4,251,922	45,132,661	(3,731,803)	-9.1%	712,417	16.8%	(3,019,387)	-6.7%
Depreciation	2,482,092	1,777,894	4,259,985	2,328,126	1,582,877	3,911,003	(153,966)	-6.6%	(195,017)	-12.3%	(348,982)	-8.9%
Amortization of Plant Acquisition	-	-	-	-	-	-	-	0.0%	-	-	-	0.0%
Total Operating Expenses	47,094,634	5,317,399	52,412,033	43,208,865	5,834,799	49,043,664	(3,885,769)	-9.0%	517,400	8.9%	(3,368,369)	-6.9%
Operating Income	5,596,200	1,287,387	6,883,587	2,562,867	(432,489)	2,130,378	3,033,333	118.4%	1,719,876	397.7%	4,753,209	223.1%
NON-OPERATING REVENUE (EXPENSE)												
Rental and Miscellaneous	171,815	164,655	336,470	365,177	179,700	544,877	(193,362)	-53.0%	(15,045)	-8.4%	(208,407)	-38.2%
Interdepartment Rent from Water	90,000	-	90,000	90,000	-	90,000	-	0.0%	-	-	-	0.0%
Investment Income	168,812	19,643	188,455	673,387	278,431	951,818	(504,575)	-74.9%	(258,788)	-92.9%	(763,363)	-80.2%
Interest Expense	(3,954)	(185)	(4,139)	(64,957)	(2,192)	(67,149)	61,003	93.9%	2,007	91.6%	63,010	93.8%
Gain/(Loss) on the Disposition of Property	31,057	-	31,057	-	-	-	31,057	0.0%	-	-	31,057	-
Total Non-Operating Revenue (Expense)	457,730	184,112	641,843	1,063,607	455,939	1,519,546	(605,877)	-57.0%	(271,827)	-59.6%	(877,703)	-57.8%
Income Before Contributions and Transfers	6,053,931	1,471,499	7,525,430	3,626,474	23,450	3,649,924	2,427,457	66.9%	1,448,049	6175.0%	3,875,506	106.2%
CAPITAL CONTRIBUTIONS	98,931	6,685,954	6,784,885	-	3,954,538	3,954,538	98,931	-	2,731,416	69.1%	2,830,347	71.6%
MUNICIPAL CONTRIBUTION	(2,370,102)	(253,115)	(2,623,218)	(2,075,608)	(204,365)	(2,279,973)	(294,494)	-14.2%	(48,750)	-23.9%	(343,245)	-15.1%
CHANGE IN NET POSITION	$ 3,782,759	7,904,338	11,687,097	1,550,866	3,773,623	5,324,489	2,231,893	143.9%	4,130,715	109.5%	6,362,608	119.5%

SHAKOPEE PUBLIC UTILITIES
ELECTRIC OPERATING REVENUE AND EXPENSE

	YTD Actual 12/31/2021	YTD Budget 12/31/2021	YTD Actual v. Budget Increase (decrease) $	%
OPERATING REVENUES				
Sales of Electricity				
Residential	$ 19,996,991	17,827,425	2,169,566	112.2
Commercial and Industrial	31,752,298	27,006,276	4,746,022	117.6
Uncollectible accounts	(81,089)	-	(81,089)	
Total Sales of Electricity	51,668,201	44,833,701	6,834,500	115.2
Forfeited Discounts	134,686	92,011	42,675	146.4
Free service to the City of Shakopee	116,313	121,132	(4,819)	96.0
Conservation program	771,635	724,888	46,747	106.4
Total Operating Revenues	52,690,835	45,771,732	6,919,103	115.1
OPERATING EXPENSES				
Operations and Maintenance				
Purchased power	37,965,029	32,743,105	5,221,924	115.9
Distribution operation expenses	437,041	583,226	(146,185)	74.9
Distribution system maintenance	779,450	897,330	(117,880)	86.9
Maintenance of general plant	261,658	374,900	(113,242)	69.8
Total Operation and Maintenance	39,443,178	34,598,561	(4,844,617)	114.0
Customer Accounts				
Meter Reading	133,206	197,056	(63,850)	67.6
Customer records and collection	635,858	881,901	(246,043)	72.1
Energy conservation	771,635	744,809	26,826	103.6
Total Customer Accounts	1,540,700	1,823,766	283,066	84.5
Administrative and General				
Administrative and general salaries	571,494	983,013	(411,519)	58.1
Office supplies and expense	153,225	238,080	(84,855)	64.4
Outside services employed	621,637	495,878	125,759	125.4
Insurance	141,380	175,494	(34,114)	80.6
Employee Benefits	1,836,470	2,060,735	(224,265)	89.1
Miscellaneous general	304,459	505,212	(200,753)	60.3
Total Administrative and General	3,628,664	4,458,412	829,748	81.4
Total Operation, Customer, & Admin Expenses	44,612,542	40,880,739	(3,731,803)	109.1
Depreciation	2,482,092	2,328,126	(153,966)	(6.6)
Total Operating Expenses	$ 47,094,634	43,208,865	(3,885,769)	109.0
Operating Income	$ 5,596,200	2,562,867	3,033,333	218.4

SHAKOPEE PUBLIC UTILITIES
WATER OPERATING REVENUE AND EXPENSE

	YTD Actual 12/31/2021	YTD Budget 12/31/2021	YTD Actual v. Budget Increase (decrease) $	%	
OPERATING REVENUES					
Sales of Water	$ 6,592,104	5,388,001	1,204,103	122.35	(1)
Forfeited Discounts	12,682	14,309	(1,627)	88.63	
Total Operating Revenues	6,604,786	5,402,310	1,202,476	122.26	
OPERATING EXPENSES					
Operations and Maintenance					
Pumping and distribution operation	608,726	533,211	75,515	114.16	(2)
Pumping and distribution maintenance	569,859	619,768	(49,909)	91.95	
Power for pumping	328,994	306,440	22,554	107.36	
Maintenance of general plant	47,251	67,988	(20,737)	69.50	(3)
Total Operation and Maintenance	1,554,830	1,527,407	(27,423)	101.80	
Customer Accounts					
Meter Reading	73,395	122,152	(48,757)	60.09	(4)
Customer records and collection	196,525	264,509	(67,984)	74.30	(5)
Energy conservation	4,155	10,000	(5,845)	41.55	
Total Customer Accounts	274,075	396,661	122,586	69.10	
Administrative and General					
Administrative and general salaries	379,982	666,862	(286,880)	56.98	(6)
Office supplies and expense	46,013	96,775	(50,762)	47.55	
Outside services employed	320,974	266,533	54,441	120.43	(7)
Insurance	47,127	55,712	(8,585)	84.59	
Employee Benefits	735,851	945,904	(210,053)	77.79	(8)
Miscellaneous general	180,653	296,068	(115,415)	61.02	(9)
Total Administrative and General	1,710,600	2,327,854	617,254	73.48	
Total Operation, Customer, & Admin Expenses	3,539,505	4,251,922	712,417	83.24	
Depreciation	1,777,894	1,582,877	-	112.32	
Amortization of plant acquisition	-	-	-	-	
Total Operating Expenses	$ 5,317,399	5,834,800	517,401	91.13	
Operating Income	$ 1,287,387	(432,490)	1,719,877	(297.67)	

Item Explanation of Items Percentage Received/Expended Less than 80% or Greater than 120% and $ Variance Greater than $15,000.

(1) Variance due to more revenues from residential, commercial, and industrial water sales than projected through December 2021. Total water gallons billed increased by 19% from 2020 because of the dry hot summer.
(3) Variance due to less expenses in the maintenance of the general plant than projected through December 2021.
(4) Variance due to less meter reading expenses than projected for through December 2021.
(5) Variance due to less expenses for customer records and collection costs than projected through December 2021.
(6) Variance due to less employee compensation than projected through December 2021. Unfilled positions that were budgeted for.
(7) Variance due to AEMFS and HR consulting expenses not budgeted for in current year 2021.
(8) Variance due to less employee benefits than projected through December 2021.
(9) Variance due to less regulatory commmision expenses, marketing costs, and other miscellaneous expenses than projected for through December 2021.

SHAKOPEE PUBLIC UTILITIES
COMBINED STATEMENT OF REVENUE & EXPENSE AND NET ASSETS
COMPARATIVE FINANCIAL RESULTS FOR 2020 - 2021

	Dec-21			Dec-20			Electric 2020 - 2021 I/(D)		Water 2020 - 2021 I/(D)		Total Utility 2020 - 2021 I/(D)	
	Electric	Water	Total Utility	Electric	Water	Total Utility	$	%	$	%	$	%
OPERATING REVENUES	$ 52,690,835	6,604,786	59,295,620	47,198,288	5,532,276	52,730,564	5,492,547	11.6%	1,072,510	19.4%	6,565,056	12.5%
OPERATING EXPENSES						-						
Operation and Maintenance	44,612,542	3,539,505	48,152,048	39,010,560	3,062,314	42,072,874	(5,601,982)	-14.4%	(477,191)	-15.6%	(6,079,174)	-14.4%
Depreciation	2,482,092	1,777,894	4,259,985	2,420,110	1,733,331	4,153,441	(61,982)	-2.6%	(44,563)	-2.6%	(106,544)	-2.6%
Total Operating Expenses	47,094,634	5,317,399	52,412,033	41,430,670	4,795,645	46,226,315	(5,663,964)	-13.7%	(521,754)	-10.9%	(6,185,718)	-13.4%
Operating Income	5,596,200	1,287,387	6,883,587	5,767,618	736,631	6,504,249	(171,418)	-3.0%	550,756	74.8%	379,338	5.8%
NON-OPERATING REVENUE (EXPENSE)												
Rental and Miscellaneous	171,815	164,655	336,470	77,161	203,265	280,426	94,654	122.7%	(38,610)	-19.0%	56,044	20.0%
Interdepartment Rent from Water	90,000	-	90,000	90,000	-	90,000	-	0.0%	-	-	-	0.0%
Investment Income	168,812	19,643	188,455	595,308	291,858	887,166	(426,496)	-71.6%	(272,215)	-93.3%	(698,711)	-78.8%
Interest Expense	(3,954)	(185)	(4,139)	(34,926)	(1,497)	(36,423)	30,972	88.7%	1,312	87.6%	32,284	88.6%
Gain on the Disposition of Property	31,057	-	31,057	9,074	-	9,074	21,983	-	-	-	21,983	-
Total Non-Operating Revenue (Expense)	457,730	184,112	641,843	736,617	493,626	1,230,243	(278,887)	-37.9%	(309,514)	-62.7%	(588,400)	-47.8%
Income Before Contributions and Transfers	6,053,931	1,471,499	7,525,430	6,504,235	1,230,257	7,734,492	(450,304)	-6.9%	241,242	19.6%	(209,062)	-2.7%
CAPITAL CONTRIBUTIONS	98,931	6,685,954	6,784,885	527,653	2,849,061	3,376,714	(428,722)	-81.3%	3,836,893	134.7%	3,408,171	100.9%
TRANSFER TO MUNICIPALITY	(2,370,102)	(253,115)	(2,623,218)	(2,167,882)	(216,722)	(2,384,604)	(202,220)	-9.3%	(36,393)	-16.8%	(238,614)	-10.0%
CHANGE IN NET POSITION	3,782,759	7,904,338	11,687,097	4,864,006	3,862,596	8,726,602	(1,081,247)	-22.2%	4,041,742	104.6%	2,960,495	33.9%

SHAKOPEE PUBLIC UTILITIES
ELECTRIC OPERATING REVENUE AND EXPENSE
For period ending December 31,2021

	2021	2020	2020 - 2021 Increase (decrease) $	%	
OPERATING REVENUES					
Sales of Electricity					
Residential	$ 19,996,991	18,032,655	1,964,336	110.9	
Commercial	31,752,298	28,553,792	3,198,506	111.2	
Uncollectible accounts	(81,089)	(258,532)	177,443		
Total Sales of Electricity	51,668,201	46,327,915	5,340,286	111.5	
Forfeited Discounts	134,686	60,835	73,851	221.4	(1)
Free service to the City of Shakopee	116,313	114,758	1,555	101.4	
Conservation program	771,635	694,780	76,855	111.1	
Total Operating Revenues	52,690,835	47,198,288	5,492,547	111.6	
OPERATING EXPENSES					
Operations and Maintenance					
Purchased power	37,965,029	32,729,485	5,235,544	116.0	(2)
Distribution operation expenses	437,041	553,702	(116,661)	78.9	
Distribution system maintenance	779,450	653,225	126,225	119.3	
Maintenance of general plant	261,658	274,843	(13,185)	95.2	
Total Operation and Maintenance	39,443,178	34,211,255	(5,231,923)	115.3	
Customer Accounts					
Meter Reading	133,206	127,450	5,756	104.5	
Customer records and collection	635,858	575,336	60,522	110.5	
Energy conservation	771,635	693,297	78,338	111.3	
Total Customer Accounts	1,540,700	1,396,083	(144,617)	110.4	
Administrative and General					
Administrative and general salaries	571,494	644,190	(72,696)	88.7	
Office supplies and expense	153,225	136,544	16,681	112.2	
Outside services employed	621,637	428,140	193,497	145.2	(3)
Insurance	141,380	129,545	11,835	109.1	
Employee Benefits	1,836,470	1,773,389	63,081	103.6	(4)
Miscellaneous general	304,459	291,414	13,045	104.5	
Total Administrative and General	3,628,664	3,403,222	(225,442)	106.6	
Total Operating Expenses	44,612,542	39,010,560	(5,601,982)	114.4	
Depreciation	2,482,092	2,420,110	(61,982)	102.6	
Total Operating Expenses	$ 47,094,634	41,430,670	(5,663,964)	113.7	
Operating Income	$ 5,596,200	5,767,618	(171,418)	97.0	

Item Explanation of Items Percentage Received/Expended Less than 80% or Greater than 120% and $ Variance Greater than $15,000.

(1) Variance due to increased penalty fees collected in 2021, penalty fees were put on hold during most of 2020 during the pandemic
(2) Variance due to increased purchase power costs than 2020
(3) Variance due to AEMFS and HR consulting expenses not budgeted for in current year 2021.
(4) Variance due to increased benefit expenses in 2021 not in 2020

SHAKOPEE PUBLIC UTILITIES
WATER OPERATING REVENUE AND EXPENSE
For period ending December 31,2021

	2021	2020	2020 - 2021 Increase (decrease) $	%	
OPERATING REVENUES	$				
Sales of Water	6,592,104	5,578,527	1,013,577	118.2	(1)
Forfeited Discounts	12,682	3,602	9,080	352.1	
Uncollectible accounts	-	(49,853)	49,853	-	
Total Operating Revenues	6,604,786	5,532,276	1,072,510	119.4	
OPERATING EXPENSES					
Operations and Maintenance					
Pumping and distribution operation	608,726	612,055	(3,329)	99.5	
Pumping and distribution maintenance	569,859	396,702	173,157	143.6	(2)
Power for pumping	328,994	284,744	44,250	115.5	
Maintenance of general plant	47,251	53,307	(6,056)	88.6	
Total Operation and Maintenance	1,554,830	1,346,808	(208,022)	115.4	
Customer Accounts					
Meter Reading	73,395	69,539	3,856	105.5	
Customer records and collection	196,525	166,593	29,932	118.0	
Energy conservation	4,155	1,481	(2,674)	280.6	
Total Customer Accounts	274,075	237,613	(36,462)	115.3	
Administrative and General					
Administrative and general salaries	379,982	421,797	(41,815)	90.1	
Office supplies and expense	46,013	45,321	692	101.5	
Outside services employed	320,974	183,196	137,778	175.2	(3)
Insurance	47,127	43,182	3,945	109.1	
Employee Benefits	735,851	615,013	120,838	119.6	(4)
Miscellaneous general	180,653	169,384	11,269	106.7	
Total Administrative and General	1,710,600	1,477,893	(232,707)	115.7	
Total Operating Expenses	3,539,505	3,062,314	(477,191)	115.6	
Depreciation	1,777,894	1,733,331	44,563	102.6	
Total Operating Expenses	5,317,399	4,795,645	(521,754)	110.9	
Operating Income	$ 1,287,387	736,631	550,756	174.8	

Item Explanation of Items Percentage Received/Expended Less than 80% or Greater than 120% and $ Variance Greater than $15,000.

(1) Variance due to more revenues from residential, commercial, and industrial water sales than projected through December 2021. Total water gallons billed increased by 19% from 2020 because of the dry hot summe

(2) Variance due to more testing and maintenance expenses on pumping equipment completed in 2021 than 2020. Increased material prices was also a factor.

(3) Variance due to AEMFS and HR consulting expenses incurred in 2021 not 2020

(4) Variance due to increased benefit expenses in 2021 not in 2020

SHAKOPEE PUBLIC UTILITIES
COMBINED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN FUND NET POSITION

	Year to Date Actual - January 2022			Year to Date Budget - January 2022			Electric		Water		Total Utility	
							YTD Actual v. Budget B/(W)		YTD Actual v. Budget B/(W)		YTD Actual v. Budget B/(W)	
	Electric	Water	Total Utility	Electric	Water	Total Utility	$	%	$	%	$	%
OPERATING REVENUES	$ 4,424,994	335,785	4,760,779	4,324,755	460,559	4,785,313	100,240	2.3%	(124,774)	-27.1%	(24,534)	-0.5%
OPERATING EXPENSES						-						
Operation, Customer and Administrative	3,459,510	285,564	3,745,075	3,676,860	336,606	4,013,466	217,350	5.9%	51,041	15.2%	268,391	6.7%
Depreciation	221,724	146,181	367,905	221,723	146,181	367,905	(0)	0.0%	(0)	0.0%	(0)	0.0%
Total Operating Expenses	3,681,234	431,746	4,112,979	3,898,584	482,787	4,381,370	217,350	5.6%	51,041	10.6%	268,391	6.1%
Operating Income	743,760	(95,961)	647,800	426,171	(22,228)	403,943	317,589	74.5%	(73,733)	-331.7%	243,856	60.4%
NON-OPERATING REVENUE (EXPENSE)												
Rental and Miscellaneous	4,842	37,198	42,040	30,042	15,780	45,823	(25,200)	-83.9%	21,418	135.7%	(3,782)	-8.3%
Interdepartment Rent from Water	7,500	-	7,500	7,500	-	7,500	0	0.0%	-	-	0	0.0%
Investment Income	215,921	50,290	266,211	56,116	23,203	79,318	159,805	284.8%	27,088	116.7%	186,893	235.6%
Interest Expense	(142)	(9)	(151)	(5,413)	(183)	(5,596)	5,271	97.4%	174	95.3%	5,445	97.3%
Total Non-Operating Revenue (Expense)	228,121	87,480	315,601	88,245	38,800	127,045	139,876	158.5%	48,680	125.5%	188,556	148.4%
Income Before Contributions and Transfers	971,881	(8,481)	963,401	514,416	16,572	530,988	457,465	88.9%	(25,053)	-151.2%	432,412	81.4%
CAPITAL CONTRIBUTIONS	-	679,853	679,853	57,743	610,604	668,347	(57,743)	-	69,249	11.3%	11,506	1.7%
MUNICIPAL CONTRIBUTION	(179,693)	(17,000)	(196,693)	(232,306)	(23,153)	(255,460)	52,613	22.6%	6,153	26.6%	58,767	23.0%
CHANGE IN NET POSITION	$ 792,189	654,372	1,446,561	339,853	604,022	943,876	452,335	133.1%	50,350	8.3%	502,685	53.3%

SHAKOPEE PUBLIC UTILITIES
ELECTRIC OPERATING REVENUE AND EXPENSE

	YTD Actual 1/31/2022	YTD Budget 1/31/2022	YTD Actual v. Budget Increase (decrease) $	%
OPERATING REVENUES				
Sales of Electricity				
Residential	$ 1,705,029	1,712,704	(7,675)	99.6
Commercial and Industrial	2,626,974	2,530,176	96,798	103.8
Uncollectible accounts	-	-	-	-
Total Sales of Electricity	4,332,003	4,242,880	89,123	102.1
Forfeited Discounts	18,334	8,628	9,706	212.5
Free service to the City of Shakopee	9,693	10,397	(704)	93.2
Conservation program	64,965	62,850	2,115	103.4
Total Operating Revenues	4,424,994	4,324,755	100,240	102.3
OPERATING EXPENSES				
Operations and Maintenance				
Purchased power	3,031,095	3,007,636	23,459	100.8
Distribution operation expenses	37,130	64,670	(27,540)	57.4
Distribution system maintenance	67,440	75,336	(7,896)	89.5
Maintenance of general plant	29,505	29,378	127	100.4
Total Operation and Maintenance	3,165,169	3,177,020	11,851	99.6
Customer Accounts				
Meter Reading	10,995	14,246	(3,251)	77.2
Customer records and collection	38,638	58,704	(20,065)	65.8
Energy conservation	(161,561)	62,174	(223,736)	(259.9)
Total Customer Accounts	(111,928)	135,124	247,052	(82.8)
Administrative and General				
Administrative and general salaries	54,139	79,834	(25,694)	67.8
Office supplies and expense	18,595	23,078	(4,484)	80.6
Outside services employed	28,808	44,263	(15,455)	65.1
Insurance	34,206	10,903	23,302	313.7
Employee Benefits	201,992	171,867	30,125	117.5
Miscellaneous general	68,529	34,771	33,759	197.1
Total Administrative and General	406,269	364,716	(41,553)	111.4
Total Operation, Customer, & Admin Expenses	3,459,510	3,676,860	217,350	94.1
Depreciation	221,724	221,723	(0)	100.0
Total Operating Expenses	$ 3,681,234	3,898,584	217,350	94.4
Operating Income	$ 743,760	426,171	317,589	174.5

SHAKOPEE PUBLIC UTILITIES
WATER OPERATING REVENUE AND EXPENSE

	YTD Actual 1/31/2022	YTD Budget 1/31/2022	YTD Actual v. Budget Increase (decrease) $	%	
OPERATING REVENUES					
Sales of Water	$ 334,209	459,001	(124,792)	72.8	(1)
Forfeited Discounts	1,576	1,557	18	101.2	
Total Operating Revenues	335,785	460,559	(124,774)	72.9	
OPERATING EXPENSES					
Operations and Maintenance					
Pumping and distribution operation	49,926	55,268	(5,342)	90.3	
Pumping and distribution maintenance	28,043	64,370	(36,327)	43.6	(2)
Power for pumping	3,952	6,048	(2,095)	65.4	
Maintenance of general plant	3,490	6,772	(3,282)	51.5	
Total Operation and Maintenance	85,411	132,457	47,046	64.5	
Customer Accounts					
Meter Reading	5,972	8,192	(2,220)	72.9	
Customer records and collection	12,443	21,527	(9,084)	57.8	
Energy conservation	81	-	81	#DIV/0!	
Total Customer Accounts	18,495	29,719	11,224	62.2	
Administrative and General					
Administrative and general salaries	34,648	50,449	(15,801)	68.7	(3)
Office supplies and expense	3,682	13,933	(10,251)	26.4	
Outside services employed	12,004	22,382	(10,379)	53.6	
Insurance	-	4,643	(4,643)	-	
Employee Benefits	89,101	64,981	24,120	137.1	(4)
Miscellaneous general	42,224	18,042	24,183	234.0	(5)
Total Administrative and General	181,658	174,429	(7,229)	104.1	
Total Operation, Customer, & Admin Expenses	285,564	336,606	51,041	84.8	
Depreciation	146,181	146,181	0	100.0	
Total Operating Expenses	$ 431,746	482,788	51,042	89.4	
Operating Income	$ (95,961)	(22,229)	(73,732)	431.7	

Item Explanation of Items Percentage Received/Expended Less than 80% or Greater than 120% and $ Variance Greater than $15,000.

(1) Variance due to less revenue from water sales than budgeted for through January 2022.
(2) Variance due to less expenses from the maintenance of structures, pumping equipment, valves, meters, and hydrants than budgeted for through January 2022.
(3) Variance due to less payroll expenses than budgeted for through January 2022. Unfilled positions that were budgeted for the full year. 1 position filled in March 2022. 1 remaining open
(4) Variance due to more employee benefits paid than budgeted for through January 2022.
(5) Variance due to large accounts payable invoice paid to MN DNR for water permit use in January 2022. Variance should stabalize throughout year.

Proposed As Consent Item 3g

Shakopee Public Utilities

PO Box 470 • 255 Sarazin Street
Shakopee, Minnesota 55379
Main 952.445-1988 • Fax 952.445-7767
www.shakopeeutilities.com

TO: Greg Drent, General Manager

FROM: Lon R. Schemel, Water Superintendent

SUBJECT: Tank 8 In Service - Advisory

DATE: March 16, 2022

The 750,000-gallon reservoir at the Windermere subdivision is now in service.

March 9	Filled to overflow which constituted substantial completion.
March 11	Bacterial samples were collected.
March 13	Bacterial sample results were received.
March 15	SCADA modifications were made for the Windermere booster site to control the tank level.
March 16	Valves were opened putting the tank into service at 8:34 am.

Water Operator – Apprentice Brandon Schwartz opens system valve for Tank 8.

Proposed As Consent Item 3h

RESOLUTION #2022-08

RESOLUTION APPROVING SHAKOPEE PUBLIC UTILITIES COMMISSION'S RULES GOVERNING THE INTERCONNECTION OF COGENERATION AND SMALL POWER PRODUCTION FACILITIES

WHEREAS, the purpose of the Rules Governing Cogeneration and Small Power Production is for Shakopee Public Utilities Commission to implement certain provisions of Minnesota Statutes Section 216B.164, the Public Utility Regulatory Policies Act of 1978, and Federal Energy Regulatory Commission regulations related to customer-owned distributed energy resources.

WHEREAS, Shakopee Public Utilities Commission is approving these Rules to update and replace a previously adopted version of these Rules.

WHEREAS, these Rules shall be implemented to give the maximum possible encouragement to cogeneration and small power production consistent with protection of the Shakopee Public Utilities' ratepayers and the public in accordance with Minnesota Statutes Section 216B.164, subdivision 1.

WHEREAS, these Rules and Minnesota Statutes Section 216B.164 require Shakopee Public Utilities Commission to review and approve a cogeneration and small power production tariff and annual update of the rates described therein.

WHERAS, these filings shall be maintained at the Shakopee Public Utilities offices and shall be made available for public inspection during normal business hours.

THEREFORE, BE IT RESOLVED that the Shakopee Public Utilities Commission approves the following Rules Governing the Interconnection of Cogeneration and Small Power Production Facilities with Shakopee Public Utilities

Passed in the regular session of the Shakopee Public Utilities Commission, this 21st day of March 2022.

_____

Commission President: Kathi Mocol

ATTEST:

_____

Commission Secretary: Greg Drent

Rules

Governing the Interconnection of

Cogeneration and Small Power Production Facilities

with

Shakopee Public Utilities

Part A. DEFINITIONS

Subpart 1. Applicability. For purposes of these rules, the following terms have the meanings given them below.

Subp. 2. Average retail utility energy rate. "Average retail utility energy rate" means, for any class of utility customer, the quotient of the total annual class revenue from sales of electricity minus the annual revenue resulting from fixed charges, divided by the annual class kilowatt-hour sales. For purposes of determining the "average retail utility energy rate," the utility may consider a retail demand rate as a fixed charge and may exclude such annual revenue from the calculation. The computation shall use data from the most recent 12- month period available.

Subp. 3. Backup power. "Backup power" means electric energy or capacity supplied by the utility to replace energy ordinarily generated by a qualifying facility's own generation equipment during an unscheduled outage of the facility.

Subp. 4. Capacity. "Capacity" means the capability to produce, transmit, or deliver electric energy and is determined using the aggregate nameplate ratings of all qualifying systems located on the customer side of the point of common coupling. The nameplate ratings of each qualifying system are the maximum alternating current capacity values at the point of DER coupling that could be measured in a 15-minute interval period.

Subp. 5. Capacity costs. "Capacity costs" means the costs associated with providing the capability to deliver energy. The utility's capacity costs consist of the capital costs of facilities from the utility and the utility's wholesale provider used to generate, transmit, and distribute electricity and the fixed operating and maintenance costs of these facilities.

Subp. 6. Customer. "Customer" means the person or entity named on the utility electric bill for the premises.

Subp. 7. Energy. "Energy" means electric energy, measured in kilowatt-hours.

Subp. 8. Energy costs. "Energy costs" means the variable costs associated with the production of electric energy. They consist of fuel costs and variable operating and maintenance expenses.

Subp. 9. Firm power. "Firm power" means energy delivered by the qualifying facility to the utility with at least a 65 percent on-peak capacity factor in the month. The capacity factor is based upon the qualifying facility's maximum metered capacity delivered to the utility during the on-peak hours for the month.

Subp. 10. Governing body. "Governing body" means Shakopee Public Utilities Commission.

Subp. 11. Interconnection costs. "Interconnection costs" means the reasonable costs of connecting, switching, metering, transmission, distribution, safety provisions, and administrative costs incurred by the utility that are directly related to installing and maintaining the physical facilities necessary to permit interconnected operations with a qualifying facility. Costs are considered interconnection costs only to the extent that they exceed the costs the utility would incur in selling electricity to the customer as a non-generating customer.

Subp. 12. Interruptible power. "Interruptible power" means electric energy or capacity supplied by the utility to a customer subject to interruption under the provisions of the utility's tariff applicable to the retail class of customers to which the customer would belong irrespective of their ability to generate electricity.

Subp. 13. Maintenance power. "Maintenance power" means electric energy or capacity supplied by the utility during scheduled outages of a qualifying facility.

Subp. 14. On-peak hours. "On-peak hours" means either those hours formally designated by the utility as on-peak for ratemaking purposes or those hours for which its typical loads are at least 85 percent of its average maximum monthly loads.

Subp. 15. Point of common coupling. "Point of common coupling" means the point where a qualifying facility's generation system, including the point of generator output, is connected to the utility's electric power grid.

Subp. 16. Point of distributed energy resource connection. "Point of distributed energy resource connection" means the point where a qualifying facility's generation system, including the point of generator output, is connected to the customer's electric system and meets the current definition of IEEE 1547.

Subp. 17. Purchase. "Purchase" means the purchase by the utility of electric energy or capacity or both from a customer with a qualifying facility.

Subp. 18. Qualifying facility. "Qualifying facility" means a cogeneration or small power production facility which satisfies the conditions established in Code of Federal Regulations, title 18, part 292. The initial operation date or initial installation date of a cogeneration or small power production facility must not prevent the facility from being considered a qualifying facility for the purposes of this chapter if it otherwise satisfies all stated conditions.

Subp. 19. Sale. "Sale" means the sale of electric energy or capacity or both by the utility to a customer with a qualifying facility.

Subp. 20a. Standby charge. "Standby charge" means the charge imposed by the utility upon a customer with a qualifying facility for the recovery of costs for the provision of standby services necessary to make electricity service available to the customer.

Subp. 20b. Standby service. "Standby service" means supplemental or backup electric service or power provided by the utility that provides reliability to customers who generate all or a portion of their electricity needs from a qualifying facility greater than 40 kW when the customer's own ability to generate will not be sufficient to meet the customer's need while the customer remains connected to the distribution system.

Subp. 21. Supplementary power. "Supplementary power" means electric energy or capacity supplied by the utility which is regularly used by a customer with a qualifying facility in addition to that which the facility generates itself.

Subp. 22. System emergency. "System emergency" means a condition on the utility's system which is imminently likely to result in significant disruption of service to customers or to endanger life or property.

Subp. 23. Utility. "Utility" means Shakopee Public Utilities.

Part B. SCOPE AND PURPOSE

The purpose of these rules is to implement certain provisions of Minnesota Statutes Section 216B.164; the Public Utility Regulatory Policies Act of 1978, United States Code, title 16, §824a-3; and the Federal Energy Regulatory Commission regulations, Code of Federal Regulations, title 18, part 292. These rules shall be applied in accordance with their intent to give the maximum possible encouragement to cogeneration and small power production consistent with protection of the utility's ratepayers and the public.

Part C. FILING REQUIREMENTS

The utility shall file for review and approval by the governing body, a cogeneration and small power production tariff containing schedules 1 – 3 and shall thereafter file annual updates of schedules 1 and 2 in the first quarter of the year. Schedule 3's contents shall remain the standing guidance unless and until the utility files changes.

SCHEDULE 1.

Schedule 1 shall contain the calculation of the average retail utility energy rates for each utility customer class.

SCHEDULE 2.

Schedule 2 shall contain the rates at which the utility purchases energy and capacity. If the utility has more than one wholesale supplier, schedule 2 shall contain the rates of that supplier from which purchases may first be avoided.

SCHEDULE 3.

Schedule 3 shall contain or indicate by reference to a publicly available document the utility's interconnection process, or "distributed generation tariff" adopted in compliance with Minnesota Statutes Section 216B.1611, subd. 3(2), including standard contract forms to be used with customers interconnecting qualifying facilities as well as general technical interconnection and interoperability requirements.

The utility shall also adopt technical specifications with utility-specific safety standards, technical requirements for distributed energy resource systems, required operating procedures for interconnected operations, and the functions to be performed by any control and protective apparatus.

Part D. AVAILABILITY OF FILINGS

All filings shall be maintained at the utility's general office and any other offices of the utility where rate tariffs are kept. The filings shall be made available for public inspection during normal business hours. The utility shall supply the current year's distributed generation rates, interconnection procedures and application form on the utility website, if practicable, or at the utility office.

Part E. REPORTING REQUIREMENTS

The utility shall report to the governing body for its review and approval an annual report including information in subparts 1-3. The utility shall also comply with other federal and state

reporting of distributed generation to federal and state agencies expressly required by statute.

Subpart 1. Summary of average retail utility energy rate. A summary of the qualifying facilities that are currently served under average retail utility energy rate.

Subp. 2. Other qualifying facilities. A summary of the qualifying facilities that are not currently served under average retail utility energy rate.

Subp. 3. Wheeling. A summary of the wheeling undertaken with respect to qualifying facilities.

Part F. PURCHASE AND CONTRACT REQUIREMENTS

Subpart 1. Requirement to purchase. The utility shall purchase energy and capacity from any customer who offer to sell energy and capacity from a qualifying facility to the utility and agrees to the conditions in these rules.

Subp. 2. Written contract. A written contract shall be executed between a customer seeking to interconnect a qualifying facility and the utility.

Part G. EXCLUSIVE SERVICE RIGHT RETAINED

The utility reserves its right to be the exclusive provider of electric service to all present and future customers in its service area as provided for in Minnesota Statutes, Sections 216B.40-44. The utility, therefore, refuses permission to interconnect or to continue to purchase energy produced from a facility not owned or leased at a fixed periodic payment amount by the electric utility account holder for the premise upon which the facility is located, unless that right is explicitly waived in writing by the utility for the specified facility.

Part H. ELECTRICAL CODE COMPLIANCE

Subpart 1. Compliance; standards. The interconnection between the qualifying facility and the utility must comply with the requirements in the most recently published edition of the National Electrical Safety Code issued by the Institute of Electrical and Electronics Engineers. The interconnection is subject to subparts 2 and 3.

Subp. 2. Interconnection. A customer with a qualifying facility is responsible for complying with all applicable local, state, and federal codes, including building codes, the National Electrical Code (NEC), the National Electrical Safety Code (NESC), and noise and emissions standards. The utility shall require proof that the qualifying facility is in compliance with the NEC before the interconnection is made. The customer seeking to interconnect a qualifying facility must obtain installation approval from an electrical inspector recognized by the Minnesota State Board of Electricity.

Subp. 3. Generation system. A qualifying facility's generation system and installation must comply with the American National Standards Institute/Institute of Electrical and Electronics Engineers (ANSI/IEEE) standards applicable to the installation.

Part I. RESPONSIBILITY FOR APPARATUS

A customer seeking to interconnect a qualifying facility, without cost to the utility, must

furnish, install, operate, and maintain in good order and repair any apparatus the qualifying facility needs in order to operate in accordance with schedule 3.

Part J. TYPES OF POWER TO BE OFFERED; STANDBY SERVICE

Subpart 1. Service to be offered. The utility shall offer maintenance, interruptible, supplementary, and backup power to a customer seeking to interconnect a qualifying facility upon request.

Subp. 2. Standby service. The utility shall offer a customer seeking to interconnect a qualifying facility standby power or service at the utility's applicable standby rate schedule.

Part K. DISCONTINUING SALES DURING EMERGENCY

The utility may discontinue sales to a customer with an interconnected qualifying facility during a system emergency if the discontinuance and recommencement of service is not discriminatory.

Part L. RATES FOR UTILITY SALES TO A CUSTOMER WITH AN INTERCONNECTED QUALIFYING FACILITY

Rates for sales to a customer with a qualifying facility are governed by the applicable tariff for the class of electric utility customers to which the customer belongs or would belong were they not a customer with an interconnected qualifying facility. Such rates are not guaranteed and may change from time to time at the discretion of the utility.

Part M. STANDARD RATES FOR PURCHASES FROM QUALIFYING FACILITIES

Subpart 1. Qualifying facilities with 100-kilowatt capacity or less. For qualifying facilities with capacity of 100 kilowatts or less, standard purchase rates apply. The utility shall make available four types of standard rates, described in parts M, N, O, and P. A customer interconnecting a qualifying facility with a capacity of 100 kilowatts or less must choose interconnection under one of these rates, and must specify their choice in the written contract required in part V. Any net credit to a customer for their qualifying facility must, at their option, be credited to their account with the utility or returned by check or comparable electronic payment service within 15 days of the billing date. The option chosen must be specified in the written contract required in part V. A customer with an interconnected qualifying facility remains responsible for any monthly service charges and demand charges specified in the tariff under which they consume electricity from the utility.

Subp. 2. Qualifying facilities over 100-kilowatt capacity. A customer interconnecting a qualifying facility with more than 100-kilowatt capacity has the option to negotiate a contract with the utility or, if they commit to provide firm power, be compensated under standard rates.

Subp. 3. Grid access charge. A customer with an interconnected qualifying facility shall be assessed a monthly grid access charge to recover the fixed costs not already paid by the customer through the customer's existing billing arrangement. The additional charge shall be reasonable and appropriate for the class of customer based on the most recent cost of service study defining the grid access charge. The cost-of-service study for the grid access charge shall be made available for review by the customer of the utility upon request.

Part N. AVERAGE RETAIL UTILITY ENERGY RATE

Subpart 1. Applicability. The average retail utility energy rate is available only to customers interconnecting qualifying facilities with capacity of less than 40 kilowatts who choose not to offer electric power for sale on either a time-of-day basis, a simultaneous purchase and sale basis or roll-over credit basis.

Subp. 2. Method of billing. The utility shall bill the customer with an interconnected qualifying facility for the excess of energy supplied by the utility above energy supplied by the qualifying facility during each billing period according to the utility's applicable retail rate schedule.

Subp. 3. Additional calculations for billing. When the energy generated by the qualifying facility exceeds that supplied by the utility to the customer at the same site during the same billing period, the utility shall compensate the customer for the excess energy at the average retail utility energy rate.

Part O. SIMULTANEOUS PURCHASE AND SALE BILLING RATE

Subpart 1. Applicability. The simultaneous purchase and sale rate is available only to customers with qualifying facilities with capacity of less than 40 kilowatts who choose not to offer electric power for sale on average retail utility energy rate basis, time-of-day basis or roll- over credit basis.

Subp. 2. Method of billing. A customer with a qualifying facility must be billed for all energy and capacity they consume during a billing period according to the utility's applicable retail rate schedule.

Subp. 3. Compensation to a customer with a qualifying facility; energy purchase. The utility shall purchase all energy which is made available to it by the qualifying facility. At the option of the customer, the qualifying facility's entire generation may be deemed to be made available to the utility. Compensation to the customer must be the energy rate shown on schedule 4.

Subp. 4. Compensation to a customer with a qualifying facility; capacity purchase. If a customer with a qualifying facility provides firm power to the utility, the capacity component must be the utility's net annual avoided capacity cost per kilowatt-hour averaged over all hours shown on schedule 4, divided by the number of hours in the billing period. If the qualifying facility does not provide firm power to the utility, no capacity component may be included in the compensation paid to the customer.

Part P. TIME-OF-DAY PURCHASE RATES

Subpart 1. Applicability. Time-of-day rates are required for customers interconnecting qualifying facilities with capacity of 40 kilowatts or more and less than or equal to 100 kilowatts, and they are optional for customers interconnecting qualifying facilities with capacity less than 40 kilowatts. Time-of-day rates are also optional for customers interconnecting qualifying facilities with capacity greater than 100 kilowatts if these qualifying facilities provide firm power.

Subp. 2. Method of billing. The interconnecting customer must be billed for all energy and capacity they consume during each billing period according to the utility's applicable retail rate schedule.

Subp. 3. Compensation to qualifying facility; energy purchases. The utility shall purchase all energy which is made available to it by the qualifying facility. Compensation to the interconnecting customer must be the energy rate shown on schedule 4.

Subp. 4. Compensation to qualifying facility; capacity purchases. If the qualifying facility provides firm power to the utility, the capacity component must be the capacity cost per kilowatt shown on schedule 4 divided by the number of on-peak hours in the billing period. The capacity component applies only to deliveries during on-peak hours. If the qualifying facility does not provide firm power to the utility, no capacity component may be included in the compensation paid to the interconnecting customer.

Part Q. ROLL-OVER CREDIT PURCHASE RATES

Subpart 1. Applicability. The roll-over credit rate is available only to interconnecting customers with qualifying facilities with capacity of less than 40 kilowatts who choose not to offer electric power for sale on average retail utility energy rate basis, time-of-day basis or simultaneous purchase and sale basis.

Subp. 2. Method of billing. The utility shall bill the interconnecting customer for the excess of energy supplied by the utility above energy supplied by the qualifying facility during each billing period according to the utility's applicable retail rate schedule.

Subp. 3. Additional calculations for billing. When the energy generated by the qualifying facility exceeds that supplied by the utility during a billing period, the utility shall apply the excess kilowatt hours as a credit to the next billing period kilowatt hour usage. Excess kilowatt hours that are not offset in the next billing period shall continue to be rolled over to the next consecutive billing period. Any excess kilowatt hours rolled over that are remaining at the end of each calendar year shall cancel with no additional compensation.

Part R. CONTRACTS NEGOTIATED BY CUSTOMER

An interconnecting customer with a qualifying facility with capacity greater than 100 kilowatts must negotiate a contract with the utility setting the applicable rates for payments to the customer of avoided capacity and energy costs.

Subpart 1. Amount of capacity payments. The interconnecting customer who negotiates a contract under part Q must be entitled to the full avoided capacity costs of the utility. The amount of capacity payments will be determined by the utility and the utility's wholesale power provider.

Subp. 2. Full avoided energy costs. The interconnecting customer who negotiates a contract under part Q must be entitled to the full avoided energy costs of the utility. The costs must be adjusted as appropriate to reflect line losses.

Part S. WHEELING

Interconnecting customers with qualifying facilities with capacity of 30 kilowatts or greater that are interconnected to the utility's distribution system who choose to sell the output of the qualifying facility to any other utility, must pay any appropriate wheeling charges to the utility. Within 15 days of receiving payment from the utility ultimately receiving the qualifying facility's output, the utility

shall pay the interconnecting customer the payment less the charges it has incurred and its own reasonable wheeling costs.

Part T. NOTIFICATION TO CUSTOMERS

Subpart 1. Contents of written notice. Following each annual review and approval by the utility of the cogeneration rate tariffs the utility shall furnish in the monthly newsletter or similar mailing, written notice to each of its customers that the utility is obligated to interconnect with and purchase electricity from cogenerators and small power producers.

Subp. 2. Availability of information. The utility shall make available to all interested persons upon request, the interconnection process and requirements adopted by the utility, pertinent rate schedules and sample contractual agreements.

Part U. DISPUTE RESOLUTION

In case of a dispute between a utility and a customer interconnecting a qualifying facility or an impasse in negotiations between them, either party may petition the governing body to determine the issue.

Part V. INTERCONNECTION CONTRACTS

Subpart 1. Interconnection standards. The utility shall provide a customer applying for interconnection with a copy of, or electronic link to, the utility's adopted interconnection process and requirements.

Subp. 2. Existing contracts. Any existing interconnection contract executed between the utility and a customer interconnecting a qualifying facility with capacity of less than 40 kilowatts remains in force until terminated by mutual agreement of the parties or as otherwise specified in the contract. The governing body has assumed all dispute responsibilities as listed in existing interconnection contracts. Disputes are resolved in accordance with Part T.

Subp. 3. Renewable energy credits; ownership. Generators own all renewable energy credits unless other ownership is expressly provided for by a contract between a generator and the utility.

Part W. UNIFORM CONTRACT

The form for uniform contract form shown in subpart 1shall be used between the utility and a qualifying facility having less than 40 kilowatts of capacity.

Subpart 1. Uniform Contract for Cogeneration and Small Power Production Facilities. (See attached contract form.)

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UNIFORM CONTRACT FOR COGENERATION AND SMALL POWER PRODUCTION FACILITIES

THIS CONTRACT is entered into _____, ____, by _____ _____, a municipal utility under Minnesota law, (hereafter called Utility") and _____ (hereafter called "Customer").

RECITALS

The Customer has installed electric generating facilities, consisting of _____ (Description of facilities), rated at ____kilowatts AC of electricity, on property located at _____.

The Customer is an electric service recipient named on a service account of the Utility.

The Customer is prepared to generate electricity in parallel with the Utility.

The Customer's electric generating facilities meet the requirements of the Rules Governing Cogeneration and Small Power Production Facilities adopted by the Utility and any technical standards for interconnection the Utility has established that are authorized by those rules.

The Utility is obligated under federal and Minnesota law to accommodate interconnection with the Customer's facilities and to purchase electricity offered for sale by the Customer from those facilities.

A contract between the Customer and the Utility is required for operation of facilities interconnected with the Utility system.

AGREEMENTS

The Customer and the Utility agree:

1. The Utility will sell electricity to the Customer under the rate schedule in force for the class of customer to which the Customer belongs.

2. The Utility will buy electricity from the Customer under the current rate schedule filed with the city council or city-appointed governing body of the Utility. The Customer elects the rate schedule category hereinafter indicated:

_____ a. Average retail utility energy rate.

- Facilities capacity must be less than 40 kW.

_____ b. Simultaneous purchase and sale billing rate.

- Facilities capacity must be less than 40 kW.

_____ c. Roll-over credits.

- Facilities capacity must be less than 40 kW.

_____ d. Time-of-day purchase rates.

- Facilities capacity must be 40 kW or more and less than or equal to 100 kW.

A copy of the presently approved rate schedule is attached to this contract.

3. The rates for sales and purchases of electricity may change over the time this contract is in force, due to actions of the Utility or the State of Minnesota, and the Customer and the Utility agree that sales and purchases will be made under the rates in effect each month during the time this contract is in force.

4. The Utility will compute the charges and payments for purchases and sales for each billing period. Any net credit to the Customer, other than kilowatt-hour credits under clause 2(c), will be made under one of the following options as chosen by the Customer.

_____ a. Credit to the Customer's account with the Utility.

_____ b. Paid by check or electronic payment service to the Customer within fifteen (15) days of the billing date.

5. Renewable energy credits associated with generation from the facility are owned by:

_____.

6. The Customer must operate their electric generating facilities within any rules, regulations, and policies adopted by the Utility not prohibited by the rules governing cogeneration and small power production facilities on the Utility's system which provide reasonable technical connection and operating specifications for the facilities and are consistent with the Minnesota Public Utilities Commission's rules adopted under Minnesota Statutes §216B.164, subdivision 6.

7. The Customer will not enter into an arrangement whereby electricity from the generating facilities will be sold to an end user in violation of the Utility's exclusive right to provide electric service in its service area under Minnesota Statutes, Section 216B.37-44.

8. The Customer will operate their electric generating facilities so that they conform to the national, state, and local electric and safety codes, and the Customer will be responsible for the costs of conformance.

9. The Customer is responsible for the actual, reasonable costs of interconnection which are estimated to be $_____. The Customer will pay the Utility in this way:

_____

_____.

10. The Customer will give the Utility reasonable access to its property and electric generating facilities if the configuration of those facilities does not permit disconnection or testing from the Utility 's side of the interconnection. If the Utility enters the Customer's property, the Utility will remain responsible for its personnel.

11. The Utility may stop providing electricity to the Customer during a system emergency. The Utility will not discriminate against the Customer when it stops providing electricity or when it resumes providing electricity.

12. The Utility may stop purchasing electricity from the Customer when necessary for the Utility to construct, install, maintain, repair, replace, remove, investigate, or inspect any equipment or facilities within its electric system. The Utility may stop purchasing electricity from the Customer in the event the generating facilities listed in this contract are documented to be causing power quality, safety or reliability issues to the Utility's electric distribution system.

The Utility will notify the Customer in this way before it stops purchasing electricity:

_____

_____.

13. The Customer will keep in force general liability insurance against personal or property damage due to the installation, interconnection, and operation of its electric generating facilities. The amount of insurance coverage will be $ _____. (The amount must be consistent with requirements for like-sized facilities under the interconnection process or distributed generation tariff adopted by the Utility pursuant to Minnesota Statutes §216B.1611, subdivision 3, clause 2.)

14. The Customer and the Utility agree to attempt to resolve all disputes arising hereunder promptly and in a good faith manner.

15. The city council or city-appointed body governing the Utility has authority to consider and determine disputes, if any, that arise under this contract in

accordance with procedures in the rules it adopts implementing Minnesota Statutes Section 216B.164, pursuant to subdivision 9 thereunder.

16. This contract becomes effective as soon as it is signed by the Customer and the Utility. This contract will remain in force until either the Customer or the Utility gives written notice to the other that the contract is canceled. This contract will be canceled thirty (30) days after notice is given. If the listed electric generating facilities are not interconnected to the Utility's distribution system within twelve months of the contract being signed by the Customer and the Utility, the contract terminates. The Customer and the Utility may delay termination by mutual agreement.

17. Neither the Customer nor the Utility will be considered in default as to any obligation if the Customer or the Utility is prevented from fulfilling the obligation due to an act of nature, labor disturbance, act of public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, an order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or other cause beyond the Customer's or Utility's control. However, the Customer or Utility whose performance under this contract is hindered by such an event shall make all reasonable efforts to perform its obligations.

18. This contract can only be amended or modified by mutual agreement in writing signed by the Customer and the Utility.

19. The Customer must notify the Utility prior to any change in the electric generating facilities' capacity size or generating technology according to the interconnection process adopted by the Utility.

20. Termination of this contract is allowed (i) by the Customer at any time without restriction; (ii) by Mutual Agreement between the Utility and the Customer; (iii) upon abandonment or removal of electric generating facilities by the Customer; (iv) by the Utility if the electric generating facilities are continuously non-operational for any twelve (12) consecutive month period; (v) by the Utility if the Customer fails to comply with applicable interconnection design requirements or fails to remedy a violation of the interconnection process; or (vi) by the Utility upon breach of this contract by the Customer unless cured with notice of cure received by the Utility prior to termination.

21. In the event this contract is terminated, the Utility shall have the rights to disconnect its facilities or direct the Customer to disconnect its generating facilities.

22. This contract shall continue in effect after termination to the extent necessary to allow either the Utility or the Customer to fulfill rights or obligations that arose under the contract.

23. Transfer of ownership of the generating facilities shall require the new owners and the Utility to execute a new contract. Upon the execution of a new contract with the new owners this contract shall be terminated.

24. The Customer and the Utility shall at all times indemnify, defend, and save each other 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 Customer's or the Utility's performance of its obligations under this contract, except to the extent that such damages, losses or claims were caused by the negligence or intentional acts of the Customer or the Utility.

25. The Utility and the Customer will each be responsible for their own acts or omissions and the results thereof to the extent authorized by law and shall not be responsible for the acts or omissions of any others and the results thereof.

26. The Customer's and the Utility's liability to each other for failure to perform their obligations under this contract shall be limited to the amount of direct damage actually occurred. In no event, shall the Customer or the Utility be liable to each other 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.

27. The Utility does not give any warranty, expressed or implied, to the adequacy, safety, or other characteristics of the Customer's interconnected system.

28. This contract contains all the agreements made between the Customer and the Utility. The Customer and Utility are not responsible for any agreements other than those stated in this contract.

THE CUSTOMER AND THE UTILITY HAVE READ THIS CONTRACT AND AGREE TO BE BOUND BY ITS TERMS. AS EVIDENCE OF THEIR AGREEMENT, THEY HAVE EACH SIGNED THIS CONTRACT BELOW ON THE DATE LISTED BY SIGNER.

CUSTOMER	**UTILITY**
By:	By:
_____	_____
Printed Name:	Printed Name:
_____	_____
DATE:	DATE:
_____	_____

RESOLUTION #2022-09

RESOLUTION APPROVING SHAKOPEE PUBLIC UTILITIES COMMISSION'S COGENERATION AND SMALL POWER PRODUCTION TARIFF

WHEREAS, the Rules Governing the Interconnection of Cogeneration and Small Power Production Facilities with Shakopee Public Utilities Commission and Minnesota Statutes Section 216B.164 require the utility to annually adopt a Cogeneration and Small Power Production Tariff.

WHEREAS, the cogeneration and small power production tariff shall include a calculation of Shakopee Public Utilities' average retail utility energy rates, the rates at which Shakopee Public Utilities' purchases energy and capacity, and Shakopee Public Utilities' adopted interconnection process.

WHEREAS, the statute and rules cited above require the information contained in schedules 1, 2 and 3 described within.

WHEREAS, Schedule 1 shall contain the calculation of average retail utility energy rates for each Shakopee Public Utilities' customer class.

WHEREAS, Schedule 2 shall contain the rates at which Shakopee Public Utilities purchases energy and capacity from the wholesale supplier from which purchases may first be avoided.

WHEREAS, Schedule 3 shall contain Shakopee Public Utilities Commission's adopted interconnection process, or "distributed generation tariff" adopted in compliance with Minnesota Statutes Section 216B.1611, subd. 3(2), including standard contract forms to be used with customers interconnecting qualifying facilities as well as general technical interconnection and interoperability requirements.

WHERAS, these filings shall be maintained at the Shakopee Public Utilities Commission office and shall be made available for public inspection during normal business hours.

THEREFORE, BE IT RESOLVED that the Shakopee Public Utilities Commission approves the following Cogeneration and Small Power Production Tariff effective beginning April 1, 2022 or the nearest regular meter reading date following, and apply to usage/output after that date and to subsequent billing periods.

Passed in the regular session of the Shakopee Public Utilities Commission, this 21st day of March 2022.

_____

Commission President: Kathi Mocol

ATTEST:

_____

Commission Secretary: Greg Drent

Shakopee Public Utilities Commission

COGENERATION AND SMALL POWER PRODUCTION TARIFF

SCHEDULE 1 – AVERAGE RETAIL UTILITY ENERGY RATES

Average Retail Utility Energy Rates: Available to any Qualifying Facility of less than 40 kW capacity that does not select either Roll Over Credits, Simultaneous Purchase and Sale Billing or Time of Day rates.

Shakopee Public Utilities shall bill Qualifying Facilities for any excess of energy supplied by Shakopee Public Utilities above energy supplied by the Qualifying Facility during each billing period according to Shakopee Public Utilities applicable rate schedule. Shakopee Public Utilities shall pay the customer for the energy generated by the Qualifying Facility that exceeds that supplied by Shakopee Public Utilities during a billing period at the "average retail utility energy rate." The term "average retail utility energy rate" means, for any class of utility customer, the quotient of the total annual class revenue from sales of electricity minus the annual revenue resulting from fixed charges, divided by the annual class kilowatt-hour sales. Data from the most recent 12-month period available shall be used in the computation.

"Average retail utility energy rates" are as follows:

RESIDENTIAL		**2021**
TOTAL REVENUES	$	19,996,990.94
LESS UNDERGROUND RELOCATION FEES	$	129,252.19
LESS FIXED REVENUES (CUSTOMER CHARGE)	$	1,791,699.00
NET REVENUES	$	18,076,039.75
TOTAL KWH SALES	$	148,722,579
AVERAGE RETAIL ENERGY RATE	$	0.1215

COMMERCIAL		
TOTAL REVENUES	$	1,862,964.12
LESS WATER DIVISION ELECTRIC FOR PUMPING	$	287,291.89
LESS FIXED REVENUES (CUSTOMER CHARGE)	$	194,908.00
NET REVENUES	$	1,380,764.23
TOTAL KWH SALES		11,452,253
AVERAGE RETAIL ENERGY RATE	$	0.1206

INDUSTRIAL		
TOTAL REVENUES	$	29,889,334.21
LESS FIXED REVENUES (CUSTOMER CHARGE)	$	465,340.00
LESS DEMAND CHARGES	$	7,022,511.89
NET REVENUES	$	22,401,482.32
TOTAL KWH SALES		283,234,985
AVERAGE RETAIL ENERGY RATE	$	0.0791

SCHEDULE 1 – AVERAGE RETAIL UTILITY ENERGY RATES

SCHEDULE 2 – WHOLESALE SUPPLY RATES

Wholesale Supply Rates: A "non-generating utility" must list the rates at which it purchases energy and capacity. If the utility has more than one wholesale supplier, the rates listed are of that supplier from which purchases may first be avoided.

Shakopee Public Utilities purchases energy and capacity from Minnesota Municipal Power Agency (MMPA).

Last year, the average energy rate paid by Shakopee Public Utilities was

$0.0273 per kilowatt-hour.

Last year, the average capacity rate paid by Shakopee Public Utilities was

$0.0000 per kilowatt-hour.

These rates are used to calculate Shakopee Public Utilities "avoided costs" for purposes of calculating compensation to customers whose Qualifying Facilities are not eligible for compensation at Shakopee Public Utilities average retail utility energy rate or who elect compensation at another rate.

SCHEDULE 3 – INTERCONNECTION PROCESS

Interconnection Process: In order to provide for coordinated interconnection of customer-owned distributed energy resources and comply with Minnesota Statutes Section 216B.1611, subd. 3(2), Shakopee Public Utilities has adopted the "Minnesota Municipal Interconnection Process (M-MIP) 2022" as recognized by the Minnesota Municipal Utilities Association Board of Directors at its February 9, 2022, meeting and made publicly available at mmua.org.

General technical requirements may be found in the Minnesota Technical Interconnection and Interoperability Requirements (TIIR) as adopted by the Minnesota Public Utilities Commission on January 22, 2020 as part of DOCKET NO. E-999/CI-16-521.

For Shakopee Public Utilities' specific safety standards, required operating procedures for interconnected operations, and the functions to be performed by any control and protective apparatus, please contact Shakopee Public Utilities for its Electric Service Rules and Regulations.

SHAKOPEE PUBLIC UTILITIES COMMISSION

DISTRIBUTED ENERGY RESOURCE INTERCONNECTION PROCESS

Minnesota Municipal Interconnection Process

(M-MIP)

2022

Minnesota Municipal Interconnection Process (M-MIP)

Table of Contents

Minnesota Municipal Interconnection Process (M-MIP)

Booklet #1

Process Overview

Provided to all interconnection inquirers

Contents

Foreword

The State of Minnesota currently has interconnection process standards in effect to address the interconnection of distributed energy resources (DER) to the distribution grid. Under Minnesota Statute §216B.1611, cooperatives and municipals shall adopt an interconnection process that addresses the same issues as the interconnection process approved by the Minnesota Public Utilities Commission. The Minnesota Municipal Interconnection Process (Interconnection Process) applies to any DER no larger than 10-megawatts (MW) AC interconnecting to and operating in parallel with the electric distribution system of a municipal utility that has adopted it for use. This interconnection process document is designed to be customer-centric when explaining the steps and details to interconnect DER systems to the distribution grid.

The Interconnection Process is comprised of four booklets: 1) Process Overview, 2) Simplified Process, 3) Fast Track Process, and 4) Study Process and also contains several forms, including a final Interconnection Agreement. For the majority of DER interconnections, only the Process Overview and the Simplified Process booklet will apply. For larger and more complex DER interconnections, the Fast Track Process or the Study Process may apply.

As part of the Interconnection Process, an Interconnection Agreement is to be executed prior to interconnecting a DER system to the utility distribution grid. For most DER interconnections, the utility's Contract for Cogeneration and Small Power Production Facilities (Uniform Contract) will be used. For DER systems that do not fall under the terms of the Uniform Contract, the Minnesota Municipal Interconnection Agreement (MMIA) will apply.

The process to interconnect a DER system to the distribution grid starts with the submission of an Interconnection Application. Each track has different information that is requested in the application and the non-refundable interconnection application fees will vary. Both the electric utility and the interconnecting customer have timelines that are enforced to ensure a timely application review, contract execution and interconnection commissioning.

The key to a successful interconnection of a DER system is communication between all parties. Timely submission of the Interconnection Application prior to the purchase and installation of a DER system is strongly recommended. The utility encourages customers to ask questions throughout the interconnection process. Interconnecting DER system to the distribution grid is not an effortless process, but it does not need to be a problematic process either.

Key Terminology

1.1. Distributed Energy Resource

Distributed Energy Resources, DER, were often referred to in past interconnection processes as Distributed Generation, DG, and on occasion also interchanged with the term Qualifying Facility, QF. This Interconnection Process uses the term DER to address all types of generation and energy resources that can be interconnected to the electric Distribution System. DER technologies can include photovoltaic solar systems, wind turbines, storage batteries or diesel generators and are not limited to renewable types of technologies.

1.2. Point of Common Coupling (PCC) / Point of DER Connection (POC)

DER systems often reside behind the utility's revenue meter of a residence or business. The meter is normally the point of demarcation between the utility-owned equipment and the customer-owned equipment. The term Point of Common Coupling, PCC, is the demarcation location between the utility and the customer.

The Point of DER Connection, PoC, can be different from the PCC. The PoC is the location where a DER system would interconnect to the electrical system normally owned by the customer. For example, the PoC for a rooftop photovoltaic solar system may be the main electrical panel in a customer's home.

1.3. Capacity

Throughout the Interconnection Process will be references to the capacity of the DER system. In most cases, the capacity listed is referring to the Nameplate Capacity of the DER system. All capacity references will be in alternating current, AC.

There can be multiple DER systems with different PoCs that all have the same PCC submitted on a single interconnection application. The capacity for this type of interconnection would be the aggregate Nameplate Capacity of all DER systems at the individual PoCs. Additional examples of DER system arrangements can be seen in Section 13 under the definition of Point of Common Coupling.

2 Roles

2.1. Overview

During the interconnection process for a proposed DER system, there may be multiple entities involved in the application, approval and commissioning processes. The main entities that are involved during the Interconnection Process for a proposed DER system are the Interconnection Customer, the Application Agent and the DER

Interconnection Coordinator. Official definitions of each entity are defined in the Glossary (Section 13). Additional details are explained in the subsections below.

2.2. DER Interconnection Coordinator

The utility is referred to as the Area Electric Power Supply Operator in this Interconnection Process. The Area EPS Operator shall designate a DER Interconnection Coordinator to serve as a single point of contact from which general information on the application process may be obtained. The DER Interconnection Coordinator shall be available to provide coordination assistance with the Interconnection Customer but is not responsible for directly answering or resolving all of the issues involved in review and implementation of the interconnection process and standards.

The contact information of the DER Interconnection Coordinator will be posted on the Area EPS Operator's website if feasible, or available from the utility.

2.3. Interconnection Customer

The owner of the proposed DER system and the entity requesting interconnection to the distribution system.

2.4. Application Agent

The Interconnection Customer may designate, on the Interconnection Application or in writing after the application has been submitted, an Application Agent to serve as a single point of contact to coordinate with the DER Interconnection Coordinator on their behalf. Designation of an Application Agent does not absolve the Interconnection Customer from signing application documents and the responsibilities outlined in the Interconnection Process or in interconnection agreements. DER vendors, project managers or electricians are common entities that the Interconnection Customer may designate to perform this role.

2.5. Engineering Roles

Either party may designate a specific person to be a single point of contact to provide technical expertise during the Interconnection Process for themselves or their organization. The person to supply engineering expertise may be a third party such as an engineering consultant or manufacturer's engineer.

3 Processes

3.1. Overview

The Interconnection Process applies to any DER no larger than 10 MW AC interconnecting to and operating in parallel with an Area EPS distribution system in

Minnesota. Interested parties with plans to interconnect DER systems larger than 10 MW AC to the distribution system should contact the Area EPS Operator for a case-specific interconnection process. Federal Energy Regulatory Commission's (FERC) interconnection process will supersede any interconnection process the Area EPS Operator has for DER system interconnections that fall under the jurisdiction of FERC.

The Interconnection Process for DER is broken into three different tracks; the Simplified Process, the Fast Track Process, and the Study Process. The general classification of each track is summarized in Table 3.1 below.

Table 3.1. Interconnection Process Tracks

Track	DER Technology	Size Limitations
Simplified Process	Certified Inverter only	20 kW AC
Fast Track Process	All types	5 MW AC
Study Process	All types	10 MW AC

If engineering screens are failed during the application process, a proposed DER interconnection may be moved into a different track. When a proposed DER interconnection is moved into a different track, additional information may be requested, and additional fees may apply.

3.2. Importance of Process Timelines

It is very important to pay attention to timelines listed for each process track. The timelines exist for an orderly and efficient process to interconnect DER systems to the Distribution System. If a timeline is missed by an Interconnection Customer, without the Interconnection Customer requesting a Timeline Extension explained in Section 10, the Interconnection Application will be deemed withdrawn by the Area EPS Operator.

The Area EPS Operator also needs to abide by the timelines listed for each process track. The process for an Area EPS Operator to request Timeline Extensions is also addressed in Section 10.

Unless otherwise stated, all time frames are measured in Business Days. For purpose of measuring these time intervals, the time shall be computed so as to exclude the first and include the last day of the prescribed duration of time. Any communication sent or received after 4:30 p.m. Central Prevailing Time or on a Saturday, Sunday or Holiday shall be considered to be sent on the next Business Day.

3.3. Simplified Process

An application to interconnect a certified[1], inverter-based DER system no larger than 20 kilowatts (kW) shall be evaluated under the Simplified Process. A common form of DER inverter certification is UL 1741. Proposed DER systems that require Area EPS system modifications to accommodate the interconnection do not qualify for the Simplified Process. A transformer change, fusing upgrades or line extensions are common examples of Area EPS system modification. Simplified Process eligibility does not imply or indicate the Interconnection Application will pass the initial review screens. Failure to pass the screens will route the Interconnection Application to the Fast Track Process.

3.4. Fast Track Process

An application to interconnect a DER shall be evaluated under the Fast Track Process if the eligibility requirements are not exceeded in Table 3.2 and the application does not qualify for the Simplified Process. Fast Track eligibility for DERs is determined based upon the generator type, the size of the generator, voltage of the line, and the location and type of line at the Point of Common Coupling, (PCC). All synchronous and induction machines must be no larger than 2 MW to be eligible for Fast Track Process consideration.

Table 3.2. Fast Track Eligibility for DER

Line Voltage	Fast Track Eligibility[2] Regardless of Location	Fast Track Eligibility for certified, inverter-based DER on a Mainline[3] and ≤ 2.5 Electrical Circuit Miles from Substation[4]
< 5 kV	≤ 500 kW	≤ 500 kW
≥ 5 kV and < 15 kV	≤ 1 MW	≤ 2 MW
≥ 15 kV and < 30 kV	≤ 2 MW	≤ 4 MW
≥ 30 kV and ≤ 69 kV	≤ 4 MW	≤ 5 MW

In addition to the size threshold, the Interconnection Customer's proposed DER must meet the codes, standards and certification requirements found in Section 15 and Section 14.

[1] Additional information regarding certified equipment is found in Sections 14 and 15.

[2] Synchronous and induction machine eligibility is limited to no more than 2 MW even when line voltage is greater than 15 kV.

[3] For purposes of this table, a Mainline is the three-phase backbone of a circuit. It will typically constitute lines with wire sizes of 4/0 American wire gauge, 266 kcmil, 336.4 kcmil, 397.5 kcmil, 477 kcmil and 795 kcmil.

[4] An Interconnection Customer can determine this information about its proposed interconnection location in advance by requesting a pre-application report described in Section 5.

3.5. Study Process

An application to interconnect a DER that does not meet the Simplified Process or Fast Track Process eligibility requirements or does not pass the review as described in either process, shall be evaluated under the Study Process.

3.6. Process Assistance

Prior to submitting an Interconnection Application, the Interconnection Customer may ask the Area EPS Operator's DER Interconnection Coordinator which process track a proposed interconnection is subject to and about additional details regarding each process track.

An Interconnection Customer can obtain, through an informal request, general information about the Interconnection Process and about potentially Affected System(s) for a proposed interconnection at a specific location. The existing electric system information provided to the Interconnection Customer should include relevant system study results, interconnection studies, and other materials useful to an understanding of an interconnection at a particular point on the Area EPS Operator's System. Information will be provided to the extent such provision does not violate the privacy policies of the Area EPS Operator, confidentiality provisions of prior agreements or critical infrastructure requirements. The Area EPS Operator shall comply with reasonable requests for such information.

4 Interconnection Application

4.1. Overview

Each process track has different information that needs to be provided to the Area EPS Operator. Table 4.1 indicates which application is to be completed in its entirety and submitted to the Area EPS Operator to start the interconnection process for the proposed DER system.

Table 4.1. Interconnection Application

Process Track	Application
Simplified	Simplified Interconnection Application
Fast Track	Standard Interconnection Application
Study	Standard Interconnection Application

The Area EPS Operator will provide all necessary Interconnection Applications, Interconnection Process documents and sample interconnection agreements on its

website if possible. The Area EPS Operator will also accept Interconnection Applications submitted electronically either through a web portal or to an email address specified by the Area EPS Operator. The Area EPS Operator may allow the Interconnection Application to be submitted with an electronic signature.

4.2. Availability of Information

The Area EPS Operator will provide all necessary Interconnection Applications, Interconnection Process documents and sample interconnection agreements on its website if possible. If a website is not available, the applicable documents will be readily available at the Area EPS Operator's main office.

The Area EPS Operator will establish a public queue of active interconnection applications on its website once the Area EPS Operator has received at least 40 completed Interconnection Applications in a year. The public queue will be updated, at minimum, on a monthly basis.

4.3. Interconnection Application Process Fees

Each Interconnection Application submitted to the Area EPS Operator must include the appropriate interconnection application process fee prior to the Area EPS Operator reviewing the Interconnection Application. The required process fee for each process track is listed in Table 4.2.

Table 4.2. Interconnection Application Process Fee

Process Track		Process Fee
Simplified		$100
Fast Track	Certified[5] System	$100 + $1/kW
	Non-Certified System	$100 + $2/kW
Study		$1,000 + $2/kW down payment. Additional study fees may apply.

4.4. Application Review Timelines

The Interconnection Application shall be date- and time-stamped upon initial, and if necessary, resubmission receipt. The Area EPS Operator shall notify the Interconnection Customer if the Interconnection Application is deemed incomplete within ten (10) Business Days. This notification shall include a written list detailing all information that must be provided to complete the Interconnection Application. Depending on the process track the Interconnection Customer has between five (5) and

[5] Additional information regarding certified equipment is found in Sections 14 and 15.

ten (10) Business Days to provide the missing information unless additional time is requested with valid reasons. Failure to submit the requested information within the stated timeline will result in the Interconnection Application being withdrawn.

An Interconnection Application will be deemed complete upon submission to the Area EPS Operator when all documents, fees and information required with the Interconnection Application adhering to Minnesota Technical Requirements are included. The time- and date- stamp of the completed Interconnection Application shall be accepted as the qualifying date for purposes of establishing a queue position as described in Section 4.7.

Depending on the process track the Area EPS Operator has either a total of twenty (20) Business Days or twenty-five (25) Business Days to complete the Interconnection Application review and submit notice back to the Interconnection Customer stating the proposed DER system may proceed with the interconnection process or the proposed DER system requires additional engineering studies. The period of time when waiting for the Interconnection Customer to provide missing information is not included in the Area EPS Operator's twenty (20) Business Days or twenty-five (25) Business Days review timeline.

4.5. Comparability

The Area EPS Operator shall receive, process and analyze all Interconnection Applications in a timely manner. The Area EPS Operator shall use the same Reasonable Efforts in processing and analyzing Interconnection Applications from all Interconnection Customers.

4.6. Changing Process Queues

During the review of the initially submitted Interconnection Application for the proposed DER system, the Area EPS Operator may determine the proposed DER system should be in a different process track. For proposed DER systems that are moved into a different process track after submittal of the initial application, the difference between the originally submitted processing fee and the current process track's processing fee will be assessed. In addition, the Area EPS Operator may request the Interconnection Customer to provide additional information regarding the proposed DER system.

4.7. Queue Position

The Area EPS Operator shall maintain a single, administrative queue and may manage the queue by geographical region. The queue position of each completed Interconnection Application is used to determine the engineering review. The queue

position is also used to determine the cost responsibility for system upgrades necessary to accommodate the interconnection.
An Interconnection Application will retain its queue number even when it is moved into a different process track. An Interconnection Application can lose its queue position if the Interconnection Customer misses timelines in the applicable process track. The Interconnection Customer and Area EPS Operator have the opportunity to request timeline extensions which are explained in detail in Section 10.

4.8. Site Control

Documentation of site control must be submitted with the Interconnection Application. Site control may be demonstrated by any of the following:

- Ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing the DER system.

- An option to purchase or acquire a leasehold site for constructing the DER system.

- An exclusivity or other business relationship between the Interconnection Customer and the entity having the right to sell, lease, or grant to the Interconnection Customer the right to possess or occupy a site for constructing the DER system.

For DER in the Simplified Process, proof of site control may be demonstrated by the site owner's signature on the Simplified Interconnection Application.

5 Pre-Application Report

5.1. Pre-Application Report Requests

The Interconnection Customer may submit a Pre-Application Report Request, including a non-refundable fee of $300, for a Pre-Application Report on a proposed project at a specific site. The Interconnection Customer must fill out the Pre-Application Request form as completely as possible. The Area EPS Operator shall provide the readily available data listed in Section 5.3 within fifteen (15) Business Days of receipt of a completed request form and payment. The Pre-Application Report produced by the Area EPS Operator is non-binding, does not confer any rights, and does not preclude the Interconnection Customer from any interconnection process steps including submission of the Interconnection Application.

5.2. Information Provided

Using the information provided in the Pre-Application Report Request form, the Area EPS Operator will identify the substation/area bus, bank or circuit likely to serve the

proposed PCC. This selection by the Area EPS Operator does not necessarily indicate, after application of the screens and/or study, that this would be the circuit the project ultimately connects to. The Interconnection Customer must request additional Pre-Application Reports if information about multiple PCCs is requested.

The Pre-Application Report will only include existing data. A request for a Pre-Application Report does not obligate the Area EPS Operator to conduct a study or other analysis of the proposed DER in the event that data is not readily available. The Area EPS Operator will provide the Interconnection Customer with the data that is available. The confidentiality provisions in Section 12.1 apply to Pre-Application Reports.

5.3. Pre-Application Report Components

The Pre-Application Report shall include the following pieces of information provided the data currently exists and is readily available.

- Total capacity (in megawatts (MW)) of substation/area bus, bank or circuit based on normal or operating ratings likely to serve the proposed Point of Common Coupling.

- Existing aggregate generation capacity (in MW) interconnected to a substation/area bus, bank or circuit (i.e., amount of generation online) likely to serve the proposed Point of Common Coupling.

- Aggregate queued generation capacity (in MW) for a substation/area bus, bank or circuit (i.e., amount of generation in the queue) likely to serve the proposed Point of Common Coupling.

- Available capacity (in MW) of substation/area bus or bank and circuit likely to serve the proposed Point of Common Coupling (i.e., total capacity less the sum of existing aggregate generation capacity and aggregate queued generation capacity).

- Substation nominal distribution voltage and/or transmission nominal voltage if applicable.

- Nominal distribution circuit voltage at the proposed Point of Common Coupling.

- Approximate circuit distance between the proposed Point of Common Coupling and the substation.

- Relevant line section(s) actual or estimated peak load and minimum load data, including daytime minimum load and absolute minimum load, when available.

- Whether the Point of Common Coupling is located behind a line voltage regulator.
- Number and rating of protective devices and number and type (standard, bi-directional) of voltage regulating devices between the proposed Point of Common Coupling and the substation/area. Identify whether the substation has a load tap changer.

- Number of phases available on the Area EPS medium voltage system at the proposed Point of Common Coupling. If a single phase, distance from the three-phase circuit.

- Limiting conductor ratings from the proposed Point of Common Coupling to the distribution substation.

- Whether the Point of Common Coupling is located on a spot network, grid network, or radial supply.

- Based on the proposed Point of Common Coupling, existing or known constraints such as, but not limited to, electrical dependencies at that location, short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints, or secondary networks.

6 Capacity of the Distributed Energy Resources

6.1. Existing DER System Expansion

If the Interconnection Application is for an increase in capacity to an existing DER system, the Interconnection Application shall be evaluated on the basis of the total new alternating current (AC) capacity of the DER. The maximum capacity for the DER shall be the aggregate maximum Nameplate Rating unless the conditions in Section 6.3 are met.

6.2. New DER Systems

An Interconnection Application for a DER that includes multiple energy production devices, (i.e. solar and storage), at a site for which the Interconnection Customer seeks a simple Point of Common Coupling, shall be evaluated on the basis of the aggregated maximum Nameplate Rating unless the conditions in Section 6.3 are met.

6.3. Limited Capacity

A DER system may include devices, (i.e. control systems, power relays or other similar device settings), that can limit the maximum capacity at which the DER system can generate into the Area EPS Operator’s distribution system. For DER system that include

capacity limited devices, the Interconnection Customer must obtain the Area EPS Operator's agreement to consider the DER system with the Nameplate Rating as the limited capacity. The Area EPS Operator's agreement shall not be unreasonably withheld provided proper documentation is provided showing the effective limit active power output will not adversely affect the safety and reliability of the Area EPS Operator's distribution system. If the Area EPS Operator does not agree, the Interconnection Application must be withdrawn or revised to specify the maximum capacity that the DER system is capable of injecting into the Area EPS Operator's distribution system without such limitations. Nothing in this section shall prevent the Area EPS Operator from considering a higher output, (i.e. aggregate Nameplate Rating), if the limitations do not provide adequate assurance, when evaluating the system impacts.

7 Modification to Interconnection Applications

7.1. Procedures

At any time after the Interconnection Application is deemed complete, the Interconnection Customer or the Area EPS Operator may identify modifications to the proposed DER system that may improve costs and benefits (including reliability) of the proposed DER system and the ability for the Area EPS Operator to accommodate the proposed DER system. The Interconnection Customer shall submit to the Area EPS Operator in writing all proposed modifications to any information provided in the Interconnection Application. The Area EPS Operator cannot unilaterally modify the Interconnection Application.

Additional information regarding modifications to interconnection applications is found in each process track document.

8 Interconnection Agreements

8.1. Timelines

After the Interconnection Application has been approved by the Area EPS Operator, the Area EPS Operator shall provide the Interconnection Customer with an executable Interconnection Agreement within five (5) Business Days. The Interconnection Customer shall have thirty (30) Business Days to sign and return the Interconnection Agreement to the Area EPS Operator. The Area EPS Operator shall sign the Interconnection Agreement within five (5) business days after receiving the signed Interconnection Agreement from the Interconnection Customer.

If the Interconnection Customer fails to return a signed Interconnection Agreement to the Area EPS Operator within thirty (30) Business Days and fails to request an extension as explained in Section 10, the Interconnection Application will be deemed withdrawn.

8.2. Types of Agreements

There are two main types of Interconnection Agreements that may be executed with an approved Interconnection Application. In general, Interconnection Customers with a proposed DER system that qualifies for the Simplified Process track will sign the Area EPS Operator's Uniform Contract for Cogeneration and Small Power Production Facilities (Uniform Contract). Proposed DER systems less than 100 kW that are under the Fast Track process may also sign the Uniform Contract. All other sized DER system will sign the Minnesota Municipal Interconnection Agreement (MMIA). Area EPS Operators who do not purchase the excess generation of the proposed DER system will also require the MMIA to be executed for any size of DER system.

Table 8.1. Interconnection Agreements

Process Track		**Interconnection Agreement**
Simplified		Uniform Contract
Fast Track	Qualifies for Net Energy Billing	Uniform Contract
	Less than 100 kW & Area EPS Agrees to Purchase Excess Generation	Uniform Contract
	All Other DER systems	MMIA
Study		MMIA

Interconnection Customers may choose to sign the MMIA in lieu of the Uniform Contact. A separate power purchase agreement will also need to be executed if the Uniform Contract is not utilized. Interconnection of the proposed DER system will not occur until a signed Uniform Contract or the MMIA is returned to the Area EPS Operator no later than five (5) days prior to scheduled testing and inspection.

9 Interconnection

9.1. Metering

Any metering requirements necessitated by the use of the DER system shall be installed at the Interconnection Customer's expense. The metering requirement costs will be included in the final invoice of interconnection costs to the Interconnection Customer. The Interconnection Customer is also responsible for metering replacement costs not covered in the Interconnection Customer's general customer charge. The Area EPS Operator may charge Interconnection Customers an ongoing metering-related charge for an estimate of ongoing metering-related costs specifically demonstrated.

9.2. Inspection, Testing and Commissioning

The Interconnection Customer shall arrange for the inspection and testing of the DER system and the Customer's Interconnection Facilities prior to interconnection pursuant to Minnesota Technical Requirements. Commissioning tests of the Interconnection Customer's installed equipment shall be performed pursuant to applicable codes and standards of Minnesota's Technical Requirements and Section 15.

The Interconnection Customer shall notify the Area EPS Operator of testing and inspection no fewer than five (5) Business Days in advance, or as may be agreed to by the Parties. Depending on the process track, either a Certificate of Completion or a testing procedure shall be submitted to the Area EPS Operator prior to the testing and inspection date. The Area EPS Operator shall send qualified personnel to the DER site to inspect the interconnection and witness the testing. Testing and inspection shall occur on a Business Day at a mutually agreed upon time and date. The Area EPS Operator may waive the right to witness the testing.

9.3. Interconnection Costs

The Interconnection Customer shall pay for the actual cost of the Interconnection Facilities and Distribution Upgrades along with the Area EPS Operator's cost to commission the proposed DER system. An estimate of the interconnection costs shall be stated in the Uniform Contract or MMIA.

9.4. Technical Requirements

The Area EPS Operator shall use Reasonable Efforts to provide the Interconnection Customer the Minnesota Technical Requirements by providing the document with the notice of approval of the interconnection application or by providing a website link to the document. Additionally, the Area EPS Operator shall notify the Interconnection Customer of any changes to these requirements as soon as they are known. Unless notified by the Area EPS Operator, the Interconnection Customer only needs to be in compliance with the current version of the Minnesota Technical Requirements at the time of interconnection.

9.5. Authorization for Parallel Operations

The Interconnection Customer shall not operate its DER system in parallel with the Area EPS Operator's distribution system without prior written authorization from the Area EPS Operator. The Area EPS Operator shall provide such authorization within three (3) Business Days from when the Area EPS Operator receives notification that the Interconnection Customer has complied with all applicable parallel operations requirements; the completion of a successful testing and inspection of the DER system and all payments for issued bills related to the interconnection process that are past

due have been paid in full. Such authorization shall not be unreasonably withheld, conditioned or delayed.

10 Extension of Timelines

10.1. Reasonable Efforts

The Area EPS Operator shall make Reasonable Efforts to meet all time frames provided in these procedures. If the Area EPS Operator cannot meet a deadline provided herein, it must notify the Interconnection Customer in writing within three (3) Business Days after the deadline to explain the reason for the failure to meet the deadline and provide an estimated time by which it will complete the applicable interconnection procedure in the process.

10.2. Extensions

For applicable time frames described in these procedures, the Interconnection Customer may request, in writing, one extension equivalent to half of the time originally allotted (e.g., ten (10) Business Days for a twenty (20) Business Days original time frame) which the Area EPS Operator may not unreasonably refuse. No further extensions for the applicable time frame shall be granted absent a Force Majeure Event or other similarly extraordinary circumstance.

11 Disputes

11.1. Procedures

The Parties agree to make good faith efforts to attempt to resolve all disputes arising out of the interconnection process and associated study and Interconnection Agreements. The Parties agree to follow the established dispute resolution policy adopted by the Area EPS Operator.

12 Clauses

12.1. Confidentiality

Confidential Information shall mean any confidential and/or proprietary information provided by one Party to the other Party that is clearly marked or otherwise designated "Confidential." For purposes of these procedures, design, operating specifications, and metering data provided by the Interconnection Customer may be deemed Confidential Information regardless of whether it is clearly marked or otherwise designated as such. If requested by either Party, the other Party shall provide in writing the basis for asserting that the information warrants confidential treatment. Parties providing a Governmental Authority trade secret, or privileged or otherwise not public or nonpublic data under Minnesota Government Data Practices Act, Minnesota Statutes

Chapter 13, shall identify such data consistent with the Commission's September 1, 1999 Revised Procedures for Handling Trade Secret and Privileged Data.

Confidential Information does not include information previously in the public domain with proper authorization, required to be publicly submitted or divulged by Governmental Authorities (after notice to the other Party and after exhausting any opportunity to oppose such publication or release), or necessary to be publicly divulged in an action to enforce these procedures. Each Party receiving Confidential Information shall hold such information in confidence and shall not disclose it to any third party nor to the public without prior written authorization from the Party providing that information, except to fulfill obligations under these procedures, or to fulfill legal or regulatory requirements that could not otherwise be fulfilled by not making the information public.

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 to any confidential information furnished.

Critical infrastructure information or information that is deemed or otherwise designated by a Party as Critical Energy/Electric Infrastructure Information (CEII) pursuant to FERC regulation, 18 C.F.R. §388.133, as may be amended from time to time, may be subject to further protections for disclosure as required by FERC or FERC regulations or orders and the disclosing Party's CEII policies. Each Party shall employ at least the same standard of care to protect Confidential Information obtained from the other Party as it employs to protect its own Confidential Information.

Each Party is entitled to equitable relief, by injunction or otherwise, to enforce its rights under this provision to prevent the release of Confidential Information without bond or proof of damages and may seek other remedies available at law or in equity for breach of this provision.

12.2. Non-Warranty

The Area EPS Operator does not give any warranty, expressed or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, operated, installed or maintained by the Interconnection Customer, including without limitation the DER and any structures, equipment, wires, appliances or devices not owned, operated or maintained by the Area EPS Operator. The Area EPS Operator does not guarantee uninterrupted power supply to the DER and will operate the Distribution System with the same reliability standards for the entire customer base.

12.3. Indemnification

Each Party is protected from liability incurred to third parties as a result of carrying out the provisions of this interconnection process and subsequent interconnection agreements. The Parties 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 to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or inactions of its obligations under this agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

This indemnification obligation shall apply notwithstanding any negligent or intentional acts, errors or omissions of the indemnified Party, but the indemnifying Party's liability to indemnify the indemnified Party shall be reduced in proportion to the percentage by which the indemnified Party's negligent or intentional acts, errors or omissions caused the damages.

Neither Party shall be indemnified for its damages resulting from its sole negligence, intentional acts or willful misconduct. These indemnity provisions shall not be construed to relieve any insurer of its obligation to pay claims consistent with the provisions of a valid insurance policy.

If an indemnified person is entitled to indemnification under this article as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under this article, to assume the defense of such claim, such indemnified person may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

If an indemnifying party is obligated to indemnify and hold any indemnified person harmless under this article, the amount owing to the indemnified person shall be the amount of such indemnified person's actual loss, net of any insurance or other recovery.

Promptly after receipt by an indemnified person of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this article may apply, the indemnified person shall notify the indemnifying party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying party.

12.4. Limitation of Liability

Each party's liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of 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 an indirect, incidental, special, consequential, or punitive damages of any kind whatsoever, except as allowed under in Section 12.3.

13 Glossary

Affected System – Another Area EPS Operator's System, Transmission Owner's Transmission System, or Transmission System connected generation which may be affected by the proposed interconnection.

Applicant Agent – A person designated in writing by the Interconnection Customer to represent or provide information to the Area EPS on the Interconnection Customer's behalf throughout the interconnection process.

Area EPS – The electric power distribution system connected at the Point of Common Coupling.

Area EPS Operator – An entity that owns, controls, or operates the electric power distribution systems that are used for the provision of electric service in Minnesota.

Business Day – Monday through Friday, excluding Holidays as defined by Minn. Stat. §645.44, Subdivision 5. Any communication to have been sent or received after 4:30 p.m. Central Prevailing Time or on a Saturday, Sunday or holiday shall be considered to have been sent on the next Business Day.

Certified Equipment – Certified equipment is equipment that has been tested by a nationally recognized lab meeting a specific standard. For DER systems, a UL 1741 listing is a common form of DER inverter certification. Additional information is contained in Sections 14 and 15.

Confidential Information – Any confidential and/or proprietary information provided by one Party to the other Party and is clearly marked or otherwise designated "Confidential." All procedures, design, operating specifications, and metering data provided by the Interconnection Customer may be deemed Confidential Information. See Section 12.1 for further information.

Distributed Energy Resource (DER) – A source of electric power that is not directly connected to a bulk power system or central station service. DER includes both generators and energy storage technologies capable of exporting active power to an EPS. An interconnection system or a supplemental DER device that is necessary for compliance with this standard is part of a DER. For the purpose of the Interconnection Process and interconnection agreements, the DER includes the Customer's Interconnection Facilities but shall not include the Area EPS Operator's Interconnection Facilities.

Distribution System – The Area EPS facilities which are not part of the Local EPS, Transmission System or any generation system.

Distribution Upgrades – The additions, modifications, and upgrades to the Distribution System at or beyond the Point of Common Coupling to facilitate interconnection of the DER and render the distribution service necessary to effect the Interconnection Customer's connection to the Distribution System. Distribution Upgrades do not include Interconnection Facilities.

Electric Power System (EPS) – The facilities that deliver electric power to a load.

Fast Track Process – The procedure as described in the Interconnection Process - Fast Track Process for evaluating an Interconnection Application for a DER that meets the eligibility requirements of Section 3.4.

Force Majeure Event – An act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, an order, regulation, or restriction imposed by governmental, military or lawfully established civilian authorities, or another cause beyond a Party's control. A Force Majeure Event does not include an act of negligence or intentional wrongdoing.

Good Utility Practice – Any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and act which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

Governmental Authority – Any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, the Area EPS Operator, or any Affiliate thereof. The governing authority of the municipal utility is the authority governing interconnection requirements unless otherwise provided for in the Minnesota Technical Requirements.

Interconnection Agreement – The terms and conditions between the Area EPS Operator and Interconnection Customer (Parties). See Section 8 for when the Uniform Contract or Minnesota Municipal Interconnection Agreement applies.

Interconnection Application – The Standard or Simplified Interconnection Application, as applicable, pursuant to Section 4.

Interconnection Customer – The person or entity named on the electric utility bill for a premise who proposes to interconnect a DER on that premise with the Area EPS Operator's Distribution System. The Interconnection Customer is responsible for ensuring the DER is designed, operated and maintained in compliance with the Minnesota Technical Requirements.

Interconnection Facilities – The Area EPS Operator's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities

include all facilities and equipment between the DER and the Point of Common Coupling, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the DER to the Area EPS Operator's System. Some examples of Customer Interconnection Facilities include supplemental DER devices, inverters, and associated wiring and cables up to the Point of DER Connection. Some examples of Area EPS Operator Interconnection Facilities include sole use facilities such as line extensions, controls, relays, switches, breakers, transformers and shall not include Distribution Upgrades or Network Upgrades.

Interconnection Process – The Area EPS Operator's interconnection standards in this document.

Material Modification – A modification to machine data, equipment configuration or to the interconnection site of the DER at any time after receiving notification by the Area EPS Operator of a complete Interconnection Application that has a material impact on the cost, timing, or design of any Interconnection Facilities or Upgrades, or a material impact on the cost, timing or design of any Interconnection Application with a later Queue Position or the safety or reliability of the Area EPS.[6]

MN Technical Requirements – The Minnesota Technical Interconnection and Interoperability Requirements (TIIR) as adopted by the Minnesota Public Utilities Commission on January 22, 2022 as part of Docket No. E-999/CI-16-521.

Nameplate Rating – Nominal voltage (V), current (A), maximum active power (kWac), apparent power (kVA), and reactive power (kVar) at which a DER is capable of sustained operation. For a Local EPS with multiple DER units, the aggregate nameplate rating is equal to the sum of all DERs nameplate rating in the Local EPS. For purposes of the Attachment V in the Interconnection Agreement, the DER system's capacity may, with the Area EPS's agreement, be limited thought use of control systems, power relays or similar device settings or adjustments as identified in IEEE 1547. The nameplate ratings referenced in the Interconnection Process are alternating current nameplate DER ratings at the Point of DER Coupling.

[6] A Material Modification shall include, but may not be limited to, a modification from the approved Interconnection Application that: (1) changes the physical location of the point of common coupling such that it is likely to have an impact on technical review; (2) increases the nameplate rating or output characteristics of the Distributed Energy Resource; (3) changes or replaces generating equipment, such as generator(s), inverter(s), transformers, relaying, controls, etc., and substitutes equipment that is not like-kind substitution in certification, size, ratings, impedances, efficiencies or capabilities of the equipment; (4) changes transformer connection(s) or grounding; and/or (5) changes to a certified inverter with different specifications or different inverter control settings or configuration. A Material Modification shall not include a modification from the approved Interconnection Application that: (1) changes the ownership of a Distributed Energy Resource; (2) changes the address of the Distributed Energy Resource, so long as the physical point of common coupling remains the same; (3) changes or replaces generating equipment such as generator(s), inverter(s), solar panel(s), transformers, relaying, controls, etc. and substitutes equipment that is a like-kind substitution in certification, size, ratings, impedances, efficiencies or capabilities of the equipment; and/or (4) increases the DC/AC ratio but does not increase the maximum AC output capability of the Distributed Energy Resource in a way that is likely to have an impact on technical review.

Network Upgrades – Additions, modifications, and upgrades to the Transmission System required at or beyond the point at which the DER interconnects with the Area EPS Operator's System to accommodate the interconnection with the DER to the Area EPS Operator's System. Network Upgrades do not include Distribution Upgrades.

Operating Requirements – Any operating and technical requirements that may be applicable due to the Transmission Provider's technical requirements or Minnesota Technical Requirements, including those set forth in the Interconnection Agreement.

Party or Parties – The Area EPS Operator and the Interconnection Customer.

Point of Common Coupling (PCC) – The point where the Interconnection Facilities connect with the Area EPS Operator's Distribution System. See figure 1. Equivalent, in most cases, to "service point" as specified by the Area EPS Operator and described in the National Electrical Code and the National Electrical Safety Code.

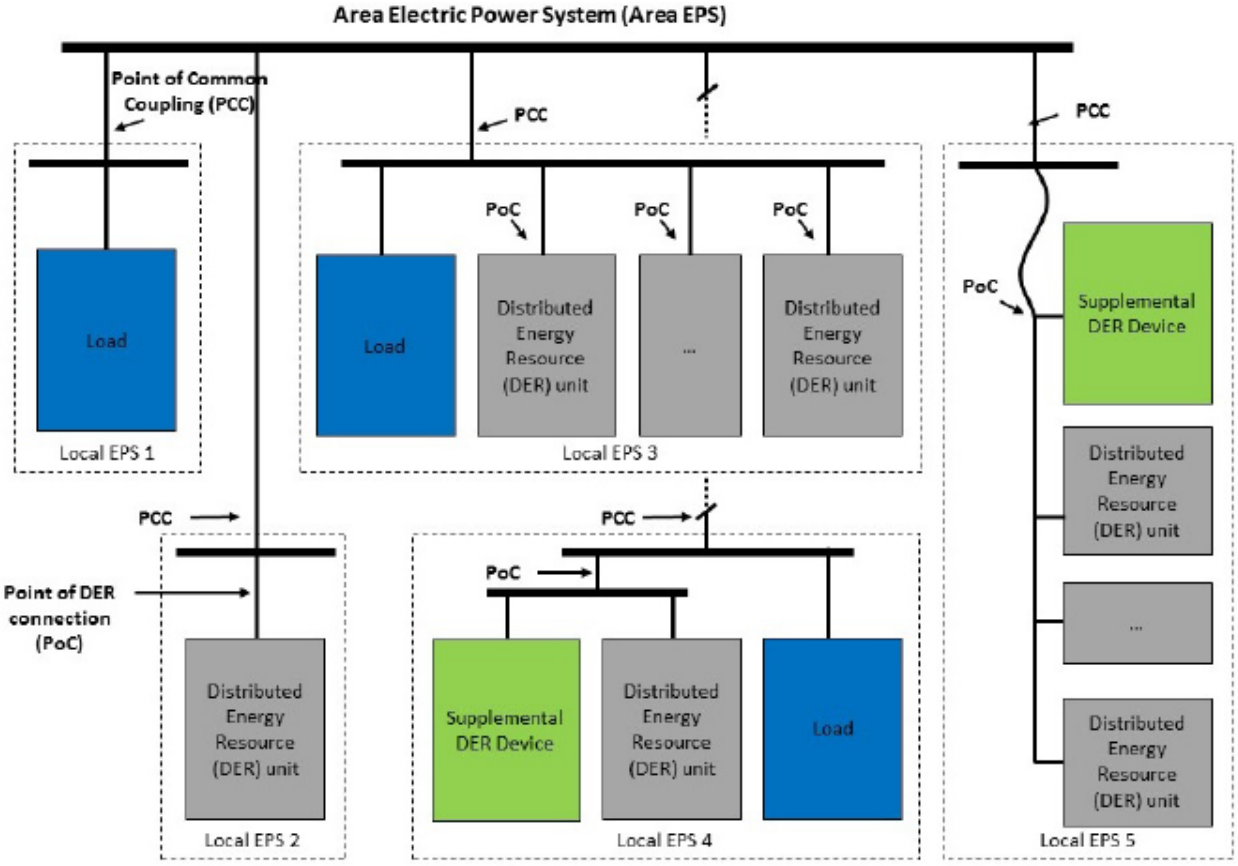

Figure 1: Point of Common Coupling and Point of DER Connection (Source: IEEE 1547)

Point of DER Connection (PoC) – When identified as the Reference Point of Applicability, the point where an individual DER is electrically connected in a Local EPS and meets the requirements of this standard exclusive of any load present in the respective part of the Local EPS (e.g., terminals of the inverter when no supplemental DER device is required). For DER

unit(s) that are not self-sufficient to meet the requirements without a supplemental DER device(s), the Point of DER Connection is the point where the requirements of this standard are met by DER in conjunction with a supplemental DER device(s) exclusive of any load present in the respective part of the Local EPS.

Queue Position – The order of a valid Interconnection Application, relative to all other pending valid Interconnection Applications, that is established based upon the date- and time- of receipt of the complete Interconnection Application as described in Section 4.7.

Reasonable Efforts – With respect to an action required to be attempted or taken by a Party under these procedures, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

Reference Point of Applicability – The location, either the Point of Common Coupling or the Point of DER Connection, where the interconnection and interoperability performance requirements specified in IEEE 1547 apply. With mutual agreement, the Area EPS Operator and Customer may determine a point between the Point of Common Coupling and Point of DER Connection. See Minnesota Technical Requirements for more information.

Simplified Process – The procedure for evaluating an Interconnection Application for a certified inverter-based DER no larger than 20 kW that uses the screens described in the Interconnection Process – Simplified Process document. The Simplified Process includes simplified procedures.

Study Process – The procedure for evaluating an Interconnection Application that includes the scoping meeting, system impact study, and facilities study.

Transmission Owner – The entity that owns, leases or otherwise possesses an interest in the portion of the Transmission System relevant to the Interconnection.

Transmission Provider – The entity (or its designated agent) that owns, leases, controls, or operates transmission facilities used for the transmission of electricity. The term Transmission Provider includes the Transmission Owner when the Transmission Owner is separate from the Transmission Provider. The Transmission Provider may include the Independent System Operator or Regional Transmission Operator.

Transmission System – The facilities owned, leased, controlled or operated by the Transmission Provider or the Transmission Owner that are used to provide transmission service. See the Commission's July 26, 2000 Order Adopting Boundary Guidelines for Distinguishing Transmission from Generation and Distribution Assets in Docket No. E-999/CI-99-1261.

Uniform Contract – The Area EPS Operator's agreement form for Cogeneration and Small Power Production Facilities that may be applied to all qualifying new and existing interconnections between the Area EPS Operator and a DER system having capacity less than 40 kilowatts.

Upgrades – The required additions and modifications to the Area EPS Operator's Transmission or Distribution System at or beyond the Point of Interconnection. Upgrades may be Network Upgrades or Distribution Upgrades. Upgrades do not include Interconnection Facilities.

14 Certification of DER Equipment

Distributed Energy Resource (DER) equipment proposed for use in an interconnection system shall be considered certified for interconnected operation if the following criteria is met:

1) It has been tested in accordance with industry standards for continuous utility interactive operation in compliance with the appropriate codes and standards referenced below by any Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration to test and certify interconnection equipment pursuant to the relevant codes and standards listed in the Overview Process,

2) It has been labeled and is publicly listed by such NRTL at the time of the interconnection application, and

3) Such NRTL makes readily available for verification all test standards and procedures it utilized in performing such equipment certification, and, with consumer approval, the test data itself. The NRTL may make such information available on its website and by encouraging such information to be included in the manufacturer's literature accompanying the equipment.

The Interconnection Customer must verify that the assembly and use of the equipment falls within the use or uses for which the equipment was tested, labeled, and listed by the NRTL.

Certified equipment shall not require further type-test review, testing, or additional equipment to meet the requirements of this interconnection procedure; however, nothing herein shall preclude the need for a DER Design Evaluation or an on-site commissioning test by the parties to the interconnection as provided for in the Minnesota Technical Requirements.

If the certified equipment package includes only interface components (switchgear, inverters, or other interface devices), then an Interconnection Customer must show that the generator or other electric source being utilized with the equipment package is compatible with the equipment package and is consistent with the testing and listing specified for this type of interconnection equipment.

Provided the generator or electric source, when combined with the equipment package, is within the range of capabilities for which it was tested by the NRTL and does not violate the interface components' labeling and listing performed by the NRTL, no further type-test review, testing or additional equipment on the customer side of the Point of Common Coupling shall be required to be considered certified for the purposes of this interconnection procedure; however, nothing herein shall preclude the need for a DER design evaluation or an on-site

commissioning test by the parties to the interconnection as provided for in the Minnesota Technical Requirements.

An equipment package does not include equipment provided by the Area EPS.

15 Certification Codes and Standards

The existing Minnesota Technical Requirements and the following standards shall be used in conjunction with the Interconnection Process. The process has started to update the Technical Requirements to meet IEEE 1547-2018. Once that process is completed, the updated DER Technical Interconnection and Interoperability Requirements will supersede this section.

When the stated version of the following standards is superseded by an approved revision then that revision shall apply:

IEEE 1547-2003 IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems

IEEE 1547a-2014 IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems – Amendment 1

IEEE 1547.1-2005 IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems

IEEE 1547.1a-2015 (Amendment to IEEE Std 1547.1-2005) IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems – Amendment 1

UL 1741 Inverters, Converters, Controllers, and Interconnection System Equipment for Use in Distributed Energy Resources (2010)

NFPA 70 (2017), National Electrical Code

IEEE Std C37.90.1 (2012) (Revision of IEEE Std C37.90.1-2002), IEEE Standard for Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems Associated with Electric Power Apparatus

IEEE Std C37.90.2 (2004) (Revision of IEEE Std C37.90.2-1995), IEEE Standard for Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

IEEE Std C37.108-20021989 (Revision of C37.108-19892002), IEEE Guide for the Protection of Network Transformers

IEEE Std C57.12.44-2014 (Revision of IEEE Std C57.12.44-2005), IEEE Standard Requirements for Secondary Network Protectors

IEEE Std C62.41.2-2002, IEEE Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and Less) AC Power Circuits

IEEE Std C62.41.2-2002_Cor 1-2012 (Corrigendum to IEEE Std C62.41.2-2002) – IEEE Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and Less) AC Power Circuits Corrigendum 1: Deletion of Table A.2 and Associated Text

IEEE Std C62.45-2002 (Revision of IEEE Std C62.45-1992) – IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000 V and less) AC Power Circuits

ANSI C84.1-(2016) Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)

IEEE Standards Dictionary Online, [Online]

NEMA MG 1-2016, Motors and Generators

IEEE Std 519-2014, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems

Minnesota Municipal Interconnection Process (M-MIP)

Booklet #2

Simplified Process

For interconnecting up to 20 kilowatts

(Used for most homes and businesses)

Contents

1 Applicability

1.1. Capacity Limit

The Simplified Process only is applicable to certified inverter-based Distributed Energy Resource (DER) systems with the capacity of 20 kW AC or less. The capacity is determined by the aggregated summation of the Nameplate Rating of the inverters that make up the DER system. Additional information regarding the capacity limits can be seen in Section 6 of the Process Overview document.

1.2. Certified Inverters

A certified inverter will have certification of meeting the current version of the IEEE standard 1547. A common inverter certification is UL 1741. Note that certified inverters may still need to have a setting adjusted to meet the technical requirements of the Area EPS Operator. Additional information regarding certified equipment is found in Section 14 and Section 15 of the Process Overview document.

2 Application Submission

2.1. Simplified Process Application

The Interconnection Customer shall complete the Simplified Interconnection Application and submit it to the Area EPS Operator to initialize the Interconnection Process. A completed Simplified Interconnection Application will include the following:

- A completed Simplified Interconnection Application signed by the Interconnection Customer,
- A non-refundable processing fee of $100,
- An aerial site layout drawing of the proposed DER system,
- A one-line diagram of the proposed DER system showing the point of common coupling, PCC, to the Area EPS Operator's Distribution System, and
- All certified equipment manufacturer specification sheets.

2.2. Battery Storage

An inverter-based DER system may include battery storage. DER systems that include battery storage must also complete the Energy Storage Application with the Simplified Interconnection Application.

2.3. Site Control

By signing the Simplified Interconnection Application, the Interconnection Customer is indicating that the proposed DER system is being located where the Interconnection Customer has site control. Site control includes ownership of, a leasehold interest in, or a right to develop a site for the purpose of construction of a DER. Additional information regarding Site Control can be reviewed in the Process Overview document in Section 4.8.

3 Application Review

3.1. Timelines

The Interconnection Application shall be date- and time-stamped upon initial, and if necessary, resubmission receipt. The Interconnection Customer shall be notified of receipt by the Area EPS Operator within ten (10) Business Days of receipt of the Interconnection Application.

The Area EPS Operator shall notify the Interconnection Customer if the Interconnection Application is deemed incomplete within ten (10) Business Days and provide a written list detailing all information that must be provided to complete the Interconnection Application. The Interconnection Customer has five (5) Business Days to provide the missing information unless additional time is requested with valid reasons. Failure to submit the requested information within the stated timeline will deem the Interconnection Application withdrawn. The Area EPS Operator has an additional five (5) Business Days to review the additionally provided information for completeness.

An Interconnection Application will be deemed complete upon submission to the Area EPS Operator provided all documents, fees and information required with the Interconnection Application adhering to Minnesota Technical Requirements is included. The time- and date- stamp of the completed Interconnection Application shall be accepted as the qualifying date for the purpose of establishing a queue position as described in Section 4.7 of the Overview Process document.

The Area EPS Operator has a total of twenty (20) Business Days to complete the Interconnection Application review from the receipt of a completed Interconnection Application and submit notice back to the Interconnection Customer stating the proposed DER system may proceed with the interconnection process or the proposed DER system has been moved into a different process track. The time during which the Interconnection Customer provides missing information is not included in the Area EPS Operator’s twenty (20) Business Days review timeline.

3.2. Initial Review Screens

The Area EPS Operator shall determine if the DER can be interconnected safely and reliably using Initial Review Screens and without the construction of facilities by the Area EPS Operator. The Initial Review screens include the following engineering screens:

- The proposed DER's PCC must be on a portion of the Area EPS Operator's Distribution System.

- For interconnection of a proposed DER to a radial distribution circuit, the aggregated generation, including the proposed DER, on the circuit shall not exceed 15% of the line section annual peak load as most recently measured or 100% of the substation aggregated minimum load. A line section is that portion of an Area EPS Operator's electric system connected to a customer bounded by automatic sectionalizing devices or the end of the distribution line. The Area EPS Operator may consider 100% of applicable loading (i.e. daytime minimum load for solar), if available, instead of 15% of line section peak load.

- For interconnection of a proposed DER to the load side of network protectors, the proposed DER must utilize an inverter-based equipment package and, together with the aggregated other inverter-based DERs, shall not exceed the smaller of 5% of a network's maximum load or 50 kW.[1]

- The proposed DER, in aggregation with other DERs on the distribution circuit, shall not contribute more than 10% to the distribution circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed PCC.

- The proposed DER, in aggregate with other Distributed Energy Resources on the distribution circuit, shall not cause any distribution protective devices and equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or Interconnection Customer equipment on the system to exceed 87.5% of the short circuit interrupting capability; nor shall the interconnection be proposed for a circuit that already exceeds 87.5% of the short circuit interrupting capability.

[1] Network protectors are protective devices used on secondary networks (spot and grid networks) to automatically disconnect their associated transformers when reverse power flow occurs. Secondary networks are most often used in densely populated downtown areas.

- Using the table below, determine the type of interconnection to a primary distribution line. This screen includes a review of the type of electrical service provided to the Interconnecting Customer, including line configuration and the transformer connection to limit the potential for creating over-voltages on the Area EPS Operator's electric power system due to a loss of ground during the operating time of any anti-islanding function.

Primary Distribution Line Type	Type of Interconnection to Primary Distribution Line	Results
Three-Phase, three wire	Three-phase or single-phase, phase-to-phase	Pass Screen
Three-phase, four wire	Effectively-grounded three-phase or single-phase, line-to-neutral	Pass Screen

- If the proposed DER is to be interconnected on single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the proposed DER, shall not exceed 20 kW or 65% of the transformer nameplate rating.

- If the proposed DER is single-phase and is to be interconnected on a center tap neutral of a 240-volt service, its addition shall not create an imbalance between the two sides of the 240-volt service of more than 20% of the nameplate rating of the service transformer.

The technical screens listed shall not preclude the Area EPS Operator from using tools that perform screening functions using different methodologies given the analysis is aimed at preventing the voltage, thermal and protection limitations as the listed screen.

3.3. Notification of Approval of Application

Provided the Simplified Interconnection Application passes the initial screens, or if the proposed interconnection fails the screens but the Area EPS Operator determines that the DER may never the less be interconnected consistent with safety, reliability and power quality standards, the Area EPS Operator shall provide notice to the Interconnection Customer that their Simplified Interconnection Application has been approved.

3.4. Failure of Review Screens

If the proposed interconnection fails the screens the Interconnection Customer will be notified by the Area EPS Operator that the Simplified Interconnection Application has

been moved to the Fast Track Process. The Area EPS Operator shall provide the Interconnection Customer the opportunity to attend a customer options meeting. Additional information regarding the customer options meeting is found in Section 3.5 of the Fast Track Process document. The Interconnection Customer will need to provide a completed Interconnection Application to the Area EPS Operator prior to, or at the customer options meeting.

The Area EPS Operator shall notify the Interconnection Customer of the determination and provide copies of all directly pertinent data and analyses underlying its conclusion, subjected to confidentiality provisions in Section 12.1 of the Overview Process document.

4 Interconnection Agreement

4.1. Uniform Contract

The Area EPS Operator shall provide the Interconnection Customer with an executable copy of the Area EPS Operator's Contract for Cogeneration and Small Power Production Facilities (Uniform Contract) within five (5) Business Days of notice of approval of the Simplified Interconnection Application.

4.2. Minnesota Municipal Interconnection Agreement

The Interconnection Customer may request on the Simplified Interconnection Application an executable copy of the Area EPS Operator's Minnesota Municipal Interconnection Agreement (MMIA) in lieu of signing the Uniform Contract. If the MMIA is requested, the Area EPS Operator shall provide an executable copy of the MMIA within five (5) Business Days of notice of approval of the Simplified Interconnection Application.

4.3. Completion of Agreement

The Interconnection Customer must return a signed Uniform Contract or MMIA at least thirty (30) Business Days prior to a requested in-service date of the propose DER. The Area EPS Operator shall sign and return a copy of the fully executed Uniform Contract or the MMIA back to the Interconnection Customer.

The Interconnection Customer may update the requested in-service date submitted on the Simplified Interconnection Application to a date thirty (30) Business Days or later from the date on which the Interconnection Customer submits a signed Uniform Contract or MMIA and payment, if required, unless the Area EPS Operator agrees to an earlier date.

Upon receipt of the signed Uniform Contract or MMIA, the Area EPS Operator may schedule appropriate metering replacements and construction of facilities, if necessary.

5 Insurance

5.1. Insurance Requirements

At minimum, the Interconnection Customer shall maintain, for the duration the DER system is interconnected to the Area EPS Operator's Distribution System, $300,000 of general liability insurance from a qualified insurance agency with a B+ or better rating by "Best." 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 operation of the DER under this agreement. Evidence of the insurance shall state that coverage provided is primary and is not excess to or contributing with any insurance or self-insurance by the Area EPS Operator.

5.2. Self-Insurance

The Interconnection Customer may choose to be self-insured provided there is an established record of self-insurance. The Interconnection Customer shall supply the Area EPS Operator at least twenty (20) 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 in Section 5.1. Failure of the Interconnection Customer or the Area EPS Operator 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.

5.3. Proof of Insurance

Prior to initial operation of the DER, the Interconnection Customer shall furnish the Area EPS Operator with the Declarations page of the Homeowner's insurance policy documenting insurance of the DER, if applicable or other insurance certificates and endorsements documenting insurance. Thereafter, the Area EPS Operator shall have the right to periodically inspect or obtain a copy of the original policy or polices of insurance. Additionally, the Area EPS Operator may request to be additionally listed as an interested third party on the insurance certificates and endorsements to meet the right to periodically obtain a copy of the policy or policies of insurance.

6 Timeline Extensions

6.1. Reasonable Efforts

The Area EPS Operator shall make Reasonable Efforts to meet all time frames provided in these procedures. If the Area EPS Operator cannot meet a deadline provided herein, it must notify the Interconnection Customer in writing within three (3) Business Days after the deadline to explain the reason for the failure to meet the deadline and provide an estimated time by which it will complete the applicable interconnection procedure in the process.

6.2. Extensions

For applicable time frames described in these procedures, the Interconnection Customer may request in writing one extension equivalent to half of the time originally allotted (e.g., ten (10) Business Days for a twenty (20) Business Days original time frame) which the Area EPS Operator may not unreasonably refuse. No further extensions for the applicable time frame shall be granted absent a Force Majeure Event or other similarly extraordinary circumstance.

7 Modifications to Application

7.1. Procedures

At any time after the Interconnection Application is deemed complete, the Interconnection Customer or the Area EPS Operator may identify modifications to the proposed DER system that may improve costs and benefits (including reliability) of the proposed DER system and the ability for the Area EPS Operator to accommodate the proposed DER system. The Interconnection Customer shall submit to the Area EPS Operator in writing all proposed modifications to any information provided in the Interconnection Application. The Area EPS Operator cannot unilaterally modify the Interconnection Application.

7.2. Timelines

Within ten (10) Business Days of receipt of the proposed modification, the Area EPS Operator shall evaluate whether the proposed modification to the Interconnection Application constitutes a Material Modification. The definition in Section 13 Glossary of the Process Overview document includes examples of what does and does not constitute a Material Modification.

The Area EPS Operator shall notify the Interconnection Customer in writing of the final determination of the proposed modification. For proposed modifications that are

determined to be a Material Modification the Interconnection Customer may choose to either: 1) withdraw the proposed modification; or 2) proceed with a new Interconnection Application. The Interconnection Customer shall provide its determination in writing to the Area EPS Operator within ten (10) Business Days after being provided the Material Modification determination. If the Interconnection Customer does not provide its determination within the timeline, the Interconnection Application shall be considered withdrawn.

If the proposed modification is not determined to be a Material Modification, then the Area EPS Operator shall notify the Interconnection Customer in writing that the modification has been accepted and the Interconnection Customer shall retain its eligibility for interconnection, including its place in the queue.

8 Interconnection

8.1. Metering

Any metering requirements necessitated by the use of the DER system shall be installed at the Interconnection Customer's expense. The metering requirement costs will be included in the final invoice of interconnection costs to the Interconnection Customer. The Interconnection Customer is also responsible for metering replacement costs not covered in the Interconnection Customer's general customer charge. The Area EPS Operator may charge Interconnection Customers an ongoing metering-related charge for an estimate of ongoing metering-related costs specifically demonstrated.

8.2. Construction

The Interconnection Customer may proceed to construct (including operational testing not to exceed two hours) the DER system when the Area EPS Operator has approved the Simplified Interconnection Application. Upon receipt of a signed Uniform Contract or MMIA the Area EPS Operator shall schedule and execute appropriate construction of facilities, if necessary, which shall be completed prior to the Interconnection Customer returning the Certification of Completion. The Area EPS Operator will notify the Interconnection Customer when construction of the distribution facilities is completed.

8.3. Inspection, Testing and Commissioning

Upon completing construction of the DER system, the Interconnection Customer will cause the DER system to be inspected or otherwise certified by the appropriate local electrical wiring inspector with jurisdiction. The Interconnection Customer shall then arrange for the inspection and testing of the DER system and the Customer's Interconnection Facilities prior to interconnection pursuant to Minnesota Technical Requirements. Commissioning test of the Interconnection Customer's installed

equipment shall be performed pursuant to applicable codes and standards of Minnesota's Technical Requirements. The Interconnection Customer shall provide the Area EPS Operator with a Certificate of Completion after completion of the DER installation.

Prior to parallel operation, the Area EPS Operator may inspect the DER for compliance with standards, which may include a witness test, and schedule appropriate metering replacements, if necessary. The Area EPS Operator shall send qualified personnel to the DER site to inspect the interconnection and witness the testing but bears no liability for the results of the test.

The Area EPS Operator is obligated to complete the witness test, if required, within ten (10) Business Days of receipt of the Certification of Completion. If the Area EPS Operator does not inspect within ten (10) Business Days, the witness test is deemed waived unless upon mutual agreement of both Parties to extend the timeline for the witness test.

Within three (3) Business Days of satisfactory inspection or waiver of inspection, the Area EPS Operator shall provide the Interconnection Customer written acknowledgment that the DER has permission to operate. Such written acknowledgment shall not be deemed to be or construed as any representation, assurance, guarantee, or warranty by the Area EPS Operator of the safety, durability, suitability, or reliability of the DER or any associated control, protective, and safety devices owned or controlled by the Interconnection Customer or the quality of power produced by the DER.

If the witness test is not satisfactory, the Area EPS Operator has the right to disconnect the DER. The Interconnection Customer has no right to operate in parallel, except for optional testing not to exceed two hours, until permission to operate is granted by the Area EPS Operator.

8.4. Interconnection Costs

The Interconnection Customer shall pay for the actual cost of the Interconnection Facilities and Distribution Upgrades along with the Area EPS Operator's cost to commission the proposed DER system. An estimate of the interconnection costs shall be stated in the Uniform Contract or MMIA. The Area EPS Operator shall render the final interconnection cost invoice to the Interconnection Customer within thirty (30) Business Days after the proposed DER system has been commissioned by the Area EPS Operator, or upon the commissioning being waived by the Area EPS Operator. The Interconnection Customer shall make payment to the Area EPS Operator within

twenty-one (21) Business Days of receipt, or as otherwise stated in the Uniform Contract.

The Area EPS Operator does not give any warranty, expressed or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, operated, installed or maintained by the Interconnection Customer, including without limitation the DER and any structures, equipment, wires, appliances or devices not owned, operated or maintained by the Area EPS Operator.

8.5. Authorization for Parallel Operation

The Interconnection Customer shall not operate its DER system in parallel with the Area EPS Operator's Distribution System without prior written authorization from the Area EPS Operator. The Area EPS Operator shall provide such authorization within three (3) Business Days from when the Area EPS Operator receives the Certificate of Completion and notification the Interconnection Customer has complied with all applicable parallel operations requirements. Such authorization shall not be unreasonably withheld, conditioned or delayed.

8.6. Continual Compliance

The Interconnection Customer shall be fully responsible for operating, maintaining, and repairing the DER as required to ensure that it complies at all times with the interconnection standards to which it has been certified. The Interconnection Customer shall also operate its DER system in compliance with the Area EPS Operator's technical requirements as referred to in the executed Uniform Contract or MMIA. The Area EPS Operator may periodically inspect, at its own expense, the operation of DER system as it relates to power quality, thermal limits and reliability. Failure by the Interconnection Customer to remain in compliance with the technical requirements will result in the DER system's disconnection from the Area EPS Operator's Distribution System.

8.7. Disconnection of DER

The Area EPS Operator has the right to disconnect the DER in the event the Interconnection Customer:

- Does not continue to follow and maintain IEEE 1547 settings approved by the Area EPS Operator as indicated by the adopted technical requirements.

- Does not meet all the requirements of the Simplified Process.

- Refuses to sign either the Interconnection Agreement or the Area EPS Operator's Uniform Contract.

The Area EPS Operator may temporarily disconnect the DER upon the following conditions:

- For scheduled outages upon reasonable notice.
- For unscheduled outages or emergency conditions.

- If the DER does not operate in a manner consistent with the Simplified Process.

The Area EPS Operator shall inform the Interconnection Customer in advance of any scheduled disconnections, or as reasonable, after an unscheduled disconnection.

Minnesota Municipal Interconnection Process (M-MIP)

Booklet #3

Fast Track Process

For interconnecting systems of less than 4 megawatts

that do not qualify for the Simplified Process

Contents

1 Applicability

1.1. Capacity Limit

The Fast Track Process is available to an Interconnection Customer proposing to interconnect a Distributed Energy Resource (DER) with the Area EPS Operator's Distribution System if the DER capacity does not exceed the size limits in Table 1.1 and does not qualify for the Simplified Process. The capacity is determined by the aggregated summation of the Nameplate Rating of all components that make up the DER system. Additional information regarding the capacity limits can be seen in Section 6 of the Process Overview document.

Table 1.1. Fast Track Eligibility for DER

Line Voltage	Fast Track Eligibility[1] Regardless of Location	Fast Track Eligibility for certified, inverter-based DER on a Mainline[2] and ≤ 2.5 Electrical Circuit Miles from Substation[3]
< 5 kV	≤ 500 kW	≤ 500 kW
≥ 5 kV and < 15 kV	≤ 1 MW	≤ 2 MW
≥ 15 kV and < 30 kV	≤ 3 MW	≤ 4 MW
≥ 30 kV and ≤ 69 kV	≤ 4 MW	≤ 5 MW

Fast Track eligibility for DERs is determined based upon the generator type, the size of the generator, voltage of the line, and the location of and the type of line at the Point of Common Coupling. All synchronous and induction machines must be no larger than 2 MW to be eligible for Fast Track Process consideration. Fast Track eligibility does not imply or indicate that a DER will pass the engineering screens or be exempt from the proposed DER Interconnection being placed into the Study Process.

1.2. Codes, Standards and Certification Requirements

The Interconnection Customer's proposed DER must meet the codes, standards and certification requirements listed in Section 14 and Section 15 of the Overview Process document. The Area EPS Operator may allow DER systems that do not meet codes, standards and certification only if the DER system design is reviewed and tested and determined that it is safe to operate in parallel with the Distribution System.

[1] Synchronous and induction machine eligibility is limited to no more than 2 MW even when line voltage is greater than 15 kV.

[2] For purposes of this table, a Mainline is the three-phase backbone of a circuit. It will typically constitute lines with wire sizes of 4/0 American wire gauge, 266 kcmil, 336.4 kcmil, 397.5 kcmil, 477 kcmil and 795 kcmil.

[3] An Interconnection Customer can determine this information about its proposed interconnection location in advance by requesting a pre-application report described in the Overview Process document.

2 Application Submission

2.1. Fast Track Process Application

The Interconnection Customer shall complete the Standard Interconnection Application and submit it to the Area EPS Operator to initialize the Interconnection Process. A completed Interconnection Application will include the following:

- A completed Interconnection Application signed by the Interconnection Customer.
- A non-refundable processing fee indicated in Section 2.3.
- A site layout drawing of the proposed DER system.
- A one-line diagram of the proposed DER system showing the point of common coupling to the Area EPS Operator's Distribution System.
- All equipment manufacturer specification sheets.
- Documentation of site control indicated in Section 2.5.

2.2. Professional Licensed Engineer Signature

The one-line diagram submitted with the Interconnection Application will require a signature from a professional engineer licensed in the State of Minnesota certifying the DER was designed in conformance to the Minnesota Technical Requirements for the following conditions:

- Certified[4] equipment is greater than 250 kW.
- Non-certified equipment is greater than 20 kW.

2.3. Processing Fee

The processing fee will differ for a Fast Track Interconnection Application depending on the type of equipment utilized as seen in Table 2.1.

[4] Additional information regarding certified equipment is found in Section 14 and Section 15 of the Process Overview document.

Table 2.1. Interconnection Application Process Fee

Equipment Type	Process Fee
Certified System	$100 + $1/kW
Non-Certified System	$100 + $2/kW

2.4. Battery Storage

An inverter-based DER system may include battery storage. DER systems that include battery storage should complete the Energy Storage Application along with the Interconnection Application.

2.5. Site Control

Documentation of site control must be submitted with the Interconnection Application. Site control may be demonstrated by any of the following:

- Ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing the DER system.
- An option to purchase or acquire a leasehold site for constructing the DER system.
- An exclusivity or other business relationship between the Interconnection Customer and the entity having the right to sell, lease, or grant the Interconnection Customer the right to possess or occupy a site for constructing the DER system.

3 Application Review

3.1. Timelines

The Interconnection Application shall be date- and time-stamped upon initial, and if necessary, resubmission receipt. The Interconnection Customer shall be notified of receipt by the Area EPS Operator within ten (10) Business Days of receipt of the Interconnection Application.

The Area EPS Operator shall notify the Interconnection Customer if the Interconnection Application is deemed incomplete within ten (10) Business Days and provide a written list detailing all information that must be provided to complete the Interconnection Application. The Interconnection Customer has ten (10) Business Days to provide the missing information unless additional time is requested with valid reasons. Failure to submit the requested information within the stated timeline will result in the Interconnection Application being deemed withdrawn. The Area EPS Operator has an

additional five (5) Business Days to review the additionally provided information for completeness.

An Interconnection Application will be deemed complete upon submission to the Area EPS Operator provided all documents, fees and information required with the Interconnection Application adhering to Minnesota Technical Requirements is included. The time- and date- stamp of the completed Interconnection Application shall be accepted as the qualifying date for the purpose of establishing a queue position as described in Section 4.7 in the Overview Process document.

The Area EPS Operator has a total of twenty-five (25) Business Days to complete the Interconnection Application review and submit notice back to the Interconnection Customer stating the proposed DER system may proceed with the interconnection process or a supplemental review offer is to be made or the proposed DER system has been moved into a different process track. The period of time when waiting for the Interconnection Customer to provide missing information is not included in the Area EPS Operator's twenty-five (25) Business Days review timeline.

3.2. Initial Review Screens

The Area EPS Operator shall determine if the DER can be interconnected safely and reliably without the construction of facilities by the Area EPS Operator by using a set of Initial Review Screens. The Initial Review screens include the following engineering screens:

- The proposed DER's Point of Common Coupling must be on a portion of the Area EPS Operator's Distribution System.

- For interconnection of a proposed DER to a radial distribution circuit, the aggregated generation, including the proposed DER, on the circuit shall not exceed 15% of the line section annual peak load as most recently measured or 100% of the substation aggregated minimum load. A line section is that portion of an Area EPS Operator's electric system connected to a customer bounded by automatic sectionalizing devices or the end of the distribution line. The Area EPS Operator may consider 100% of applicable loading (i.e. daytime minimum load for solar), if available, instead of 15% of line section peak load.

- For interconnection of a proposed DER to the load side of network protectors, the proposed DER must utilize an inverter-based equipment package and,

together with the aggregated other inverter-based DERs, shall not exceed the smaller of 5% of a network's maximum load or 50 kW.[5]

- The proposed DER, in aggregation with other DERs on the distribution circuit, shall not contribute more than 10% to the distribution circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed Point of Common Coupling.

- The proposed DER, in aggregate with other Distributed Energy Resources on the distribution circuit, shall not cause any distribution protective devices and equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or Interconnection Customer equipment on the system to exceed 87.5% of the short circuit interrupting capability; nor shall the interconnection be proposed for a circuit that already exceeds 87.5% of the short circuit interrupting capability.

- Using the table below, determine the type of interconnection to a primary distribution line. This screen includes a review of the type of electrical service provided to the Interconnecting Customer, including line configuration and the transformer connection to limit the potential for creating over-voltages on the Area EPS Operator's electric power system due to a loss of ground during the operating time of any anti-islanding function.

Table 3.1. Type of Primary Distribution Line Interconnections

Primary Distribution Line Type	Type of Interconnection to Primary Distribution Line	Results
Three-Phase, three wire	Three-phase or single-phase, phase-to-phase	Pass Screen
Three-phase, four wire	Effectively-grounded three-phase or single-phase, line-to-neutral	Pass Screen

- If the proposed DER is to be interconnected on single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the proposed DER, shall not exceed 20 kW or 65% of the transformer nameplate rating.

[5] Network protectors are protective devices used on secondary networks (spot and grid networks) to automatically disconnect associated transformers when reverse power flow occurs. Secondary networks are most often used in densely populated downtown areas.

- If the proposed DER is single-phase and is to be interconnected on a center tap neutral of a 240-volt service, its addition shall not create an imbalance between the two sides of the 240-volt service of more than 20% of the nameplate rating of the service transformer.

The technical screens listed shall not preclude the Area EPS Operator from using tools that perform screening functions using different methodologies provided the analysis is targeted to maintain the voltage, thermal and protection objectives as the listed screen.

3.3. Notification of Approval of Application

Provided the Interconnection Application passes the initial screens, or if the proposed interconnection fails the screens but the Area EPS Operator determines that the DER may nevertheless be interconnected consistent with safety, reliability and power quality standards, the Area EPS Operator shall provide notice to the Interconnection Customer that their Interconnection Application has been approved. The Area EPS Operator shall provide the Interconnection Customer with an Interconnection Agreement as outlined in Section 5.

3.4. Failure of Review Screens

If the proposed interconnection fails the screens, and the Area EPS Operator does not or cannot determine from the Initial Review that the DER may nevertheless be interconnected consistent with safety, reliability, and power quality standards, unless the Interconnection Customer is willing to consider minor modifications or further study, the Area EPS Operator shall provide the Interconnection Customer the opportunity to attend a customer options meeting.

The Area EPS Operator shall notify the Interconnection Customer of the determination and provide copies of all directly pertinent data and analyses underlying its conclusion, subject to confidentiality provisions in Section 12.1 of the Overview Process document.

3.5. Customer Options Meeting

Within ten (10) Business Days of the Area EPS Operator's notification to the Interconnection Customer of the proposed interconnection's failure of the engineering screens, the Area EPS Operator and the Interconnection Customer shall schedule a customer options meeting to review possible facility modification, screen analysis and related results to determine what further steps are needed to permit the DER to be interconnected safely and reliably to the Distribution System. At the customer options meeting the Area EPS Operator shall:

- Offer to perform a supplemental review in accordance with Section 4 and provide a non-binding good faith estimate of the cost of such review; or

- Obtain the Interconnection Customer's agreement to continue evaluating the Interconnection Application under the Study Process track.

4 Supplemental Review

4.1. Acceptance of Supplemental Review

To accept the offer of a supplemental review, the Interconnection Customer shall agree in writing and submit a deposit for the estimated costs of the supplemental review in the amount of the Area EPS Operator's good faith estimate of the costs of such review within fifteen (15) Business Days once the supplemental review offer is made by the Area EPS Operator. If the written agreement and deposit have not been received by the Area EPS Operator within that timeframe, the Interconnection Application can only continue being evaluated under the Study Process or it can be withdrawn by the Interconnection Customer.

The Interconnection Customer may specify within the written agreement the order in which the Area EPS Operator will complete the supplemental review screens listed in Section 4.4.

4.2. Supplemental Review Costs

The Interconnection Customer shall be responsible for the Area EPS Operator's actual costs for conducting the supplemental review. The Interconnection Customer shall pay any review costs that exceed the deposit within twenty (20) Business Days of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced costs, the Area EPS Operator will return such excess within twenty (20) Business Days of the invoice without interest.

4.3. Supplemental Review Timelines

Within thirty (30) Business Days following the receipt of the deposit for a supplemental review, the Area EPS Operator shall:

- Perform the supplemental review using the screens in Section 4.4.

- Notify the Interconnection Customer of the results in writing.

- Include copies of the Area EPS Operator's analysis under the screens with the written notification.

Unless the Interconnection Customer provides instruction for how to respond to a failure of any of the supplemental review screens in the written acceptance of supplemental review, the Area EPS Operator shall notify the Interconnection Customer within two (2) Business Days if a supplemental review screen is failed or if the Area EPS Operator is unable to perform the supplemental review screen. The Area EPS Operator shall then obtain the Interconnection Customer's permission to either:

- Continue evaluating the proposed interconnection using the supplemental review screens in Section 4.4.

- Terminate the supplemental review and continue evaluating the Interconnection Application in the Study Process track.

- Terminate the supplemental review upon withdrawal of the Interconnection Application by the Interconnection Customer.

The Interconnection Customer shall respond with its choice within five (5) Business Days of notification from the Area EPS Operator.

4.4. Supplemental Review Screens

The three supplemental review screens are the Minimum Load screen, the Voltage and Power Quality screen and the Safety and Reliability screen.

4.4.1. Minimum Load Screen

The aggregate DER capacity on the line section is less than 100% of the minimum load for all line sections bounded by automatic sectionalizing devices upstream of the proposed DER. If minimum load data is not available, or cannot be calculated, estimated or determined, the Area EPS Operator shall include the reason(s) that it is unable to calculate, estimate or determine minimum load in its supplemental review results notification under Section 4.3. The line section minimum load data shall include onsite load but not station service load served by the proposed DER in this screen.

The type of generation used by the proposed DER will be considered when calculating, estimating, or determining circuit or line section minimum load relevant for the application of this screen. Solar photovoltaic (PV) generation systems with no battery storage use daytime minimum load (i.e., 10 a.m. to 4 p.m. for fixed panel systems and 8 a.m. to 6 p.m. for PV systems utilizing tracking systems), while all other generation uses absolute minimum load.

When this screen is being applied to a DER that serves some station service load, only the net injection into the Area EPS Operator's electric system will be considered as part of the aggregate generation.

The Area EPS Operator will not consider as part of the aggregate generation for purposes of this screen DER capacity known to be already reflected in the minimum load data.

4.4.2. Voltage and Power Quality Screen

In aggregate with existing generation on the line section the following conditions shall be met for the screen to be passed:

- The voltage regulation on the line section can be maintained in compliance with relevant requirements under all system conditions.

- The voltage fluctuation is within acceptable limits as defined by Institute of Electrical and Electronics Engineers (IEEE) Standard 1453, or utility practice similar to IEEE Standard 1453.

- The harmonic levels meet IEEE Standard 519 limits.

4.4.3. Safety and Reliability Screen

The location of the proposed DER and the aggregate generation capacity on the line section do not create impacts to safety or reliability that cannot be adequately addressed without application of the Study Process. The Area EPS Operator shall give due consideration to the following and other factors in determining potential impacts to safety and reliability in applying this screen.

- Whether the line section has significant minimum loading levels dominated by a small number of customers (e.g., several large commercial customers).

- Whether the loading along the line section is uniform or even.

- Whether the proposed DER is located in close proximity to the substation (i.e., less than 2.5 electrical circuit miles), and whether the line section from the substation to the Point of Common Coupling is a main line rated for normal and emergency ampacity.

- Whether the proposed DER incorporates a time delay function to prevent reconnection of the generator to the system until system voltage and frequency are within normal limits for a prescribed time.

- Whether operational flexibility is reduced by the proposed DER, such that transfer of the line section(s) of the DER to a neighboring distribution circuit/substation may trigger overloads or voltage issues.

- Whether the proposed DER employs equipment or systems certified by a recognized standards organization to address technical issues such as, but not limited to, islanding, reverse power flow, or voltage quality.

4.5. Identification of Construction of Facilities

If the proposed interconnection requires the construction of any distribution or transmission facilities, the Area EPS Operator shall notify the Interconnection Customer of the requirement when it provides the supplemental review results. The Area EPS Operator may include a non-binding good faith estimate to construct the facilities included with the supplemental review results. In lieu of providing a non-binding good faith estimate to construct the necessary facilities, the Area EPS Operator may require the proposed interconnection to move to the Study Process for a facility study instead.

Upon being presented with either the non-binding good faith estimate or the requirement for a facility study, the Interconnection Customer has five (5) Business Days to inform the Area EPS Operator to proceed with the proposed interconnection or withdraw the Interconnection Application.

4.6. Supplemental Review Results

If the proposed interconnection passes the supplemental review screens in Section 4.4 and does not require construction of distribution or transmission facilities by the Area EPS on its own system, the Area EPS Operator shall provide an executable Interconnection Agreement within five (5) Business Days after the supplemental review screens are completed. Information regarding the Interconnection Agreement is detailed in Section 5.

If the proposed interconnection passes the supplemental review screens in Section 4.4 and the Interconnection Customer agrees to the non-binding good faith estimate of construction of any distribution or transmission facilities by the Area EPS Operator, the Area EPS Operator shall provide an executable Interconnection Agreement within twenty (20) Business Days. Included with the Interconnection Agreement shall be non-

binding good faith estimate of construction costs and a construction schedule for the facilities. Information regarding the Interconnection Agreement is detailed in Section 5.

If the proposed interconnection does not pass the supplemental review screens in Section 4.4 the Area EPS Operator shall provide the Interconnection Customer with the option of commencing the Study Process. The Interconnection Customer shall notify the Area EPS Operator within fifteen (15) Business Days if they wish to proceed with the Study Process to retain their queue position or the Interconnection Application will be deemed withdrawn.

5 Interconnection Agreement

5.1. Uniform Contract

For a proposed interconnection that meets the conditions of being classified as a qualifying facility less than 40 kW, the Area EPS Operator shall provide the Interconnection Customer with an executable copy of the Area EPS Operator's Uniform Contract for Cogeneration and Small Power Production Facilities (Uniform Contract).

5.2. Minnesota Municipal Interconnection Agreement

For proposed interconnections that do not meet the conditions of being classified as a qualifying facility less than 40 kW or if requested by the Interconnection Customer in lieu of signing the Uniform Contract, the Area EPS Operator shall provide an executable copy of the Minnesota Municipal Interconnection Agreement (MMIA).

5.3. Completion of Agreement

The Interconnection Customer must return a signed Interconnection Agreement at least thirty (30) Business Days prior to the requested in-service date of the proposed DER. The Area EPS Operator shall sign and return a copy of the fully executed Interconnection Agreement back to the Interconnection Customer.

The Interconnection Customer may update the requested in-service date submitted on the Interconnection Application to a date thirty (30) Business Days or later from the date on which the Interconnection Customer submits a signed Interconnection Agreement and payment if required unless the Area EPS Operator agrees to an earlier date.

Upon receipt of the signed Interconnection Agreement, the Area EPS Operator may schedule appropriate metering replacements and construction of facilities, if necessary.

6 Insurance

6.1. Insurance Requirements

At minimum, the Interconnection Customer shall maintain, for the duration the DER system is interconnected to the Area EPS Operator's Distribution System, general liability insurance from a qualified insurance agency with a B+ or better rating by "Best" with a combined single limit of not less than those described in Table 6.1. 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 operation of the DER under this agreement. Evidence of the insurance shall state that coverage provided is primary and is not excess to or contributing with any insurance or self-insurance by the Area EPS Operator.

Table 6.1. Liability Insurance Requirements

DER System Size	Liability Insurance Requirement
< 40 kW AC	$300,000
≥ 40 kW AC and < 250 kW AC	$1,000,000
≥ 250 kW AC and < 5 MW AC	$2,000,000
≥ 5 MW AC	$3,000,000

For all proposed DER systems, except those that are qualifying systems less than 40 kW AC, the general liability insurance shall, by endorsement to the policy or polices:

- Include the Area EPS Operator as additionally insured.
- Contain severability of interest clause or cross-liability clause.
- Provide that the Area EPS Operator shall not by reason incur liability to the insurance carrier for the payment of premiums for such insurance if the Area EPS Operator is included as an additionally insured.

6.2. Self-Insurance

The Interconnection Customer may choose to be self-insured provided there is an established record of self-insurance. The Interconnection Customer shall supply the Area EPS Operator at least 20 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 in Section 6.1. Failure of the Interconnection Customer or the Area EPS Operator 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.

6.3. Proof of Insurance

The Interconnection Customer shall furnish the required insurance certificates and endorsements to the Area EPS Operator prior to the initial operation of the DER. A copy of the Declaration page of the Homeowner's insurance policy is a common example of an insurance certificate. Thereafter, the Area EPS Operator shall have the right to periodically inspect or obtain a copy of the original policy or polices of insurance. Additionally, the Area EPS Operator may request to be additionally listed as an interested third part on the insurance certificates and endorsements for qualifying facilities less than 40 kW AC to meet the right to periodically obtain a copy of the policy or policies of insurance.

7 Timeline Extensions

7.1. Reasonable Efforts

The Area EPS Operator shall make Reasonable Efforts to meet all time frames provided in these procedures. If the Area EPS Operator cannot meet a deadline provided herein, it must notify the Interconnection Customer in writing within three (3) Business Days after the deadline to explain the reason for the failure to meet the deadline and provide an estimated time by which it will complete the applicable interconnection procedure in the process.

7.2. Extensions

For applicable time frames described in these procedures, the Interconnection Customer may request in writing one extension equivalent to half of the time originally allotted (e.g., ten (10) Business Days for a twenty (20) Business Days original time frame) which the Area EPS Operator may not unreasonably refuse. No further extensions for the applicable time frame shall be granted absent a Force Majeure Event or other similarly extraordinary circumstance.

8 Modifications to Application

8.1. Procedures

At any time after the Interconnection Application is deemed complete, the Interconnection Customer or the Area EPS Operator may identify modifications to the proposed DER system that may improve costs and benefits (including reliability) of the proposed DER system and the ability for the Area EPS Operator to accommodate the proposed DER system. The Interconnection Customer shall submit to the Area EPS Operator in writing all proposed modifications to any information provided in the Interconnection Application. The Area EPS Operator cannot unilaterally modify the Interconnection Application.

8.2. Timelines

Within ten (10) Business Days of receipt of the proposed modification, the Area EPS Operator shall evaluate whether the proposed modification to the Interconnection Application constitutes a Material Modification. The definition in the Section 13 Glossary of the Process Overview document includes examples of what does and does not constitute a Material Modification.

The Area EPS Operator shall notify the Interconnection Customer in writing of the final determination of the proposed modification. For proposed modifications that are determined to be a Material Modification the Interconnection Customer may choose to either: 1) withdraw the proposed modification; or 2) proceed with a new Interconnection Application. The Interconnection Customer shall provide its determination in writing to the Area EPS Operator within ten (10) Business Days after being provided the Material Modification determination. If the Interconnection Customer does not provide its determination within the timeline, the Interconnection Application shall be considered withdrawn.

If the proposed modification is not determined to be a Material Modification, then the Area EPS Operator shall notify the Interconnection Customer in writing that the modification has been accepted and the Interconnection Customer shall retain its eligibility for interconnection, including its place in the queue.

9 Interconnection

9.1. Interconnection Milestones

For DER systems that are not a qualifying facility less than 40 kW AC, the Interconnection Customer and the Area EPS Operator shall agree on milestones for which each Party is responsible and list them in Attachment IV of the MMIA. To the greatest extent possible, the Parties will identify all design, procurement, installation and construction requirements associated with the project, and clear associated timelines, at the beginning of the design, procurement, installation and construction phase, or as early within the process as possible.

A Party's obligation under this provision may be extended by agreement. If a Party anticipates that it will be unable to meet a milestone for any reason other than a Force Majeure Event, it shall immediately notify the other Party of the reason(s) for not meeting the milestone, propose the earliest reasonable alternative date in which this and future milestones will be met, and request appropriate amendments to the MMIA and its attachments. The Party affected by the failure to meet a milestone shall not unreasonably withhold agreement to such an amendment unless:

- The Party will suffer significant uncompensated economic or operational harm from the delay, or

- Attainment of the same milestone has previously been delayed, or

- The Party has reason to believe the delay in meeting the milestone is intentional or unwarranted notwithstanding the circumstance explained by the Party proposing the amendment.

If the Party affected by the failure to meet a milestone disputes the proposed extension, the affected Party may pursue dispute resolution as described in the Overview Process document.

9.2. Metering

Any metering requirements necessitated by the use of the DER system shall be installed at the Interconnection Customer's expense. The metering requirement costs will be included in the final invoice of interconnection costs to the Interconnection Customer. The Interconnection Customer is also responsible for metering replacement costs not covered in the Interconnection Customer's general customer charge. The Area EPS Operator may charge Interconnection Customers an ongoing metering-related charge for an estimate of ongoing metering-related costs specifically demonstrated.

9.3. Construction

The Interconnection Customer may proceed to construct (including operational testing not to exceed two hours) the DER system when the Area EPS Operator has approved the Interconnection Application. Upon receipt of a signed Uniform Contract or Interconnection Agreement the Area EPS Operator shall schedule and execute appropriate construction of facilities.

9.4. Inspection, Testing and Commissioning

Upon completing construction of the DER system, the Interconnection Customer will cause the DER system to be inspected or otherwise certified by the appropriate local electrical wiring inspector with jurisdiction. The Interconnection Customer shall then arrange for the inspection and testing of the DER system and the Customer's Interconnection Facilities prior to interconnection pursuant to Minnesota Interconnection Technical Requirements. Commissioning tests of the Interconnection Customer's installed equipment shall be performed pursuant to applicable codes and standards of Minnesota's Technical Requirements and Section 15 in the Overview Process.

The Interconnection Customer shall notify the Area EPS Operator of testing and inspection no fewer than five (5) Business Days in advance, or as may be agreed to by the Parties. The Interconnection Customer shall provide to the Area EPS Operator a testing procedure that will be followed on the day of testing and inspection no fewer than ten (10) Business Days prior to the testing and inspection date. The testing procedure should include tests and/or inspections to confirm the DER system will meet the technical requirements of interconnection. The Area EPS Operator shall review the testing procedure for completeness and shall notify the Interconnection Customer if the testing procedure fails to address components of the technical requirements for interconnection.

The Area EPS Operator shall send qualified personnel to the DER site to inspect the interconnection and witness the testing. Testing and inspection shall occur on a Business Day at a mutually agreed upon date and time. The Area EPS Operator may waive the right to witness the testing.

9.5. Interconnection Costs

9.5.1 Estimation of Interconnection Costs

The Interconnection Customer shall pay for the actual cost of the Interconnection Facilities and Distribution Upgrades along with the Area EPS Operator's cost to commission the proposed DER system. An estimate of the interconnection costs shall be stated in the Uniform Contract or in the MMIA in Attachment II as a detailed itemization of such costs. If Network Upgrades are required, the actual cost of the Network Upgrades, including overheads, shall be borne by the Interconnection Customer pursuant to the Transmission Provider and associated agreements.

9.5.2 Progressive Payment of Interconnection Costs

The Area EPS Operator shall bill the Interconnection Customer for the design, engineering, construction and procurement costs of the Interconnection Facilities and Upgrades described in the MMIA Attachment II on a monthly basis or other basis agreed upon by both Parties in the MMIA or Uniform Contract. The Interconnection Customer shall pay each bill within twenty-one (21) Business Days or as agreed to in the MMIA or Uniform Contract.

9.5.3 Final Accounting of Interconnection Facilities and Upgrade Costs

If distribution or transmission facilities required upgrades to accommodate the proposed DER system, the Area EPS Operator shall render the final interconnection cost invoice to the Interconnection Customer within eighty (80) Business Days (approximately four calendar months) of completing the

construction and installation of the Area EPS Operator's Interconnection Facility and Upgrades. The Area EPS Operator shall provide the Interconnection Customer with a final accounting report identifying the difference between the actual Interconnection Customer's cost responsibility and the Interconnection Customer's previous aggregate payments to the Area EPS Operator for the specific DER system interconnection. Upon the final accounting submitted to the Interconnection Customer, the balance between the actual cost and previously aggregated payments shall be paid to the Area EPS Operator within twenty (20) Business Days. If the balance between the actual cost and previously aggregated payments is a credit, the Area EPS Operator shall refund the Interconnection Customer within twenty (20) Business Days.

9.5.4 Final Interconnection Costs without Facilities and Upgrades Needed

Within thirty (30) Business Days the final invoice for the interconnection costs shall be rendered to the Interconnection Customer once the proposed DER system has been commissioned by the Area EPS Operator, or upon the commissioning being waived by the Area EPS Operator. The Interconnection Customer shall make payment to the Area EPS Operator within twenty-one (21) Business Days of receipt, or as otherwise stated in the Uniform Contract or MMIA.

9.6. Security of Payment

At the option of the Area EPS Operator, either the "Traditional Security" or the "Modified Security" method shall be used for assurance of payment of interconnection cost.

Under the Traditional Security method, 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 the Area EPS Operator credit policy. The letter of credit shall also include procedures for the unpaid balance of the estimated amount shown in the Interconnection Agreement for the totality of all anticipated work or expense incurred by the Area EPS Operator associated with the Interconnection Application. The payment for these estimated costs shall be as follows:

- 1/3 of estimated costs shall be due no later than when the Interconnection Customer signs the Interconnection Agreement.

- An additional 1/3 of estimated costs shall be due prior to initial energization of the DER with the Area EPS Operator.

- Remainder of actual costs, incurred by Area EPS Operator, shall be due within thirty (30) Business Days from the date the bill is mailed by the Area EPS Operator after project completion.

Under the Modified Security method, at least twenty (20) Business Days prior to the commencement of the design, procurement, installation, or construction of a discrete portion of the Area EPS Operator's Interconnection Facilities and Upgrades, the Interconnection Customer shall provide the Area EPS Operator, at the Interconnection Customer's option, a guaranty, letter of credit or other form of security that is reasonably acceptable to the Area EPS Operator and is consistent with the Minnesota Uniform Commercial Code. Such security for payment shall be in an amount sufficient to cover the costs for constructing, designing, procuring, and installing the applicable portion of the Area EPS Operator's Interconnection Facilities and Upgrades and shall be reduced on a dollar-for-dollar basis for payments made to the Area EPS Operator under the Interconnection Agreement during its term.

The guaranty must be made by an entity that meets the creditworthiness requirements of the Area EPS Operator and contain terms and conditions that guarantee payment of any amount that may be due from the Interconnection Customer, up to an agreed-to maximum amount.

The letter of credit must be issued by a financial institution or insurer reasonably acceptable to the Area EPS Operator and must specify a reasonable expiration date not sooner than sixty (60) Business Days (three calendar months) after the due date of the final accounting report and bill described in Section 9.5

9.7. Non-Warranty

Area EPS Operator does not give any warranty, expressed or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, operated, installed or maintained by the Interconnection Customer, including without limitation the DER and any structures, equipment, wires, appliances or devices not owned, operated or maintained by the Area EPS Operator. The Area EPS Operator does not guarantee uninterrupted power supply to the DER and will operate the Distribution System with the same reliability standards for the entire customer base.

9.8. Authorization for Parallel Operation

The Interconnection Customer shall not operate its DER system in parallel with the Area EPS Operator's Distribution System without prior written authorization from the Area EPS Operator. The Area EPS Operator shall provide such authorization within three (3) Business Days from when the Area EPS Operator receives notification that the Interconnection Customer has complied with all applicable parallel operations requirements and commissioning has been successfully completed. Such authorization shall not be unreasonably withheld, conditioned or delayed.

9.9. Continual Compliance

The Interconnection Customer shall be fully responsible to operate, maintain, and repair the DER as required to ensure that it complies at all times with the interconnection standards to which it has been certified. The Interconnection Customer shall also operate its DER system in compliance with the Area EPS Operator's technical requirements referred to in the executed Interconnection Agreement. The Area EPS Operator may periodically inspect, at its own expense, the operation of the DER system as it relates to power quality, thermal limits and reliability. Failure by the Interconnection Customer to remain in compliance with the technical requirements will result in the disconnection of the DER system from the Area EPS Operator's Distribution System.

9.10. Disconnection of DER

The Area EPS Operator has the right to disconnect the DER in the event of the following:

- Does not continue to follow and maintain IEEE 1547 settings approved by the Area EPS Operator as indicated by the adopted technical requirements.
- Does not meet all the requirements of the Fast Track Process.
- Refuses to sign either the MMIA or the Area EPS Operator's Uniform Contract.

The Area EPS Operator may temporarily disconnect the DER upon the following conditions:

- For scheduled outages upon reasonable notice.
- For unscheduled outages or emergency conditions.

- If the DER does not operate in the manner consistent with the Fast Track Process.

The Area EPS Operator shall inform the Interconnection Customer in advance of any scheduled disconnections, or as reasonable, after an unscheduled disconnection.

Minnesota Municipal Interconnection Process (M-MIP)

Booklet #4

Study Process

For interconnecting systems larger than 4 megawatts

or in need of additional studies

Contents

1 Applicability

1.1. Applicability

The Study Process is applicable to an Interconnection Customer proposing to interconnect a Distributed Energy Resource (DER) with the Area Electrical Power System (Area EPS) Operator's Distribution System, if the DER capacity is larger than 4 MW or is identified through the engineering screening process to need additional studies.

The majority of proposed DER interconnections will initially apply for interconnection under the Simplified or Fast Track Processes. Initial and supplemental screening results are to be considered throughout the Study Process.

1.2. Codes, Standards and Certification Requirements

The Interconnection Customer's proposed DER must meet the codes, standards and certification requirements listed in Section 13, 14 and Section 15 of the Process Overview document. The Area EPS Operator may allow DER systems that do not meet codes, standards and certification only if the DER system design is reviewed, tested and determined to be safe to operate in parallel with the Distribution System.

2 Application Submission

2.1. Initial Interconnection Application for the Study Process

For proposed DER interconnections that are not initially applied for under the Fast Track Process, the Interconnection Customer shall complete the Standard Interconnection Application and submit it to the Area EPS Operator to initiate the Interconnection Process. A completed Interconnection Application will include the following:

- A completed Interconnection Application signed by the Interconnection Customer.
- A process fee not to exceed $1,000, plus $2.00 per kW, toward the deposit of the study(s) indicated in Section 4.
- A site layout drawing of the proposed DER system.
- A one-line diagram of the proposed DER system showing the Point of Common Coupling to the Area EPS Operator's Distribution System.
- All equipment manufacturer specification sheets.
- Documentation of site control as indicated in Section 2.4.

2.2. Professional Licensed Engineer Signature

The one-line diagram submitted with the Interconnection Application will require a signature from a professional engineer licensed in the State of Minnesota certifying the DER was designed in conformance to the Minnesota Technical Requirements for the following conditions:

- Certified[1] equipment is greater than 250 kW.
- Non-certified equipment is greater than 20 kW.

2.3. Battery Storage

An inverter-based DER system may include battery storage. DER systems that include battery storage should complete the Energy Storage Application along with the Interconnection Application.

2.4. Site Control

Documentation of site control must be submitted with the Interconnection Application. Site control may be demonstrated by any of the following:

- Ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing the DER system;
- An option to purchase or lease a site for constructing the DER system;
- An exclusivity or other business relationship between the Interconnection Customer and the entity having the right to sell, lease, or grant the Interconnection Customer the right to possess or occupy a site for constructing the DER system.

2.5. Interconnection Applications from Other Processes

Some Interconnection Applications submitted under the Fast Track Process may be moved into the Study Process due to issues with the DER interconnection identified by engineering screens. An Area EPS Operator cannot request a new Interconnection Application submission if the Interconnection Application has already been submitted through the Fast Track Process. The Interconnection Customer who had already paid a processing fee for the Fast Track Process is still responsible to make a deposit toward the applicable studies address in Section 4, 5 and 6, but does not need to submit an additional processing fee.

[1] Additional information regarding certified equipment is found in Sections 14 and 15 of the Process Overview booklet.

3 Initial Steps

3.1. Completeness Review and Queue Position

The Interconnection Application originally submitted under the Study Process shall be date- and time-stamped upon initial receipt, and if necessary, resubmission receipt. The Interconnection Customer shall be notified of receipt by the Area EPS Operator within ten (10) Business Days after receipt.

The Area EPS Operator shall notify the Interconnection Customer, within ten (10) Business Days, if the Interconnection Application is deemed incomplete, and provide a written list detailing all information that must be provided to complete the Interconnection Application. The Interconnection Customer has ten (10) Business Days, to provide the missing information, unless additional time is requested with a valid reason. Failure to submit the requested information, within the stated timeline, will result in the Interconnection Application being deemed withdrawn. The Area EPS Operator has an additional five (5) Business Days to review the additionally provided information for completeness.

An Interconnection Application will be deemed complete upon submission to the Area EPS Operator, provided all documents, fees and information required with the Interconnection Application, adhering to Minnesota Technical Requirements, is included. The date- and time-stamp of the completed Interconnection Application shall be accepted as the qualifying date for the purpose of establishing a queue position, as described in Section 4.7 of the Overview Process document.

Interconnection Applications already screened in the Simplified Process or Fast Track Process shall retain their original queue position in the Study Process provided all applicable timelines were met.

3.2. Scoping Meeting

A scoping meeting shall be held within ten (10) Business Days after the Interconnection Application submitted under the Study Process is deemed complete. For Interconnection Applications that were submitted under or put through the Fast Track Process, the scoping meeting will occur within ten (10) Business Days after the Interconnection Customer has elected to continue with the Study Process. The scoping meeting timeline may be extended upon mutual agreement of both Parties. The scoping meeting may also be omitted by mutual agreement.

The purpose of the scoping meeting is to discuss the Interconnection Application and review existing study results relevant to the Interconnection Application. The Parties shall further discuss whether the Area EPS Operator should perform a System Impact

Study or Studies, or proceed directly to a Facilities Study or an Interconnection Agreement. If the Area EPS Operator determines there is no potential for Transmission System or Distribution System adverse system impacts, the Interconnection Application shall proceed directly to a Facilities Study or an executable Interconnection Agreement, as agreed to by the Parties.

4 System Impact Study

4.1. Electric System Impacts

A System Impact Study shall identify and detail the electric system impacts that would result if the proposed DER(s) were interconnected without project modifications or electric system modifications. The System Impact Study is also to study the potential impacts, including but not limited to, those identified in the scoping meeting. A System Impact Study shall evaluate the impacts of the proposed interconnection on the reliability of the electric system.

4.2. System Impact Study Agreement

If the Parties agree at the scoping meeting that a System Impact Study should be performed, the Area EPS Operator shall provide the Interconnection Customer a System Impact Study Agreement, not later than five (5) Business Days after the scoping meeting. If the scoping meeting was omitted by mutual agreement, the Area EPS Operator shall provide the Interconnection Customer a System Impact Study Agreement within ten (10) Business Days after the Interconnection Customer waives the scoping meeting.

The System Impact Study Agreement shall include an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study. If applicable, the System Impact Study Agreement shall list any additional and reasonable technical data on the DER needed to perform the study. The scope and cost responsibilities are to be described in the System Impact Study Agreement.

4.3. System Impact Study Costs

A deposit of the good faith estimated cost for each System Impact Study shall be provided by the Interconnection Customer with the return of a signed System Impact Study Agreement.

4.4. System Impact Study Timelines

Both the Area EPS Operator and the Interconnection Customer has timeline responsibilities under the System Impact Study.

4.4.1. Interconnection Customer Timelines

In order to remain in consideration for interconnection, an Interconnection Customer who has requested a System Impact Study shall meet the following conditions within twenty (20) Business Days of being provided a System Impact Study Agreement:

- Return a signed System Impact Study Agreement.
- Provide to the Area EPS Operator any requested additional and reasonable technical data on the DER needed to perform the System Impact Study.
- Pay the required study deposit.

Upon the Interconnection Customer's request, the Area EPS Operator shall grant a time frame extension as described in Section 9.2, if additional technical data is requested.

4.4.2 Area EPS Operator Timelines

A System Impact Study shall be completed within thirty (30) Business Days after the System Impact Study Agreement has been signed by both Parties and delivered with the deposit and requested technical information to the Area EPS Operator. The results of the System Impact Study shall be delivered to the Interconnection Customer within five (5) Business Days of completion of the System Impact Study. Upon request, the Area EPS Operator shall provide the Interconnection Customer supporting documentation developed in the preparation of the System Impact Study, subjected to confidentiality arrangements consistent with Section 12.1 of the Overview Process and terms of the System Impact Study Agreement.

5 Transmission System Impact Study

5.1. Transmission System Impacts

In instances where the System Impact Study shows potential for Transmission System adverse system impacts, the Area EPS Operator shall contact the appropriate Transmission Provider within five (5) Business Days following the identification of such impacts. The Area EPS Operator shall coordinate with the Area EPS Operator's Transmission Provider to have the necessary studies to determine if the DER causes any adverse transmission impacts. The appropriate Transmission Provider shall provide a Transmission System Impact Study Agreement for the Interconnection Customer. Included in the Transmission System Impact Study Agreement will be a non-binding,

good faith estimate of cost for the study, along with a scope outline of the study and any additional technical data required to complete the Transmission System Impact Study.

5.2. Transmission System Impact Study Timelines

In order to remain in consideration for interconnection, an Interconnection Customer must return the executed Transmission System Impact Study Agreement, along with the study deposit, within fifteen (15) Business Days. The Transmission System Impact Study shall be completed and the results provided to the Interconnection Customer in as timely a manner as possible, after the Transmission System Impact Study Agreement is signed by the Parties. The Area EPS Operator shall be responsible for coordination with the Transmission Provider as needed. Affected Systems shall participate in the study and provide all information necessary to prepare the study.

5.3. Regional Transmission Operator Jurisdiction

In certain circumstances the Transmission Provider may not be able to study a proposed DER system if there is a possible affect to the bulk Transmission System. In these situations, the Area EPS Operator will coordinate with the Transmission Provider to inform the Interconnection Customer that the proposed DER system will need to follow the Regional Transmission Operator's interconnection process. For most of Minnesota, the Regional Transmission Operator is Midcontinent Independent System Operator (MISO).

6 Facilities Study

6.1. Construction of Facilities

If construction of facilities is required, a Facility Study may be necessary to specify and estimate the cost of the equipment, engineering, procurement and construction work. A Facility Study is identified by an Initial Review, Supplemental Review or the Study Process to provide interconnection and interoperability of the DER with the Area EPS Operator's Distribution System as required by Minnesota Technical Requirements. At the determination of the Area EPS Operator, Interconnection Applications reviewed in the Simplified Process or the Fast Track Process that require construction of facilities may forgo a Facilities Study.

6.2. Facilities Study Agreement

The Area EPS Operator shall provide the Interconnection Customer a Facilities Study Agreement either:

- in tandem with the results of the Interconnection Customer's System Impact Study, or

- in tandem with a Transmission System Impact Study, or

- if no System Impact Study is required, within five (5) Business Days after the scoping meeting, or

- within ten (10) Business Days after the Interconnection Application is deemed complete and approved through the Simplified Process or Fast Track Process.

The Facilities Study Agreement shall be accompanied by an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the Facilities Study. The scope of and cost responsibilities for the Facilities Study are to be described in the Facilities Study Agreement. A deposit of the good faith estimated costs for the Facilities Study shall be provided by the Interconnection Customer at the time it returns the Facilities Study Agreement.

6.3. Facilities Study Timeline

In order to remain under consideration for interconnection, the Interconnection Customer must return the executed Facilities Study Agreement and pay the required study deposit within fifteen (15) Business Days.

6.4. Identification of Construction of Facilities

The Facilities Study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads), needed to implement the conclusions of the System Impact Study(-ies). Design for any required Interconnection Facilities and/or Upgrades shall be performed under the Facilities Study Agreement unless the Facilities Study Agreement was deemed unnecessary by the Area EPS Operator. However, in the event that the Interconnection Customer did not provide the Area EPS Operator all required Conditional Use Permits at the time of entering into the Facilities Study Agreement, any such Design and/or Upgrades by the Area EPS Operator may be delayed until after the Interconnection Customer has provided to the Area EPS Operator all required Conditional Use Permits or provides a final design. The information in the Conditional Use Permits, or changes to the design, may result in significant modifications to the planned design and/or Upgrades. The Interconnection Customer may send to the Area EPS Operator a redacted version of the Conditional Use Permit(s) to ensure confidentiality, but any and all information that the Area EPS Operator would reasonably need to perform an accurate Facilities Study shall not be redacted. If necessary to comply with these requirements, a confidential version of the

Conditional Use Permit(s) may be provided to the Area EPS Operator, with the confidential information being clearly marked and subjected to Confidentiality provisions in the Overview Process document Section 12.1.

The Area EPS Operator may contract with consultants to perform activities required under the Facilities Study Agreement. The Interconnection Customer and the Area EPS Operator may agree to allow the Interconnection Customer to separately arrange for the design of some of the Interconnection Facilities. In such cases, facilities design will be reviewed and/or modified prior to acceptance by the Area EPS Operator, under the provisions of the Facilities Study Agreement. The Area EPS Operator shall make sufficient information available to the Interconnection Customer, in accordance with confidentiality and critical infrastructure requirements, to permit the Interconnection Customer to obtain an independent design and cost estimate for any necessary facilities.

6.5. Facilities Study Report Timeline

In cases where Upgrades are required, the Facilities Study must be completed within forty-five (45) Business Days of the receipt of the executed Facilities Study Agreement and deposit. In cases where no Upgrades are necessary, and the required facilities are limited to Interconnection Facilities, the Facilities Study must be completed within thirty (30) Business Days of the receipt of the executed Facilities Study Agreement and deposit.

Once the Facilities Study is completed, a draft Facilities Study Report shall be prepared and transmitted to the Interconnection Customer. Upon request, the Area EPS Operator shall provide the Interconnection Customer supporting documentation developed in the preparation of the Interconnection Facilities Study, subject to confidentiality arrangements consistent with these procedures and the Facilities Study Agreement.

Within ten (10) Business Days of providing a draft Facilities Study Report to the Interconnection Customer, the Area EPS Operator and Interconnection Customer shall meet to discuss the results of the Facilities Study. This meeting may be omitted by mutual agreement. The Interconnection Customer may, within twenty (20) Business Days after receipt of the draft report, provide written comments to the Area EPS Operator, which the Area EPS Operator shall address in the final report.

The Area EPS Operator shall issue the final Facilities Study Report within fifteen (15) Business Days of receiving the Interconnection Customer’s comments, or promptly upon receiving the Interconnection Customer’s statement that they will not provide comments. The Area EPS Operator may reasonably extend the time frame, upon notice

to the Interconnection Customer, if the Interconnection Customer's comments require additional analyses or lead to significant modifications by the Area EPS Operator prior to issuance of the final Facilities Study Report.

7 Interconnection Agreement

7.1. Uniform Contract

For a proposed interconnection that meets the conditions of being classified as a qualifying facility less than 40 kW, the Area EPS Operator shall provide the Interconnection Customer with an executable copy of the Area EPS Operator's Uniform Contract for Cogeneration and Small Power Production Facilities (Uniform Contract), within five (5) Business Days after the completion of the applicable study(-ies).

7.2. Minnesota Municipal Interconnection Agreement

For proposed interconnections that do not meet the conditions of being classified as a qualifying facility less than 40 kW or if requested by the Interconnection Customer in lieu of signing the Uniform Contract, the Area EPS Operator shall provide the Interconnection Customer an executable Minnesota Municipal Interconnection Agreement (MMIA) within five (5) Business Days after the completion of the applicable study(-ies).

7.3. Completion of Agreement

The Interconnection Customer must return a signed Interconnection Agreement at least thirty (30) Business Days prior to the requested in-service date of the propose DER. The Area EPS Operator shall sign and return a copy of the fully executed Interconnection Agreement, back to the Interconnection Customer.

The Interconnection Customer may update the requested in-service date submitted on the Interconnection Application to a date thirty (30) Business Days or later from the date on which the Interconnection Customer submits a signed Interconnection Agreement and payment if required unless the Area EPS Operator agrees to an earlier date.

Upon receipt of the signed Interconnection Agreement, the Area EPS Operator may schedule appropriate metering replacements and construction of facilities, if necessary.

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8.1. Insurance Requirements

At minimum, the Interconnection Customer shall maintain, for the duration the DER system is interconnected to the Area EPS Operator's Distribution System, general liability insurance from a qualified insurance agency with a B+ or better rating by "Best," with a combined single limit of not less than those described in Table 8.1. 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 operation of the DER under this agreement. Evidence of the insurance shall state that coverage provided is primary and is not excess to or contributing with any insurance or self-insurance by the Area EPS Operator.

Table 8.1 Liability Insurance Requirements

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For all proposed DER systems, except those that are qualifying systems less than 40 kW AC, the general liability insurance shall, by endorsement to the policy or polices:

- Include the Area EPS Operator as additionally insured.
- Contain severability of interest clause or cross-liability clause.
- Provide that the Area EPS Operator shall not by reason of its inclusion as an additional insured incur liability to the insurance carrier for the payment of premiums for such insurance if the Area EPS Operator is included as an additionally insured.

8.2. Self-Insurance

The Interconnection Customer may choose to be self-insured provided there is an established record of self-insurance. The Interconnection Customer shall supply the Area EPS Operator at least twenty (20) Business 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 in Section 8.1. Failure of the Interconnection Customer or the Area EPS Operator 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.

8.3. Proof of Insurance

The Interconnection Customer shall furnish the required insurance certificates and endorsements to the Area EPS Operator prior to the initial operation of the DER. A copy of the Declaration page of the homeowner's insurance policy is a common example of an insurance certificate. Thereafter, the Area EPS Operator shall have the right to periodically inspect or obtain a copy of the original policy or polices of insurance. Additionally, the Area EPS Operator may request to be additionally listed as an interested third party on the insurance certificates and endorsements for qualifying facilities less than 40 kW AC, to meet the right to periodically obtain a copy of the policy or policies of insurance.

9 Timeline Extensions

9.1. Reasonable Efforts

The Area EPS Operator shall make Reasonable Efforts to meet all the time frames provided in these procedures. If the Area EPS Operator cannot meet a deadline provided herein, it must notify the Interconnection Customer in writing within three (3) Business Days after the deadline, explaining the reason for the failure to meet the deadline and providing an estimated time by which it will complete the applicable interconnection procedure in the process.

9.2. Extensions

For applicable time frames described in these procedures, the Interconnection Customer may request in writing one extension equivalent to half of the time originally allotted (e.g., ten (10) Business Days for a twenty (20) Business Days original time frame), which the Area EPS Operator may not unreasonably refuse. No further extensions for the applicable time frame shall be granted, absent a Force Majeure Event or other similarly extraordinary circumstance.

10 Modifications to Application

10.1. Procedures

At any time after the Interconnection Application is deemed complete, the Interconnection Customer or the Area EPS Operator may identify modifications to the proposed DER system that may improve costs and benefits. This includes reliability of the proposed DER system and the ability for the Area EPS Operator to accommodate the proposed DER system. The Interconnection Customer shall submit to the Area EPS Operator, in writing, all proposed modifications to any information provided in the Interconnection Application. The Area EPS Operator cannot unilaterally modify the Interconnection Application.

10.2. Timelines

Within ten (10) Business Days of receipt of the proposed modification, the Area EPS Operator shall evaluate whether the proposed modification to the Interconnection Application constitutes a Material Modification. The definition in the Section 13 Glossary of the Process Overview document includes examples of what does and does not constitute a Material Modification.

The Area EPS Operator shall notify the Interconnection Customer in writing of the final determination of the proposed modification. For proposed modifications that are determined to be a Material Modification the Interconnection Customer may choose to either: 1) withdraw the proposed modification; or 2) proceed with a new Interconnection Application. The Interconnection Customer shall provide its choice in writing to the Area EPS Operator within ten (10) Business Days after being provided the Material Modification determination. If the Interconnection Customer does not provide its choice within the timeline, the Interconnection Application shall be considered withdrawn.

If the proposed modification is not determined to be a Material Modification, then the Area EPS Operator shall notify the Interconnection Customer in writing that the modification has been accepted and the Interconnection Customer shall retain its eligibility for interconnection, including its position in the queue.

11 Interconnection

11.1. Interconnection Milestones

For DER systems that are not a qualifying facility less than 40 kW AC, the Interconnection Customer and the Area EPS Operator shall agree on milestones for which each Party is responsible and list them in Attachment IV in the Interconnection Agreement. To the greatest extent possible, the Parties will identify all design, procurement, installation and construction requirements associated with the project while also clearly identifying associated timelines, at the beginning, or as early within the process as possible, of the design, procurement, installation and construction phase.

A Party's obligation under this provision may be extended by agreement. If a Party anticipates that they will be unable to meet a milestone for any reason other than a Force Majeure Event, they shall immediately notify the other Party of the reason(s) for not meeting the milestone, then propose the earliest reasonable alternative date in which this and future milestones will be met and request appropriate amendments to the Interconnection Agreement and its attachments. The Party affected by the failure to meet a milestone shall not unreasonably withhold agreement to such an amendment unless:

- The Party will suffer significant uncompensated economic or operational harm from the delay, or

- Attainment of the same milestone has previously been delayed, or

- The Party has reason to believe the delay in meeting the milestone is intentional or unwarranted notwithstanding the circumstance explained by the Party proposing the amendment.

If the Party affected by the failure to meet a milestone disputes the proposed extension, the affected Party may pursue dispute resolution as described in the Overview Process document.

11.2. Metering

Any metering requirements necessitated by the use of the DER system shall be installed at the Interconnection Customer's expense. The metering-related costs will be included in the final invoice of interconnection costs to the Interconnection Customer. The Interconnection Customer is also responsible for metering replacement costs not covered in the Interconnection Customer's general customer charge. The Area EPS Operator may charge Interconnection Customers an ongoing metering-related charge for an estimate of ongoing metering-related costs specifically demonstrated.

11.3. Inspection, Testing and Commissioning

Upon completing construction of the DER system, the Interconnection Customer will cause the DER system to be inspected or otherwise certified by the appropriate local electrical wiring inspector with jurisdiction. The Interconnection Customer shall then arrange for the inspection and testing of the DER system and the Customer's Interconnection Facilities prior to interconnection pursuant to Minnesota Technical Requirements. Commissioning tests of the Interconnection Customer's installed equipment shall be performed pursuant to applicable codes and standards of Minnesota's Technical Requirements and Section 15 in the Overview Process.

The Interconnection Customer shall notify the Area EPS Operator of testing and inspection no fewer than five (5) Business Days in advance, or as may be agreed to by the Parties. The Interconnection Customer shall provide to the Area EPS Operator a testing procedure that will be followed on the day of testing and inspection no fewer than ten (10) Business Days prior to the testing and inspection date. The testing procedure should include tests and/or inspections to confirm the DER system will meet the technical requirements of interconnection. The Area EPS Operator shall review the testing procedure for completeness and notify the Interconnection Customer if the

testing procedure fails to address components of the technical requirements for interconnection.

The Area EPS Operator shall send qualified personnel to the DER site to inspect the interconnection and witness the testing. Testing and inspection shall occur on a Business Day at a mutually agreed upon date and time. The Area EPS Operator may waive the right to witness the testing.

11.4. Interconnection Costs

11.4.1 Estimation of Interconnection Costs

The Interconnection Customer shall pay for the actual cost of the Interconnection Facilities and Distribution Upgrades along with the Area EPS Operator's cost to commission the proposed DER system. An estimate of the interconnection costs shall be stated in the Uniform Contract or in the MMIA in Attachment II, Interconnection Facilities and Upgrades, as a detailed itemization of such costs. If Network Upgrades are required, the actual cost of the Network Upgrades, including overheads, shall be borne by the Interconnection Customer pursuant to the Transmission Provider and associated agreements.

11.4.2 Progressive Payment of Interconnection Costs

The Area EPS Operator shall invoice the Interconnection Customer for the design, engineering, construction and procurement costs of the Interconnection Facilities and Upgrades described in the MMIA Attachment II, on a monthly basis, or other manner agreed upon by both Parties in the MMIA, or as described in the Uniform Contract. The Interconnection Customer shall pay each invoice within twenty-one (21) Business Days or as agreed to in the MMIA or Uniform Contract.

11.4.3 Final Accounting of Interconnection Facilities and Upgrade Costs

If distribution or transmission facilities required upgrades to accommodate the proposed DER system, the Area EPS Operator shall render the final interconnection cost invoice to the Interconnection Customer within eighty (80) Business Days (approximately four calendar months) of completing the construction and installation of the Area EPS Operator's Interconnection Facility and Upgrades. The Area EPS Operator shall provide the Interconnection Customer with a final accounting report identifying the difference between the actual Interconnection Customer's cost responsibility and the Interconnection Customer's previous aggregate payments to the Area EPS Operator for the specific DER system interconnection. Upon the final accounting submitted to the Interconnection Customer, the balance between the actual cost and previously

aggregated payments shall be paid to the Area EPS Operator within twenty (20) Business Days. If the balance between the actual cost and previously aggregated payments is a credit, the Area EPS Operator shall refund the Interconnection Customer within twenty (20) Business Days.

11.4.4 Final Interconnection Costs without Facilities and Upgrades Needed

Within thirty (30) Business Days the final invoice for the interconnection costs shall be rendered to the Interconnection Customer once the proposed DER system has been commissioned by the Area EPS Operator, or upon the commissioning being waived by the Area EPS Operator. The Interconnection Customer shall make payment to the Area EPS Operator within twenty-one (21) Business Days of receipt, or as otherwise stated in the Uniform Contract or MMIA.

11.5. Security of Payment

At the option of the Area EPS Operator, either the "Traditional Security" or the "Modified Security" method shall be used for assurance of payment of interconnection cost.

Under the Traditional Security method, 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 the Area EPS Operator credit policy. The letter of credit shall also include procedures for the unpaid balance of the estimated amount shown in the Interconnection Agreement for the totality of all anticipated work or expense incurred by the Area EPS Operator associated with the Interconnection Application. The payment for these estimated costs shall be as follows:

- One-third of estimated costs, shall be due no later than when the Interconnection Customer signs the Interconnection Agreement.

- An additional one-third of estimated costs, shall be due prior to initial energization of the DER with the Area EPS Operator.

- After the project completion, the remainder of actual costs, incurred by Area EPS Operator, shall be due within thirty (30) Business Days from the date the invoice is mailed.

Under the Modified Security method, at least twenty (20) Business Days prior to the commencement of the design, procurement, installation, or construction of a discrete

portion of the Area EPS Operator's Interconnection Facilities and Upgrades, the Interconnection Customer shall provide the Area EPS Operator, at the Interconnection Customer's option, a guaranty, letter of credit or other form of security that is reasonably acceptable to the Area EPS Operator and is consistent with the Minnesota Uniform Commercial Code. Such security for payment shall be in an amount sufficient to cover the costs for constructing, designing, procuring, and installing the applicable portion of the Area EPS Operator's Interconnection Facilities and Upgrades and shall be reduced on a dollar-for-dollar basis for payments made to the Area EPS Operator under the Interconnection Agreement during its term.

The guaranty must be made by an entity that meets the creditworthiness requirements of the Area EPS Operator and contain terms and conditions that guarantee payment of any amount that may be due from the Interconnection Customer, up to an agreed-to maximum amount.

The letter of credit must be issued by a financial institution or insurer reasonably acceptable to the Area EPS Operator and must specify a reasonable expiration date not sooner than sixty (60) Business Days, (three calendar months), after the due date of the final accounting report and invoice described in Section 11.4.

11.6. Non-Warranty

Area EPS Operator does not give any warranty, expressed or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, operated, installed or maintained by the Interconnection Customer, including without limitation the DER and any structures, equipment, wires, appliances or devices not owned, operated or maintained by the Area EPS Operator. The Area EPS Operator does not guarantee uninterrupted power supply to the DER and will operate the Distribution System with the same reliability standards for the entire customer base.

11.7. Authorization for Parallel Operation

The Interconnection Customer shall not operate its DER system in parallel with the Area EPS Operator's Distribution System without prior written authorization from the Area EPS Operator. The Area EPS Operator shall provide such authorization within three (3) Business Days from when the Area EPS Operator receives notification that the Interconnection Customer has complied with all applicable parallel operations requirements and commissioning has been successfully completed. Such authorization shall not be unreasonably withheld, conditioned or delayed.

11.8. Continual Compliance

The Interconnection Customer shall operate its DER system in compliance with the Area EPS Operator's technical requirements referred to in the executed Interconnection Agreement. The Area EPS Operator may periodically inspect, at its own expense, the operation of DER system as it relates to power quality, thermal limits and reliability. Failure by the Interconnection Customer to remain in compliance with the technical requirements will result in the disconnection of the DER system from the Area EPS Operator's Distribution System.

11.9. Disconnection of DER

The Area EPS Operator has the right to disconnect the DER in the event of the following:

- Does not continue to follow and maintain IEEE 1547 settings approved by the Area EPS Operator as indicated by the adopted technical requirements.
- Does not meet all the requirements of the Study Process.
- Refuses to sign either the Interconnection Agreement or the Area EPS Operator's Uniform Contract.

The Area EPS Operator may temporarily disconnect the DER upon the following conditions:

- For scheduled outages upon reasonable notice.
- For unscheduled outages or emergency conditions.
- If the DER does not operate in the manner consistent with the Study Process.

The Area EPS Operator shall inform the Interconnection Customer in advance of any scheduled disconnections, or as reasonable, after an unscheduled disconnection.

Pre-Application Report Request

Persons interested in additional information regarding the interconnection of a distributed energy resource to their utility's distribution system are to fill out this Pre-Application Report Request. The Pre-Application Report Request is to be filled out as completely as possible by the applicant. Please type or print clearly. The utility will provide the applicant with a Pre-Application Report within 15 business days once the completed Pre-Application Report Request and a $300 fee is submitted to the utility.

Distributed Energy Resource Information		
Project address:		
City:	State:	Zip code:
GPS coordinates:	Nearby cross streets:	
Location of the proposed Point of Common Coupling (e.g., meter number or pole number):		
DER type *(Check all that apply)*: ☐ Solar photovoltaic ☐ Wind ☐ Battery storage ☐ Combined Heat & Power ☐ Solar thermal ☐ Other (please specify)		
Total aggregate nameplate rating of proposed DER system *(kW AC)*:		
Phase configuration of proposed DER system	☐ Single ☐ Three	
Service voltage of proposed DER system	Volts	
Will this be a stand-alone generator not interconnected to onsite load (not including station service)?	☐ Yes ☐ No	

Please attach copy of site map for proposed project and any additional information that may be helpful in fulfilling the pre-application request. Site map should include true north, proposed project location including general layout, proposed service point location and major roadways.

For Office Use Only		
Date received:	Application fee received: ☐ Yes ☐ No	
Date completed Pre-Application Report sent to applicant:		

Point of Interconnection – Additional Information

Is the proposed interconnection to an existing service? (If no, applicant is to skip to the next section.)	☐ Yes ☐ No
Customer name:	Customer account number:
Existing loads at site *(kW AC):*	
List future additional loads planned for at site *(in kW AC):*	

Project Contact Information

Full name:		
Name of business:		
Street address:		
City:	State:	Zip code:
Email:	Phone:	

Payment and Agreement

There is a non-refundable $300 fee for the construction of a pre-application report. By signing this document, I acknowledge and understand that:

- Neither review of this application nor construction of any report shall begin until the full amount of the fee has been paid to my utility.
- My utility shall provide a report with only the available information on the proposed point of interconnection.
- The information provided by my utility may become outdated and not useful at the time of submission of a complete Interconnection Application.
- The confidentiality provisions in Section 12.1 of the Overview Process of the Minnesota Municipal Interconnection Process apply.
- Upon receipt of the report no guarantee is made by my utility that a future Interconnection Application will be approved for this proposed site.

_____ _____

Applicant signature Date

*****Please return completed along with any additional documentation*****

Pre-Application Report

This report summarizes information available to the utility regarding the potential interconnection of a distributed energy resource to the utility's distribution system. The report includes only information that is readily available to the utility. This report is not a guarantee by the utility that a future interconnection application will be approved for the proposed site. Information provided in this report is subject to change as modifications are made to the utility's distribution system.

Pre-Application Request				
Pre-application ID:				
Project address:				
DER size:		kW_{ac}	DER type:	
Project contact:				
Email:		Phone:		

Electric Distribution System Information			
			Info not available
Total capacity of the circuit based on normal conditions likely to serve the proposed PCC*		MW_{ac}	
Existing aggregate generation capacity interconnected to the circuit likely to serve the proposed PCC		MW_{ac}	
Aggregate queued generation capacity for the circuit likely to serve the proposed PCC		MW_{ac}	
Available capacity of the circuit most likely to serve the proposed PCC		MW_{ac}	
Estimated peak load of relevant line sections		kW_{ac}	
Estimated minimum load of relevant line sections (Daytime minimum load to be specified for solar DER if available)		kW_{ac}	
Substation voltage (Nominal distribution)		kV	
Substation voltage (Nominal transmission)		kV	
Nominal distribution circuit voltage at proposed PCC		kV	

**PCC = Point of Common Coupling*

Electric Distribution System Information - Continued

			Info not available
Approximate circuit distance between the proposed PCC and the substation		Miles	
Distance to three-phase circuit (If not already located on a three-phase circuit)		Miles	
Limiting conductor ratings from the proposed PCC to the substation		Amps	
Number of available phases on the area EPS at the proposed PCC		Phases	
Is the proposed point of common coupling located on a spot network, grid network, or radial supply?	☐ Yes ☐ No		
Is the proposed PCC located behind a line voltage regulator?	☐ Yes ☐ No		
Type of voltage regulating devices between substation and proposed PCC	Device A		
	Device B		
	Device C		
Number and type of protection devices between substation and proposed PCC	Device A		
	Device B		
	Device C		
Any additionally known distribution system constraints?	☐ Yes ☐ No		

Additional known constraints that could affect installation or operation of the DER or Area EPS at the proposed PCC are attached to this report. Constraints may include, but are not limited to, electrical dependencies at that location, short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints, or secondary networks.

Utility Information

Report completed by:			
Company:			
Project contact:			
Email:		Phone:	

Simplified Interconnection Application

Persons interested in applying for the interconnection of a distributed energy resource (DER) to the utility's distribution system through the Simplified Process are to fill out this Simplified Interconnection Application. This application is to be used for inverter-based DER technologies with the capacity of 20 kW_{ac} or less and is to be filled out completely by the applicant. The application shall be returned to the utility with the requested information and material and a non-refundable $100 application fee.

Proposed DER interconnections to the utility's distribution system submitted under the Simplified Process may be moved into the Fast Track Process if engineering screens are failed during the Simplified Interconnection Application review. The timeline for review of this application is as follows:

- Upon receipt of a Simplified Interconnection Application the utility has 10 business days to review the application for completeness.
- If the application is deemed incomplete, the utility shall notify the applicant of what additional information or material is required.
- The applicant has 5 business days to return the missing information and/or material or their application may lose its queue position and be deemed withdrawn.
- The utility shall have a total of 20 business days to review the Simplified Interconnection Application, not including time waiting for additional information or material necessary for the application to be deemed complete.
- The utility will notify the applicant if the proposed DER system is preliminarily approved for interconnection or if the proposed DER system will need to be moved into the Fast Track Process.

The Simplified Interconnection Application is to be filled out clearly and completely by the applicant or as noted in each section of the application. Sections that are noted with an asterisk (*) are required to be filled out along with **bolded items**.

Checklist for Submission to Utility

The items below shall be included with submittal of this Simplified Interconnection Application to the utility. Applications that fail to include all items will be deemed incomplete.

	Included
$100 non-refundable processing fee	☐ Yes
One-line diagram (See Technical Specification Manual ("TSM") for more details)	☐ Yes
Documentation showing site control	☐ Yes
Site diagram showing DER system layout (See TSM for more details)	☐ Yes

Possible Additional Documentation (See TSM for more details)

- If requesting the DER export capacity to be limited, include information material explaining the limiting capabilities.
- Schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).
- Documentation that describes and details the operation of protection and control schemes (if applicable).
- Inverter specification sheet(s).

Applicant *

First and last name:	
Name on electric service account, if different:	
Account number:	**Meter number:**
Mailing address:	
Email:	**Phone:**

Application Agent *

Is the applicant using an application agent for this application? ☐ Yes ☐ No	
If Applicant is not using an application agent, please continue to next section.	
Agent name:	
Agent's company name:	
Email:	Phone:

DER Location *

Is the proposed DER system to be located at the applicant's mailing address: ☐ Yes ☐ No	
If yes, please continue to the next section.	
If no, will the proposed DER system be interconnected to an existing electric service? ☐ Yes ☐ No	
Please provide the address or GPS coordinates:	
If not an existing service, please state the proposed service entrance size (amps):	

General *

Choose one of the following and provide applicable data:	
☐ Application is for a new DER	
Aggregate DER nameplate rating of all generation and storage types (kW_{ac}):	
☐ Application is for a capacity addition to an existing DER	
Capacity of existing DER (kW_{ac}):	Capacity proposed to be added (kW_{ac}):
☐ Application is for a "Material Modification" to an existing DER (See M-MIP Process Overview, p. 21)	
If Material Modification to existing facility, please describe:	

Distributed Energy Resource will be used for what reason? (Check all that apply):

☐ Net metering ☐ Only to supply power to applicant
☐ Only to supply power to Area EPS

Installed DER system cost (before incentives): $

Distributed Energy Resource Information *

Phase configuration of Distributed Energy Resource(s): ☐ Single-phase ☐ Three-phase			
DER type (Check all that apply and list aggregate capacity of each type):			
☐ Solar photovoltaics	Size (kW_{ac}):	☐ Wind	Size (kW_{ac}):
☐ Storage	Size (kW_{ac}):	☐ Other	Size (kW_{ac}):
Please specify other:			

Export Capacity Limitation *

Is the maximum physical export capacity request the same as the nameplate capacity? ☐ Yes ☐ No
If yes, please continue to the next section.
If no, what is the maximum physical export capacity requested? kW_{ac}
Is the export capacity limited? (E.g., though the use of a control system, power relay(s), or other similar devices setting of adjustment) ☐ Yes ☐ No
If yes, please attach detailed information describing the method of limiting export capacity.

Inverter Interconnected System Information – non ESS (if applicable) *

Aggregate inverter rating (kW_{ac}):	**Total number of inverters:**
Phase configuration of inverter(s): ☐ Single-phase ☐ Three-phase	
Voltage of inverter(s):	
Inverter manufacturer:	
1. Model No.	**Certification** ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	**Number of units of this model:**
2. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:
3. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:
4. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:

Energy Storage System Information (if applicable)	
ESS inverter energy rating (kWh_{ac}):	**ESS inverter capacity rating (kW_{ac}):**
How will the ESS be used? Select all use cases that apply. ☐ Outage protection/backup power ☐ Demand reduction ☐ No export ☐ Time-of-use energy management ☐ Increased self-consumption ☐ Other	
Please specify other:	
What operating modes will be used? Select only one operating mode. ☐ Import only ☐ Export only ☐ No exchange ☐ Unrestricted exchange	
If export only is checked, select all that apply. ☐ ESS export is allowed ☐ Solar export is allowed ☐ Limited export is allowed (please specify export limit amount in kW):	
Is the ESS recharging limited to certain times of the day and/or after a power outage? ☐ Yes ☐ No If yes, please explain:	
If the ESS shares an inverter that is listed in the previous section, please skip the rest of this section.	
Aggregate ESS inverter rating (kW_{ac}):	**Total number of ESS inverters:**
Phase configuration of ESS inverter(s): ☐ Single-phase ☐ Three-phase	
Voltage of ESS inverter(s):	
ESS inverter manufacturer:	
1. Model No.	**Certification** ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	**Number of units of this model:**
2. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:
3. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:
4. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:

Additional Documentation

Please see the Area EPS Operator's Technical Specification Manual (TSM) for requirements that need to be on the one-line and site diagram and for example application documentation.

Please see the Minnesota Municipal Interconnection Process (M-MIP) for additional requirements related to site control and insurance documentation.

*Interconnection Agreement **

An approved interconnection applicant is referred to throughout the Minnesota Municipal Interconnection Process as an Interconnection Customer and will be provided one of two interconnection agreement forms from the Process to encapsulate the rights and obligations of the Interconnection Customer and the utility. For facilities that qualify to proceed through the Simplified Process, the Interconnection Customer may elect to utilize the simpler Uniform Contract form. Included in this contract are payment terms for purchase by the utility of excess power generated by the interconnected DER system. The Interconnection Customer has the option, however, to utilize the longer Minnesota Municipal Interconnection Agreement form in lieu of the Uniform Contract.

Would the applicant prefer to utilize the Minnesota Municipal Interconnection Agreement form in lieu of the Uniform Contract form?	☐ Yes ☐ No

*Acknowledgements – Must be completed by applicant **

	Initials
An Interconnection Customer has opportunities to request a timeline extension during the interconnection process. Failure by the Interconnection Customer to meet or request an extension for a timeline outlined in the Interconnection Process could result in a withdrawn queue position and the need to re-apply.	
Proposed DER interconnections to the utility's distribution system submitted under the Simplified Process may be moved into the Fast Track Process if engineering screens are failed during the interconnection application review. Interconnection Customers would be contacted regarding the next steps in the Fast Track Process.	

*Application Signature – Must be completed by Applicant **

I designate the individual or company listed as my Application Agent to serve as my agent for the purpose of coordinating with the Area EPS Operator on my behalf throughout the interconnection process.

_____
Initials

I hereby certify that, to the best of my knowledge, the information provided in this Interconnection Application is true and I have appropriate Site Control in conformance with the Interconnection Process. I agree to abide by the terms and conditions for Interconnecting an Inverter-based Distribution Energy Resource No Larger than 20 kW (Simplified Process) and return the Certification of Completion when the DER has been installed.

_____ _____

Applicant Signature **Date**

***** Please return completed application and include all documentation *****

Interconnection Application

Persons interested in applying for the interconnection of a distributed energy resource (DER) to the utility's distribution system through the Fast Track or Study Processes are to fill out this Interconnection Application. The Interconnection Application is to be filled out completely by the applicant or as noted in each section of the application. The utility will contact the applicant within 10 business days once the Interconnection Application and the corresponding processing fee is submitted to the utility. The utility will then notify the applicant of the completeness of their application. If the application is deemed incomplete by the utility, the utility will provide the applicant with a list of missing material. The applicant will then have 10 business days to provide the utility with this information or request an extension, otherwise the application will be deemed incomplete, and the applicant will lose their place in the queue.

The Interconnection Application is to be filled out clearly and completely by the applicant or as noted in each section of the application. Sections that are noted with an asterisk (*) are required to be filled out along with **bolded items**.

Checklist for Submission to Area EPS Operator	
The items below shall be included with submittal of the Interconnection Application to the Area EPS Operator. Applications that fail to include all items will be deemed incomplete.	
	Included
Non-refundable processing fee Fast Track Process • $100 + $1/kW for Certified systems • $100 + $2/kW for Non-certified systems Study Process • $1,000 + $2/kW down payment. Additional study fees may apply.	☐ Yes
One-line diagram • Please see Area EPS Operator's Technical Specification Manual (TSM) for more details.	☐ Yes
Documentation showing site control	☐ Yes
Site diagram showing DER system layout (See TSM for more details)	☐ Yes
<u>Possible additional documentation (See TSM for more details)</u> • If requesting the DER export capacity to be limited, include information material explaining the limiting capabilities. • Schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable). • Documentation that describes and details the operation of protection and control schemes (if applicable). • Inverter specification sheet(s) (if applicable).	

Applicant *

First and last name:	
Name on electric service account, if different:	
Account number:	**Meter number:**
Mailing address:	
Email:	**Phone:**

Application Agent *

Is the applicant using an Application Agent for this application? ☐ Yes ☐ No	
If Interconnection Customer is not using an Applicant Agent, please continue to next section.	
Application agent:	
Agent's company name:	
Email:	Phone:

DER Location *

Is the proposed DER system to be located at the applicant's mailing address: ☐ Yes ☐ No	
If yes, please continue to the next section.	
If no, will the proposed DER system be interconnected to an existing electric service? ☐ Yes ☐ No	
Please provide the address or GPS coordinates:	
If not an existing service, please state the proposed service entrance size (amps):	

General *

Select Review Process:	☐ Fast Track Process	☐ Study Process
Choose one of the following and provide applicable data:		
☐ Application is for a new DER		
Aggregate DER nameplate rating of all generation and storage types (kW_{ac}):		
☐ Application is for a Capacity Addition to an existing DER		
Capacity of existing DER (kW_{ac}):	Capacity proposed to be added (kW_{ac}):	
☐ Application is for a Material Modification to an existing DER (See M-MIP Process Overview, p. 21)		
If Material Modification to existing facility, please describe:		
Distributed Energy Resource will be used for what reason? (Check all that apply):		
☐ Net metering ☐ Only to supply power to applicant ☐ Only to supply power to Area EPS		
Type of generator (check all that apply):	☐ Inverter	☐ Induction or synchronous
Installed DER system cost (before incentives): $		

Distributed Energy Resource Information *

Phase configuration of Distributed Energy Resource(s): ☐ Single-phase ☐ Three-phase

DER type (Check all that apply and list aggregate capacity of each type):

☐ Solar photovoltaics	Size (kW_{ac}):	☐ Wind	Size (kW_{ac}):
☐ Storage	Size (kW_{ac}):	☐ Diesel	Size (kW_{ac}):
☐ Natural gas	Size (kW_{ac}):	☐ Fuel oil	Size (kW_{ac}):
☐ Hydro type	Size (kW_{ac}):	☐ Other	Size (kW_{ac}):
Please specify Other:			

Export Capacity Limitation *

Is the maximum physical export capacity request the same as the nameplate capacity: ☐ Yes ☐ No

If yes, please continue to the next section.

If no, what is the maximum physical export capacity requested? kW_{ac}

Is the export capacity limited? (E.g., though the use of a control system, power relay(s), or other similar devices setting of adjustment) ☐ Yes ☐ No

If yes, please attach detailed information describing the method of limiting export capacity.

Interconnection Facilities Information *

What type of DER interconnection/transfer method is proposed?

☐ None (DER is never operating parallel with the distribution system)

☐ Extended parallel/continuous (The normal state of the DER is to operate parallel with the distribution system.)

☐ Limited (DER operated parallel with the distribution system for a short time). Please specify what type of Limited.

☐ Quick closed (100msec parallel or less) ☐ Limited parallel (2 minutes or less)

Will a transfer switch be used with the DER? ☐ Yes ☐ No

Manufacturer:	Model:	Load rating (in Amps):

Will a transformer, owned by the Interconnection Customer, be used between the DER and the Point of Common Coupling?	☐ Yes ☐ No

Please show proposed location of protective interface equipment on property on the submitted site diagram.

Transformer Data, if applicable (For Interconnection Customer-Owned Transformer) ***(E.g., Transformers used for secondary voltage conversion or primary metered interconnections)***			
What is the phase configuration of the transformer?			☐ Single-phase ☐ Three-phase
Size (kVA):		*Transformer impedance (%):*	On kVA base:
Transformer volts: (Primary)	Delta:	Wye:	Wye grounded:
Transformer volts: (Secondary)	Delta:	Wye:	Wye grounded:
Transformer volts: (Tertiary)	Delta:	Wye:	Wye grounded:
Transformer Fuse Data (For Interconnection Customer-Owned Fuse)			
Manufacturer:	Type:	Size:	Speed:
Interconnecting Circuit Breaker, if applicable (For Interconnection Customer-Owned Circuit Breaker)			
Manufacturer:		Type:	
Load rating (in amps):	Interrupting rating (in amps):	Trip speed (cycles):	
Interconnection Protective Relays: Please show protective relay manufacturer, model and type on the one-line diagram.			
Current and Potential Transformer Data: Please show CT ratios and CT/PT locations on one-line.			

Fill out all following sections which pertain to the proposed DER installation

Inverter Interconnected System Information – non ESS (if applicable)	
Aggregate inverter rating (kW_{ac}):	**Total number of inverters:**
Phase configuration of inverter(s): ☐ Single-phase ☐ Three-phase	
Voltage of inverter(s):	
Inverter manufacturer:	
1. Model No.	**Certification** ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	**Number of units of this model:**
2. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:
3. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:
4. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:

Energy Storage System Information (if applicable)

ESS inverter energy rating (kWh_{ac}):	**ESS inverter capacity rating (kW_{ac}):**
How will the ESS be used? Select all use cases that apply. ☐ Outage protection/backup power ☐ Demand reduction ☐ No export ☐ Time-of-use energy management ☐ Increased self-consumption ☐ Other	
Please specify other:	
What operating modes will be used? Select only one operating mode. ☐ Import only ☐ Export only ☐ No exchange ☐ Unrestricted exchange	
If Export Only is Checked, select all that apply. ☐ ESS export is allowed ☐ Solar export is allowed ☐ Limited export is allowed (please specify export limit amount in kW):	
Is the ESS recharging limited to certain times of the day and/or after a power outage? ☐ Yes ☐ No If yes, please explain:	
If the ESS shares an inverter that is listed in the previous section, please skip the rest of this section.	
Aggregate ESS inverter rating (kW_{ac}):	**Total number of ESS inverters:**
Phase configuration of ESS inverter(s): ☐ Single-phase ☐ Three-phase	
Voltage of ESS inverter(s):	
ESS inverter manufacturer:	
1. Model No.	**Certification** ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	**Number of units of this model:**
2. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:
3. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:
4. Model No.	Certification ☐ UL 1741 ☐ UL 1741-SA ☐ UL 1741-SB
Inverter rating (kW_{ac}):	Number of units of this model:

Rotating Generation System Information (if applicable) **Prime Mover Information**		
Please indicate the prime mover: ☐ Microturbine ☐ Reciprocating engine ☐ Hydro ☐ Wind ☐ Other (please specify)		
Generator type ☐ Induction ☐ Synchronous		
Manufacturer:	Model name & number:	Version:

Summer name plate rating:	kW_{ac}	Summer name plate rating:	kW_{ac}
Winter name plate rating:	kVA_{ac}	Winter name plate rating:	kVA_{ac}
Rated power factor:	Leading:	Lagging:	

Distributed Energy Resource Characteristic Data (for Synchronous machines)	
RPM frequency:	Neutral grounding resistor:
Direct axis synchronous reactance, X_d:	Zero sequence reactance, X_0:
Direct axis transient reactance, X'_d:	KVA base:
Direct axis subtransient reactance, X''_d:	Field volts:
Negative sequence reactance, X_2:	Field amperes:
For synchronous generators 1 MW or larger, please provide the appropriate IEEE model block diagram of excitation system, governing system and power system stabilizer (PSS) in accordance with the regional reliability council criteria. A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be submitted.	

Distributed Energy Resource Characteristic Data (for Induction machines)	
RPM Frequency:	Neutral grounding resistor:
Motoring power (kW):	Exciting current:
Heating time constant:	Temperature rise:
Rotor resistance, R_r:	Frame size:
Stator resistance, R_s:	Design letter:
Stator reactance, X_s:	Reactive power required In Vars (no load):
Rotor reactance, X_r:	Reactive power required In Vars (full load):
Magnetizing reactance, X_m:	Total rotating inertia, H:
Short circuit reactance, X_d'':	

Additional Documentation

On the one-line diagram please show the interconnection transformer and provide the transformer winding configuration, primary and secondary transformer voltage, transformer protection information and expected impedance. Please also show how the transformer will be protected to meet the NEC requirements.

Please see the Area EPS Operator's Technical Specification Manual (TSM) for requirements that need to be on the one-line and site diagrams and for application documentation examples.

Please see the Minnesota Municipal Interconnection Process for additional requirements related to site control and insurance documentation.

*Interconnection Agreement **

An approved interconnection applicant is referred to throughout the Minnesota Municipal Interconnection Process as an Interconnection Customer and will be provided one of two interconnection agreement forms from the Process to encapsulate the rights and obligations of the Interconnection Customer and the utility. For facilities that qualify to proceed through the Simplified Process, the Interconnection Customer may elect to utilize the simpler Uniform Contract form. Included in this contract are payment terms for purchase by the utility of excess power generated by the interconnected DER system. The Interconnection Customer has the option, however, to utilize the longer Minnesota Municipal Interconnection Agreement form in lieu of the Uniform Contract.

Would the applicant prefer to utilize the Minnesota Municipal Interconnection Agreement form in lieu of the Uniform Contract form?	☐ Yes ☐ No

*Acknowledgements – Must be completed by Interconnection Customer **

	Initials
An Interconnection Customer has opportunities to request a timeline extension during the interconnection process. Failure by the Interconnection Customer to meet or request an extension for a timeline outlined in the Interconnection Process could result in a withdrawn queue position and the need to re-apply.	
Proposed DER interconnections to the utility's distribution submitted under the Fast Track Process may be moved into the Study Process if engineering screens are failed during the Interconnection Application review. Interconnection Customers would be contacted to approve being moved into the Study Process.	

*Application Signature – Must be completed by Interconnection Customer **

I designate the individual or company listed as my Application Agent to serve as my agent for the purpose of coordinating with the Area EPS Operator on my behalf throughout the interconnection process.

_____
Initials

I hereby certify that, to the best of my knowledge, the information provided in this Interconnection Application is true, and that I have appropriate Site Control in conformance with the Interconnection Process. I agree to abide by the terms and conditions of the Interconnection Process and will inform the utility if the proposed DER system changes from the details listed in this Interconnection Application.

_____ _____

Applicant Signature **Date**

*****Please print clearly or type and return completed along with any additional documentation*****

Minnesota Municipal Interconnection Process (M-MIP)

System Impact Study Agreement

System Impact Study Agreement

THIS AGREEMENT is made and entered into this _____day of_____ 20___ by and between_____, ("Interconnection Customer"), and _____, a municipal utility existing under the laws of the State of Minnesota, ("Area EPS Operator"). Interconnection Customer and Area EPS Operator each may be referred to as a "Party," or collectively as the "Parties."

RECITALS

WHEREAS, the Interconnection Customer is proposing to develop a Distributed Energy Resource (DER) or generating capacity addition to an existing DER consistent with the Interconnection Application completed by the Interconnection Customer on_____(date); and

WHEREAS, the Interconnection Customer desires to interconnect the DER with the Area EPS Operator's Electric System; and

WHEREAS, the Interconnection Customer has requested the Area EPS Operator to perform a System Impact Study to assess the impact of interconnecting the DER with the Area EPS Operator's Electric System, and potential Affected System(s);

NOW, THEREFORE, in consideration of, and subject to, the mutual covenants contained herein the Parties agreed as follows:

1. When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated, or the meanings specified, in the Minnesota Municipal Interconnection Process (M-MIP).

2. The Interconnection Customer elects and the Area EPS Operator shall cause to be performed a System Impact Study consistent with the M-MIP. The scope of a System

Impact Study shall be subject to the assumptions set forth in this Agreement, including Attachment A.

3. A System Impact Study will be based upon the technical information provided by Interconnection Customer in the Interconnection Application. The Area EPS Operator reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the System Impact Study.

4. A System Impact Study may, as necessary, consist of a short circuit analysis, a stability analysis, a power flow analysis, voltage drop and flicker studies, protection and set point coordination studies, and grounding reviews. A System Impact Study shall state the assumptions upon which it is based, state the results of the analyses, and provide the requirement or potential impediments to providing the requested interconnection service, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection. A System Impact Study shall provide a list of facilities that are required as a result of the Interconnection Application and non-binding good faith estimates of cost responsibility and time to construct. A Facilities Study may be required to identify all possibilities of facility upgrades, cost estimates and estimate of construction time.

5. A distribution System Impact Study shall incorporate a distribution load flow study, an analysis of equipment interrupting ratings, protection coordination study, voltage drop and flicker studies, protection and set point coordination studies, grounding reviews, and the impact on electric system operation, as necessary.

6. If the System Impact Study determines Affected Systems may be affected, a separate Transmission System Impact Study may be required. All Affected Systems shall be

afforded an opportunity to review and comment upon a System Impact Study that indicates potential adverse system impacts on their electric systems.

7. If the Area EPS Operator uses a queuing procedure for sorting or prioritizing projects and their associated cost responsibilities for any required Network Upgrades, the System Impact Study shall consider all Distributed Energy Resources (and with respect to Section 7.3 below, any identified Upgrades associated with such higher queued interconnection) that, on the date the System Impact Study is commenced.

   7.1. Are directly interconnected with the Area EPS Operator's Electric System; or

   7.2. Are interconnected with Affected Systems and may have an impact on the proposed interconnection; and

   7.3. Have a pending higher queued Interconnection Application to interconnect with the Area EPS Operator's Electric System.

8. A deposit of the equivalent of the good faith estimated cost of a System Impact Study shall be required from the Interconnection Customer when the signed Agreement is provided to the Area EPS Operator.

9. Any study fees shall be based on the Area EPS Operator's actual costs and include a summary of professional time. An invoice shall be sent to the Interconnection Customer within twenty (20) Business Days after the study is completed and delivered.

10. The Interconnection Customer must pay any study costs that exceed the deposit without interest, within twenty (20) Business Days, on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Area EPS

Operator shall refund such excess within twenty (20) Business Days of the invoice without interest.

11. Governing Law, Regulatory Authority, and Rules

The validity, interpretation and enforcement of this Agreement and each of its provisions, shall be governed by the laws of the State of Minnesota. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

12. Amendment

The Parties may amend this Agreement by a written instrument duly executed by both Parties.

13. No Third-Party Beneficiaries

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and where permitted, their assigns.

14. Waiver

14.1. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement, will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

14.2. Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by the

Interconnection Customer, shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Area EPS Operator. Any waiver of this Agreement shall, if requested, be provided in writing.

15. Multiple Counterparts

This Agreement may be executed in two or more counterparts, each of which is deemed an original, but all constitute one and the same instrument.

16. 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.

17. Severability

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore, insofar as practicable, the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

18. Subcontractors

18.1. Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement, in

providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

18.2. The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires, as if no subcontract had been made; provided, however, that in no event shall the Area EPS Operator be liable for the actions or inactions of the Interconnection Customer or their subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement, upon the hiring Party, shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

18.3. The obligations under this article will not be limited in any way by any limitation of subcontractor's insurance.

19. Inclusion of Area EPS Operator Tariffs and Rules

The interconnection 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 the Area EPS Operator, which tariff schedules and rules are hereby incorporated into this Agreement by this reference. Notwithstanding any other provisions of this Agreement, the Area EPS Operator shall have the right to unilaterally change rates, charges, classification, service, tariff, or rule or any agreement relating thereto. The Interconnection Customer shall have the right to protest any such change through the Area EPS Operator's dispute resolution process, pursuant to the Area EPS Operator's rules and regulations.

IN WITNESS THEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

[Insert Name of Area EPS Operator]	[Insert Name of Interconnection Customer]
(Signature)	(Signature)
(Title)	(Title)

Attachment A

Assumptions Used in Conducting the System Impact Study

The System Impact Study shall be based upon the following assumptions:

1) Designation of Point of Common Coupling and configuration to be studied.

2) Designation of alternative Points of DER Interconnection and configuration.

1) and 2) are to be completed by the Interconnection Customer. Other assumptions (attached to this Agreement) are to be provided by the Interconnection Customer and the Area EPS Operator. The Area EPS Operator shall use the Reference Point for Applicability which is either the Point of Common Coupling or the Point(s) of DER Interconnection as described in IEEE 1547.

Additional DER Technical Data Required for System Impact Study

If applicable, the Area EPS Operator shall provide a list of any additional technical data that is required to adequately perform the System Impact Study. This list of required technical data shall be attached to this Agreement. As indicated in Section 4 of the Study Process document of the M-MIP, this information is to be returned with the signed System Impact Study Agreement and deposit.

Data to Be Provided by the Area EPS Operator with the System Impact Study Agreement

Estimate Cost of System Impact Study	$
Time duration to complete System Impact Study	Business Days

Minnesota Municipal Interconnection Process (M-MIP)

Facilities Study Agreement

Facilities Study Agreement

THIS AGREEMENT is made and entered into this _____day of_____ 20___ by and between_____, ("Interconnection Customer"), and _____, a municipal utility existing under the laws of the State of Minnesota, ("Area EPS Operator"). Interconnection Customer and Area EPS Operator each may be referred to as a "Party," or collectively as the "Parties."

RECITALS

WHEREAS the Interconnection Customer is proposing to develop a Distributed Energy Resource (DER) or generating capacity addition to an existing DER consistent with the Interconnection Application completed by the Interconnection Customer on_____(date); and

WHEREAS the Interconnection Customer desires to interconnect the DER with the Area EPS Operator's Electric System;

WHEREAS the Area EPS Operator has completed Initial Review, Supplemental Review, and/or a System Impact Study, and provided the results of said review to the Interconnection Customer, or determined none was required; and

WHEREAS the Interconnection Customer has requested the Area EPS Operator to perform a Facilities Study(s) to specify, and estimate the cost of, the equipment, engineering, procurement and construction work, needed to implement the conclusions of the above noted review in accordance with Good Utility Practice, to physically and electrically connect the DER with the Area EPS Operator's distribution system.

NOW, THEREFORE, in consideration of, and subject to, the mutual covenants contained herein the Parties agreed as follows:

1. When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated, or the meanings specified, in the Minnesota Municipal Interconnection Process (M-MIP).

2. The Interconnection Customer elects and the Area EPS Operator shall cause a Facilities Study consistent with the standard M-MIP to be performed. The scope of the Facilities Study shall be subject to data provided in Section 17 to this Agreement.

3. The Facilities Study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads), needed to implement the conclusions of the System Impact Study(s). The Facilities Study shall also identify: 1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, 2) the nature and estimated cost of the Area EPS Operator's Interconnection Facilities and Upgrades, necessary to accomplish the interconnection, and 3) an estimate of the time required to complete the construction and installation of such facilities.

4. The Area EPS Operator may propose to group facilities required for more than one Interconnection Customer in order to minimize facilities costs through economies of scale. Any Interconnection Customer may require the installation of facilities required for its own Distributed Energy Resource, if they are willing to pay the costs of those facilities.

5. A deposit of the equivalent of the good faith estimated cost of a distribution Facility Study shall be required from the Interconnection Customer when the signed Agreement is provided to the Area EPS Operator.

6. Any study fees shall be based on the Area EPS Operator's actual costs and include a summary of professional time. An invoice shall be sent to the Interconnection Customer within twenty (20) Business Days after the study is completed and delivered.

7. The Interconnection Customer must pay any study costs that exceed the deposit without interest, within twenty (20) Business Days, on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Area EPS Operator shall refund such excess within twenty (20) Business Days of the invoice without interest.

8. Governing Law, Regulatory Authority, and Rules

   The validity, interpretation and enforcement of this Agreement and each of its provisions, shall be governed by the laws of the State of Minnesota. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

9. Amendment

   The Parties may amend this Agreement by a written instrument duly executed by both Parties.

10. No Third-Party Beneficiaries

    This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and where permitted, their assigns.

11. Waiver

    11.1. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement, will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

    11.2. Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure

to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by the Interconnection Customer, shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Area EPS Operator. Any waiver of this Agreement shall, if requested, be provided in writing.

12. Multiple Counterparts

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

13. 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.

14. Severability

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore, insofar as practicable, the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

15. Subcontractors

15.1. Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to

comply with all applicable terms and conditions of this Agreement, in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

15.2. The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires, as if no subcontract had been made; provided, however, that in no event shall the Area EPS Operator be liable for the actions or inactions of the Interconnection Customer or their subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement, upon the hiring Party, shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

15.3. The obligations under this article will not be limited in any way by any limitation of subcontractor's insurance.

16. Inclusion of Area EPS Operator Tariffs and Rules

The interconnection 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 the Area EPS Operator, which tariff schedules and rules are hereby incorporated into this Agreement by this reference. Notwithstanding any other provisions of this Agreement, the Area EPS Operator shall have the right to unilaterally change rates, charges, classification, service, tariff, or rule or any agreement relating thereto. The Interconnection Customer shall have the right to protest any such change through the Area EPS Operator's dispute resolution process, pursuant to the Area EPS Operator's rules and regulations.

17. Data to be Provide by Interconnection Customer with Facilities Agreement

17.1. The Interconnection Customer shall be available to meet on site with the Area EPS Operator within five (5) Business Days of signing the Facilities Study Agreement. The personnel furnished by the Interconnection Customer for this site visit shall bring detailed information on the site layout. The Area EPS Operator may request the Interconnection Customer physically places stakes at the locations of major components.

17.2. The Interconnection Customer shall furnish a final site plan detailing the location of major equipment at the time this agreement is returned. The Point of Common Coupling (PCC) and Point of Distributed Resource Connection (PoC) shall be clearly marked. The site plan shall depict any nearby roads and be labeled with the road name. Accurate dimensions shall be included on the site plan. The proper emergency (911) address, corresponding to the site, shall be labeled on the site plan.

17.3. The Interconnection Customer shall furnish a final one-line diagram detailing the electrical connections between major components. The one-line shall be returned with the signed Facilities Study Agreement.

17.4. Technical cut sheets on all equipment related to metering shall be provided by the Interconnection Customer along with the signed Facilities Study Agreement.

17.5. If available, copies of the Conditional Use Permits(s) from all necessary authorities shall be returned by the Interconnection Customer with the signed Facilities Study Agreement.

17.6. The Interconnection Customer shall secure any necessary easements from private land owners prior to signing the Facilities Study Agreement. Documentation of any such agreements shall be provided to the Area EPS Operator.

17.7. In the event that the Area EPS Operator determines a site survey is necessary in order to complete a Facilities Study, the Interconnection Customer shall make good faith efforts to complete the survey in a timely manner.

17.8. The Facilities Study assumes all land use permits required for the interconnection will be approved by the proper authorities. Permits are submitted after Interconnection Agreement is signed and may impact project costs (i.e. overhead to underground requirements.)

17.9. The Interconnection Customer and Area EPS Operator shall provide a single point of contact for design and construction related matters. The Interconnection Customer single point of contact shall respond in a timely manner to the Area EPS Operator's questions during the Facilities Study.

17.10. In the event that an Interconnection Customer does not provide the necessary information described in this Agreement, or if the Interconnection Customer takes more than five (5) Business Days to respond to a question during the Facilities Study, the Facilities Study timeframe shall pause until the question is resolved.

IN WITNESS THEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

[Insert Name of Area EPS Operator]	[Insert Name of Interconnection Customer]
(Signature)	(Signature)
(Title)	(Title)

Data to Be Provided by the Area EPS Operator with the Facilities Study Agreement

Estimate Cost of Facility Study	$
Time duration to complete Facility Study	Business Days

Minnesota Municipal Interconnection Process (M-MIP)

Transmission System Impact Study Agreement

Transmission System Impact Study Agreement

THIS AGREEMENT is made and entered into this _____day of_____ 20___ by and between_____, ("Interconnection Customer"), and _____, a municipal utility existing under the laws of the State of Minnesota, ("Area EPS Operator"), and _____, a transmission system owner existing under the laws of the State of Minnesota, ("Transmission Provider"). Interconnection Customer, Area EPS Operator and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

RECITALS

WHEREAS the Interconnection Customer is proposing to develop a Distributed Energy Resource or generating capacity addition to an existing DER, (in either case referred to herein as a "DER"), interconnected to the Area EPS Operator's Electric System, as described in the Interconnection Application completed by the Interconnection Customer and submitted to the Area EPS Operator on_____; and

WHEREAS the Interconnection Customer has requested the Area EPS Operator to work with the Transmission Provider to perform a Transmission System Impact Study to assess the impact on the Transmission Provider's electric transmission system of interconnecting the DER with the Area EPS Operator's Electric System, and to determine if there are potential Affected System(s) in addition to the Transmission Provider's electric transmission system;

NOW, THEREFORE, in consideration of, and subject to, the mutual covenants contained herein the Parties agreed as follows:

1. When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated, or the meanings specified, in the Minnesota Municipal Interconnection Process (M-MIP).

2. The Interconnection Customer requests and the Area EPS Operator and its Transmission Provider agrees to perform a Transmission System Impact Study consistent with the M-MIP. The Interconnection Customer understands and acknowledges that each of the Area EPS Operator and the Transmission Provider may perform separate system impact studies. The scope of a Transmission System Impact Study shall be subject to the assumptions set forth in this Agreement; including Attachment A.

3. A Transmission System Impact Study will be based upon the technical information provided by Interconnection Customer in the Interconnection Application. Each of the Area EPS Operator and Transmission Provider reserve the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the System Impact Study. Neither the Area EPS Operator nor the Transmission Provider will be obligated to commence the Transmission System Impact Study until each has received adequate technical information from the Interconnection Customer.

4. In the event that the applicable bulk transmission system generation interconnection process, (such as the Midcontinent Independent System Operator or MISO, or Southwest Power Pool or SPP), supersedes the M-MIP, the Transmission Provider will so notify the Interconnection Customer and this Agreement will be deemed terminated.

5. A Transmission System Impact Study may, as determined by the Area EPS Operator and/or the Transmission Provider, consist of a short circuit analysis, a stability analysis, a power flow analysis, voltage analysis and flicker studies, protection and set point coordination studies, and grounding reviews. A Transmission System Impact Study shall

state the assumptions upon which it is based, indicate the applicable Local Planning Criteria used, state the results of the analyses, and provide the requirement or potential impediments to providing the requested interconnection service, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and provide for the interconnection. A Transmission System Impact Study shall provide a list of transmission facilities that are required as a result of the Interconnection Application and non-binding good faith estimates of cost responsibility and time to construct such transmission facilities. A Facilities Study may be required to identify all possibilities of facility upgrades, cost estimates and estimate of construction time.

6. If the Transmission Provider determines there are any potential Affected System(s), the Affected System(s) will be asked to participate in or review/comment on the Transmission System Impact Study. The Affected System(s) will be entitled to determine in their sole discretion the extent of their participation or review/comment, and will be entitled to apply their respective Local Planning Criteria. The Transmission Provider will inform the Interconnection Customer of the estimated cost of the Affected System's participation in or review/comment on the Transmission System Impact Study.

7. The Transmission System Impact Study will be scheduled for completion taking in consideration for prior-queued projects in the applicable bulk transmission generation interconnection queue or Transmission Provider's generation interconnection queue. The Transmission Provider and/or the Area EPS Operator shall notify the Interconnection Customer if such condition exists.

8. The Area EPS Operator and/or the Transmission Provider shall provide an estimate of the cost of the Transmission System Impact Study to the Interconnection Customer. At the time that the Interconnection Customer executes this Agreement, the Interconnection Customer shall provide a deposit of the estimated cost(s) of the

Transmission System Impact Study to the Area EPS Operator and/or Transmission Provider, as applicable.

9. The Interconnection Customer shall be responsible for the actual costs incurred by the Area EPS Operator and/or the Transmission Provider to perform the Transmission System Impact Study. An invoice documenting the actual costs shall be sent by the Area EPS Operator and/or Transmission Provider to the Interconnection Customer within twenty (20) Business Days after the study is completed and delivered.

10. The Interconnection Customer shall pay the invoice amount less the deposit amount, within twenty (20) Business Days, on receipt of the invoice. If the deposit exceeds the actual cost of the study, the Transmission Provider shall refund such excess amount within twenty (20) Business Days of the date of the invoice.

11. Governing Law, Regulatory Authority, and Rules

The validity, interpretation and enforcement of this Agreement and each of its provisions, shall be governed by the laws of the State of Minnesota. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

12. Amendment

The Parties may amend this Agreement by a written instrument duly executed by both Parties.

13. No Third-Party Beneficiaries

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities

other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and where permitted, their assigns.

14. Waiver

14.1. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement, will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

14.2. Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by the Interconnection Customer, shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Area EPS Operator. Any waiver of this Agreement shall, if requested, be provided in writing.

15. Multiple Counterparts

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

16. 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 a Party. No 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, any other Party.

17. Severability

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other

Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore, insofar as practicable, the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

18. Subcontractors

18.1. Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement, in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

18.2. The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Parties for the acts or omissions of any subcontractor the hiring Party hires, as if no subcontract had been made; provided, however, that in no event shall the Area EPS Operator or the Transmission Provider be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement, upon the hiring Party, shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

18.3. The obligations under this article will not be limited in any way by any limitation of subcontractor's insurance.

19. Inclusion of Area EPS Operator Tariffs and Rules

The interconnection 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 the Area EPS Operator, which tariff schedules and rules are hereby incorporated into this Agreement by this reference. Notwithstanding any other provisions of this Agreement, the Area EPS Operator shall have the right to unilaterally change rates, charges, classification, service, tariff, or rule or any agreement relating thereto. The Interconnection Customer shall have the right to protest any such change through the Area EPS Operator's dispute resolution process, pursuant to the Area EPS Operator's rules and regulations.

IN WITNESS THEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

[Insert Name of Area EPS Operator]	[Insert Name of Interconnection Customer]
_____	_____
_____	_____
(Signature)	(Signature)
_____	_____
(Title)	(Title)

[Insert Name of Transmission Provider]

_____

_____

(Signature)

_____

(Title)

Attachment A

Assumptions Used in Conducting the Transmission System Impact Study

The Transmission System Impact Study shall be based upon the following assumptions:

1) Designation of Point of Common Coupling and configuration to be studied.

2) Designation of alternative Points of DER Interconnection and configuration.

1) and 2) are to be completed by the Interconnection Customer. Other assumptions (listed below) are to be provided by the Interconnection Customer, the Area EPS Operator and the Transmission Provider. The Area EPS Operator and Transmission Provider shall use the Reference Point for Applicability which is either the Point of Common Coupling or the Point(s) of DER Interconnection as described in IEEE 1547.

Additional DER Technical Data Required for Transmission System Impact Study

If applicable, the Transmission Provider shall attach a list to this Agreement any additional technical data that is required to adequately perform the Transmission System Impact Study. As indicated in Section 4 of the Study Process document of the M-MIP, this information is to be returned with the signed Transmission System Impact Study Agreement and deposit.

Data to Be Provided by the Area EPS Operator and Transmission Provider with the Transmission System Impact Study Agreement

Estimate Cost of Transmission System Impact Study	$
Time duration to complete Transmission System Impact Study	Business Days

Minnesota Municipal Interconnection Process (M-MIP)

Uniform Contract

Generally for facilities of up to 40 kilowatts

UNIFORM CONTRACT FOR COGENERATION AND SMALL POWER PRODUCTION FACILITIES

THIS CONTRACT is entered into _____, ___, by _____ _____, a municipal utility under Minnesota law, (hereafter called Utility") and _____ (hereafter called "Customer").

RECITALS

The Customer has installed electric generating facilities, consisting of _____ (Description of facilities), rated at ____kilowatts AC of electricity, on property located at _____.

The Customer is an electric service recipient named on a service account of the Utility.

The Customer is prepared to generate electricity in parallel with the Utility.

The Customer's electric generating facilities meet the requirements of the Rules Governing Cogeneration and Small Power Production Facilities adopted by the Utility and any technical standards for interconnection the Utility has established that are authorized by those rules.

The Utility is obligated under federal and Minnesota law to accommodate interconnection with the Customer’s facilities and to purchase electricity offered for sale by the Customer from those facilities.

A contract between the Customer and the Utility is required for operation of facilities interconnected with the Utility system.

AGREEMENTS

The Customer and the Utility agree:

1. The Utility will sell electricity to the Customer under the rate schedule in force for the class of customer to which the Customer belongs.

2. The Utility will buy electricity from the Customer under the current rate schedule filed with the city council or city-appointed governing body of the Utility. The Customer elects the rate schedule category hereinafter indicated:

____ a. Average retail utility energy rate.

- Facilities capacity must be less than 40 kW.

____ b. Simultaneous purchase and sale billing rate.

- Facilities capacity must be less than 40 kW.

____ c. Roll-over credits.

- Facilities capacity must be less than 40 kW.

____ d. Time-of-day purchase rates.

- Facilities capacity must be 40 kW or more and less than or equal to 100 kW.

A copy of the presently approved rate schedule is attached to this contract.

3. The rates for sales and purchases of electricity may change over the time this contract is in force, due to actions of the Utility or the State of Minnesota, and the Customer and the Utility agree that sales and purchases will be made under the rates in effect each month during the time this contract is in force.

4. The Utility will compute the charges and payments for purchases and sales for each billing period. Any net credit to the Customer, other than kilowatt-hour credits under clause 2(c), will be made under one of the following options as chosen by the Customer.

____ a. Credit to the Customer's account with the Utility.

____ b. Paid by check or electronic payment service to the Customer within fifteen (15) days of the billing date.

5. Renewable energy credits associated with generation from the facility are owned by:

_____.

6. The Customer must operate their electric generating facilities within any rules, regulations, and policies adopted by the Utility not prohibited by the rules governing cogeneration and small power production facilities on the Utility's system which provide reasonable technical connection and operating specifications for the facilities and are consistent with the Minnesota Public Utilities Commission's rules adopted under Minnesota Statutes §216B.164, subdivision 6.

7. The Customer will not enter into an arrangement whereby electricity from the generating facilities will be sold to an end user in violation of the Utility's exclusive right to provide electric service in its service area under Minnesota Statutes, Section 216B.37-44.

8. The Customer will operate their electric generating facilities so that they conform to the national, state, and local electric and safety codes, and the Customer will be responsible for the costs of conformance.

9. The Customer is responsible for the actual, reasonable costs of interconnection which are estimated to be $_____. The Customer will pay the Utility in this way:

_____

_____.

10. The Customer will give the Utility reasonable access to its property and electric generating facilities if the configuration of those facilities does not permit disconnection or testing from the Utility 's side of the interconnection. If the Utility enters the Customer's property, the Utility will remain responsible for its personnel.

11. The Utility may stop providing electricity to the Customer during a system emergency. The Utility will not discriminate against the Customer when it stops providing electricity or when it resumes providing electricity.

12. The Utility may stop purchasing electricity from the Customer when necessary for the Utility to construct, install, maintain, repair, replace, remove, investigate, or inspect any equipment or facilities within its electric system. The Utility may stop purchasing electricity from the Customer in the event the generating facilities listed in this contract are documented to be causing power quality, safety or reliability issues to the Utility’s electric distribution system.

The Utility will notify the Customer in this way before it stops purchasing electricity:

_____

_____.

13. The Customer will keep in force general liability insurance against personal or property damage due to the installation, interconnection, and operation of its electric generating facilities. The amount of insurance coverage will be $ _____. (The amount must be consistent with requirements for like-sized facilities under the interconnection process or distributed generation tariff adopted by the Utility pursuant to Minnesota Statutes §216B.1611, subdivision 3, clause 2.)

14. The Customer and the Utility agree to attempt to resolve all disputes arising hereunder promptly and in a good faith manner.

15. The city council or city-appointed body governing the Utility has authority to consider and determine disputes, if any, that arise under this contract in

accordance with procedures in the rules it adopts implementing Minnesota Statutes Section 216B.164, pursuant to subdivision 9 thereunder.

16. This contract becomes effective as soon as it is signed by the Customer and the Utility. This contract will remain in force until either the Customer or the Utility gives written notice to the other that the contract is canceled. This contract will be canceled thirty (30) days after notice is given. If the listed electric generating facilities are not interconnected to the Utility's distribution system within twelve months of the contract being signed by the Customer and the Utility, the contract terminates. The Customer and the Utility may delay termination by mutual agreement.

17. Neither the Customer nor the Utility will be considered in default as to any obligation if the Customer or the Utility is prevented from fulfilling the obligation due to an act of nature, labor disturbance, act of public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, an order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or other cause beyond the Customer's or Utility's control. However, the Customer or Utility whose performance under this contract is hindered by such an event shall make all reasonable efforts to perform its obligations.

18. This contract can only be amended or modified by mutual agreement in writing signed by the Customer and the Utility.

19. The Customer must notify the Utility prior to any change in the electric generating facilities' capacity size or generating technology according to the interconnection process adopted by the Utility.

20. Termination of this contract is allowed (i) by the Customer at any time without restriction; (ii) by Mutual Agreement between the Utility and the Customer; (iii) upon abandonment or removal of electric generating facilities by the Customer; (iv) by the Utility if the electric generating facilities are continuously non-operational for any twelve (12) consecutive month period; (v) by the Utility if the Customer fails to comply with applicable interconnection design requirements or fails to remedy a violation of the interconnection process; or (vi) by the Utility upon breach of this contract by the Customer unless cured with notice of cure received by the Utility prior to termination.

21. In the event this contract is terminated, the Utility shall have the rights to disconnect its facilities or direct the Customer to disconnect its generating facilities.

22. This contract shall continue in effect after termination to the extent necessary to allow either the Utility or the Customer to fulfill rights or obligations that arose under the contract.

23. Transfer of ownership of the generating facilities shall require the new owners and the Utility to execute a new contract. Upon the execution of a new contract with the new owners this contract shall be terminated.

24. The Customer and the Utility shall at all times indemnify, defend, and save each other 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 Customer's or the Utility's performance of its obligations under this contract, except to the extent that such damages, losses or claims were caused by the negligence or intentional acts of the Customer or the Utility.

25. The Utility and the Customer will each be responsible for their own acts or omissions and the results thereof to the extent authorized by law and shall not be responsible for the acts or omissions of any others and the results thereof.

26. The Customer's and the Utility's liability to each other for failure to perform their obligations under this contract shall be limited to the amount of direct damage actually occurred. In no event, shall the Customer or the Utility be liable to each other 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.

27. The Utility does not give any warranty, expressed or implied, to the adequacy, safety, or other characteristics of the Customer's interconnected system.

28. This contract contains all the agreements made between the Customer and the Utility. The Customer and Utility are not responsible for any agreements other than those stated in this contract.

THE CUSTOMER AND THE UTILITY HAVE READ THIS CONTRACT AND AGREE TO BE BOUND BY ITS TERMS. AS EVIDENCE OF THEIR AGREEMENT, THEY HAVE EACH SIGNED THIS CONTRACT BELOW ON THE DATE LISTED BY SIGNER.

CUSTOMER	**UTILITY**
By:	By:
_____	_____
Printed Name:	Printed Name:
_____	_____
DATE:	DATE:
_____	_____

Minnesota Municipal Interconnection Process (M-MIP)

Minnesota Municipal Interconnection Agreement (MMIA)

Contents

i.**Contact Information**

Contact information for each Party is listed below along with the basic information describing the Distributed Energy Resource (DER) system.

Area EPS Operator Information

Area EPS Operator: _____

Attention: _____

Address: _____

_____

Phone: _____

Email: _____

Interconnection Customer Information

Interconnection Customer: _____

Attention: _____

Address: _____

_____

Phone: _____

Email: _____

DER System Information

Application Number: _____

Type of DER System: _____

Capacity Rating of System (AC): _____

Limited Capacity Rating (AC): _____

Address of DER System: _____

_____

THIS AGREEMENT is made and entered into this _____day of_____ 20___ by and between_____, ("Interconnection Customer"), and _____, a municipal utility existing under the laws of the State of Minnesota, ("Area EPS Operator"). Interconnection Customer and Area EPS Operator each may be referred to as a "Party," or collectively as the "Parties."

In consideration of the mutual covenants set forth herein, the Parties agree as follows:

1 Scope and Limitations of Agreement

1.1. This Agreement form is intended to provide for the Interconnection Customer to interconnect at the Point of Common Coupling and operate a Distributed Energy Resource with a Nameplate Rating of 10 Megawatts (MW) or less in parallel with the Area EPS at the location identified above and in the Interconnection Application.

1.2. This Agreement shall be used for all Interconnection Applications submitted under the Minnesota Municipal Interconnection Process (M-MIP) except for those Interconnection Applications that qualify and choose for the Uniform Contract to replace the need for this Agreement.

1.3. This Agreement form governs the terms and conditions under which the Interconnection Customer's Distributed Energy Resource will interconnect with, and operate in parallel with, the Area EPS Operator's Distribution System.

1.4. Capitalized terms used herein shall have the meanings specified in the Glossary of Terms in Attachment 1, the M-MIP, or the body of this Agreement.

1.5. This Agreement does not constitute an agreement to purchase or deliver the Interconnection Customer's power. The purchase or delivery of power and other services that the Interconnection Customer may require will be covered under separate agreements, if any. The Interconnection Customer will be responsible for separately making all necessary arrangements (including scheduling) for delivery of electricity with the applicable Area EPS Operator.

1.6. Nothing in this Agreement is intended to affect any other agreement between the Area EPS Operator and the Interconnection Customer.

2 Responsibilities of the Parties

2.1. The Parties shall perform all obligations of this Agreement in accordance with the M-MIP, Minnesota Technical Requirements, all Applicable Laws and Regulations, Operating Requirements, and Good Utility Practice.

2.2. The Interconnection Customer shall construct, interconnect, operate and maintain its Distributed Energy Resource and construct, operate, and maintain its Interconnection Facilities in accordance with the applicable manufacturer's recommended maintenance schedule and, in accordance with this Agreement, and with Good Utility Practice.

2.3. The Area EPS Operator shall construct, operate, and maintain its Distribution System and its Interconnection Facilities in accordance with this Agreement, and with Good Utility Practice.

2.4. The Interconnection Customer agrees to construct its facilities or systems in accordance with the Minnesota Technical Requirements and this Agreement; including, applicable specifications that meet or exceed those provided by the National Electrical Safety Code, the American National Standards Institute, Institute of Electrical and Electronics Engineers (IEEE), Underwriter's Laboratory (UL), and Operating Requirements in effect at the time of construction and other applicable national and state codes and standards. The Interconnection Customer agrees to design, install, maintain, and operate its Distributed Energy Resource so as to reasonably minimize the likelihood of a disturbance adversely affecting or impairing the system or equipment of the Area EPS Operator and any Affected Systems.

2.5. Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for the facilities that it now owns or subsequently owns unless otherwise specified in the Attachments to this Agreement. Each Party shall be responsible for the safe installation, maintenance, repair and condition of their respective lines and appurtenances on their respective sides of the point of common coupling. The Area EPS Operator and the Interconnection Customer, as appropriate, shall provide Interconnection Facilities that adequately protect the Area EPS Operator's Distribution System, personnel, and other persons from damage and injury. The allocation of responsibility for the design, installation, operation, maintenance and ownership of Interconnection Facilities shall be delineated in the Attachments to this Agreement.

2.6. The Area EPS Operator shall coordinate with all Affected Systems to support the interconnection.

3 Parallel Operation Obligations

3.1. Once the Distributed Energy Resource has been authorized to commence parallel operation, the Interconnection Customer shall abide by all rules and procedures pertaining to the parallel operation of the Distributed Energy Resource in the applicable control area, including, but not limited to; 1) the rules and procedures concerning the operation of generation set forth by the applicable system operator(s) for the Area EPS Operator's Distribution System provided or referenced in an attachment to this Agreement and; 2) the Operating Requirements set forth in Attachment 5 of this Agreement. The Minnesota Technical Requirements for interconnection are covered in a separate document, a copy of which has been made available to the Interconnection Customer and incorporated and made part of this Agreement by this reference.

4 Metering

4.1. As described in M-MIP Process Overview Section 9.1, the Interconnection Customer shall be responsible for the Area EPS Operator's reasonable and necessary cost for the purchase, installation, operation, maintenance, testing, repair, and replacement of metering and data acquisition equipment specified in Attachments 2 and 3 of this Agreement. The Interconnection Customer's metering (and data acquisition, as required) equipment shall conform to applicable industry rules and Operating Requirements.

5 Distributed Energy Resource Capabilities and Grid Reliability

5.1. The Minnesota Technical Requirements outlines the Parties responsibilities consistent with IEEE 1547 Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces which provides requirements relevant to the interconnection and interoperability performance, operation and testing, and, to safety, maintenance and security considerations.

5.2. The Area EPS Operator may offer the Interconnection Customer the option to utilize required DER capabilities to mitigate Interconnection Customer costs related to Upgrades or Interconnection Facilities to address anticipated system impacts from the engineering review (i.e. Initial Review, Supplemental Review, or Study Process described in the M-MIP.)

6 Equipment Testing and Inspection

6.1. As described in M-MIP Process Overview Section 9.3, the Interconnection Customer shall test and inspect its Distributed Energy Resource and Interconnection Facilities prior to interconnection pursuant to Minnesota Technical Requirements and this Agreement.

7 Authorization Required Prior to Parallel Operation

7.1. As described in M-MIP Process Overview Section 9.5, the Area EPS Operator shall use Reasonable Efforts to list applicable parallel operation requirements by attaching the Minnesota Technical Requirements and/or including them in Attachment 5 to this Agreement. Additionally, the Area EPS Operator shall notify the Interconnection Customer of any changes to these requirements as soon as they are known. Pursuant to the M-MIP Process Overview Section 8.5, the Interconnection Customer shall not operate its Distributed Energy Resource in parallel with the Area EPS Operator's Distribution System without prior written authorization of the Area EPS Operator.

8 Right of Access

8.1. Upon reasonable notice, the Area EPS Operator may send a qualified person to the premises of the Interconnection Customer at or immediately before the time the Distributed Energy Resource first produces energy to inspect the interconnection, and observe the commissioning of the Distributed Energy Resource (including any required testing), startup, and operation for a period of up to three (3) Business Days after initial start-up of the unit. In addition, the Interconnection Customer shall notify the Area EPS Operator at least five (5) Business Days prior to conducting any on-site verification testing of the Distributed Energy Resource.

8.2. Following the initial inspection process described above, at reasonable hours, and upon reasonable notice, or at any time without notice in the event of an emergency or hazardous condition, the Area EPS Operator shall have access to the Interconnection Customer's premises for any reasonable purpose in connection with the performance of the obligations imposed on it by this Agreement or if necessary to meet its legal obligation to provide service to its customers.

8.3. Each Party shall be responsible for its costs associated with the interconnection of the DER system as outlined in M-MIP Process Overview Section 9.3 and the Minnesota Technical Requirements.

9 Effective Date

9.1 This Agreement shall become effective upon execution by the Parties.

10 Term of Agreement

10.1. This Agreement shall become effective on the Effective Date and shall remain in effect from the Effective Date unless terminated earlier in accordance with Section 11 of this Agreement.

11 Termination

11.1. No termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination.

11.2. The Interconnection Customer may terminate this Agreement at any time by giving the Area EPS Operator twenty (20) Business Days written notice.

11.3. The Area EPS Operator may terminate this Agreement if the listed electric generating facilities are not interconnected to the Area EPS Operator's distribution system within thirty-six (36) months of this Agreement signed by the Parties. The Parties may choose to delay termination by mutual agreement.

11.4. Either Party may terminate this Agreement after Default pursuant to Section 3.

11.5. Upon termination of this Agreement, the Distributed Energy Resource will be disconnected from the Area EPS Operator's Distribution System. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this Agreement or such non-terminating Party otherwise is responsible for these costs under this Agreement.

11.6. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.

11.7. The provisions of this article shall survive termination or expiration of this Agreement.

12 Temporary Disconnection

12.1. Temporary disconnection shall continue only for so long as reasonably necessary under Good Utility Practice.

12.2. Emergency Conditions. Under emergency conditions, the Area EPS Operator may immediately suspend interconnection service and temporarily disconnect the Distributed Energy Resource. The Area EPS Operator shall use Reasonable Efforts to notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Interconnection Customer's operation of the Distributed Energy Resource. The Interconnection Customer shall use Reasonable Efforts to notify the Area EPS Operator promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Area EPS Operator's Distribution System or any Affected Systems. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of both Parties' facilities and operations, its anticipated duration, and the necessary corrective action.

12.3. Temporary Interruption. The Area EPS Operator may interrupt interconnection service or curtail the output of the Distributed Energy Resource and temporarily disconnect the Distributed Energy Resource from the Area EPS Operator's Distribution System when necessary for routine maintenance, construction, or repairs on the Area EPS Operator's Distribution System. The Area EPS Operator shall use Reasonable Efforts to provide the Interconnection Customer with three (3) Business Days' notice prior to such interruption. The Area EPS Operator shall use Reasonable Efforts to coordinate such reduction or temporary disconnection with the Interconnection Customer.

12.4. Forced Outage. During any forced outage, the Area EPS Operator may suspend interconnection service to effect immediate repairs on the Area EPS Operator's Distribution System. The Area EPS Operator shall use Reasonable Efforts to provide the Interconnection Customer with prior notice. If prior notice is not given, the Area EPS Operator shall, upon request, provide the Interconnection Customer written documentation after the fact explaining the circumstances of the disconnection.

12.5. Adverse Operating Effects. The Area EPS Operator shall notify the Interconnection Customer as soon as practicable if, based on Good Utility Practice, operation of the Distributed Energy Resource may cause disruption or deterioration of service to other customers served from the same electric system, or if operating the Distributed Energy Resource could cause damage to the Area EPS Operator's Distribution System or Affected Systems. Supporting documentation used to reach the decision to disconnect shall be provided to the Interconnection Customer upon request. If, after notice, the Interconnection Customer fails to remedy the adverse operating effect within a reasonable time, the Area EPS Operator may disconnect the Distributed Energy Resource. The Area EPS Operator shall provide the Interconnection Customer

with five Business Day notice of such disconnection, unless the provisions of Section 12.2 apply.

12.6. Modification of the Distributed Energy Resource. The Interconnection Customer must receive written authorization from the Area EPS Operator before making any change to the Distributed Energy Resource that may have a material impact on the safety or reliability of the Distribution System. Such authorization shall not be unreasonably withheld if the modification is not a Material Modification. Material Modifications, including an increase Nameplate Rating or capacity, may require the Interconnection Customer to submit a new Interconnection Application as described in the M-MIP Process Overview Section 7. If the Interconnection Customer makes such modification without the Area EPS Operator's prior written authorization, the latter shall have the right to temporarily disconnect the Distributed Energy Resource.

12.7. Reconnection. The Parties shall cooperate with each other to restore the Distributed Energy Resource, Interconnection Facilities, and the Area EPS Operator's Distribution System to their normal operating state as soon as reasonably practicable following a temporary disconnection.

12.8. Treatment Similar to Other Retail Customers. If the Interconnection Customer receives retail electrical service at the same site as the Distributed Energy Resource, it may also be disconnected consistent with the rules and practices for disconnecting other retail electrical customer.

12.9. Disconnection for Default. If the Interconnection Customer is in Default of this Agreement, it may be disconnected after a sixty (60) day written notice is provided and the Default is not cured during this sixty (60) day notice. This provision does not apply to disconnection based on Sections 12.2, 12.3, 12.4 or 12.5 of this Agreement.

13 Cost Responsibility for Interconnection Facilities and Distribution Upgrades

13.1 Interconnection Facilities. The Interconnection Customer shall pay for the cost of the Interconnection Facilities itemized in Attachment 2 of this Agreement. The Area EPS Operator shall provide a good faith estimate cost, including overheads, for the purchase and construction of its Interconnection Facilities and provide a detailed itemization of such costs. Costs associated with Interconnection Facilities may be shared with other entities that may benefit from such facilities by agreement of the Interconnection Customer, such other entities, and the Area EPS Operator.

13.2 The Interconnection Customer shall be responsible for its share of all reasonable expenses, including overheads, associated with (1) owning, operating, maintaining, repairing, and replacing its own Interconnection Facilities, and (2) operating, maintaining, repairing, and replacing the Area EPS Operator's Interconnection Facilities.

13.3 Distribution Upgrades. The Area EPS Operator shall design, procure, construct, install, and own the Distribution Upgrades described in Attachment 6 of this Agreement. The Area EPS Operator shall provide a good faith estimate cost, including overheads, for the purchase and construction of the Distribution Upgrades and provide a detailed itemization of such costs. If the Area EPS Operator and the Interconnection Customer agree, the Interconnection Customer may construct Distribution Upgrades that are located on land owned by the Interconnection Customer. The actual cost of the Distribution Upgrades, including overheads, shall be directly assigned to the Interconnection Customer.

14 Cost Responsibility for Network Upgrades

14.1. Applicability. No portion of Section 14 shall apply unless the interconnection of the Distributed Energy Resource requires Network Upgrades.

14.2. Network Upgrades. The Area EPS Operator or the Transmission Owner shall design, procure, construct, install, and own the Network Upgrades described in Attachment 6 of this Agreement. The Area EPS Operator shall provide a good faith estimate cost, including overheads, for the purchase and construction of the Network Upgrades and provide a detailed itemization of such costs. If the Area EPS Operator and the Interconnection Customer agree, the Interconnection Customer may construct Network Upgrades that are located on land owned by the Interconnection Customer. Unless the Area EPS Operator elects to pay for Network Upgrades, the actual cost of the Network Upgrades, including overheads, shall be borne initially by the Interconnection Customer.

14.3. Repayment of Amounts Advanced for Network Upgrades. The Interconnection Customer shall be entitled to a cash repayment, equal to the total amount paid to the Area EPS Operator and Affected System operator, if any, for Network Upgrades, including any tax gross-up or other tax-related payments associated with the Network Upgrades, and not otherwise refunded to the Interconnection Customer, to be paid to the Interconnection Customer on a dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, as payments are made under the Area EPS Operator's Tariff and Affected System's Tariff for transmission services with respect to the Distributed Energy Resource. Any repayment shall include interest

calculated in accordance with the methodology set forth in Federal Energy Regulatory Commission's (FERC's) regulations at 18 C.F.R. § 35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment pursuant to this subparagraph. The Interconnection Customer may assign such repayment rights to any person.

14.4. Notwithstanding the foregoing, the Interconnection Customer, the Area EPS Operator, and any applicable Affected System operators may adopt any alternative payment schedule that is mutually agreeable so long as the Area EPS Operator and said Affected System operators take one of the following actions no later than five years from the Commercial Operation Date: (1) return to the Interconnection Customer any amounts advanced for Network Upgrades not previously repaid, or (2) declare in writing that the Area EPS Operator or any applicable Affected System operators will continue to provide payments to the Interconnection Customer on a dollar-for-dollar basis for the non-usage sensitive portion of transmission charges, or develop an alternative schedule that is mutually agreeable and provides for the return of all amounts advanced for Network Upgrades not previously repaid; however, full reimbursement shall not extend beyond 20 years from the commercial operation date.

14.5. If the Distributed Energy Resource fails to achieve commercial operation, but it or another Distributed Energy Resource is later constructed and requires use of the Network Upgrades, the Area EPS Operator and Affected System operator shall at that time reimburse the Interconnection Customer for the amounts advanced for the Network Upgrades. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the Distributed Energy Resource, if different, is responsible for identifying the entity to which reimbursement must be made.

14.6. Special Provisions for Affected Systems. Unless the Area EPS Operator provides, under this Agreement, for the repayment of amounts advanced to any applicable Affected System operators for Network Upgrades, the Interconnection Customer and Affected System operator shall enter into an agreement that provides for such repayment. The agreement shall specify the terms governing payments to be made by the Interconnection Customer to Affected System operator as well as the repayment by Affected System Operator.

14.7. Rights Under Other Agreements. Notwithstanding any other provision of this Agreement, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, transmission congestion rights, or transmission credits, that the Interconnection

Customer shall be entitled to, now or in the future, under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements or transmission credits for transmission service that is not associated with the Distributed Energy Resource.

15 Billing, Payment, Milestones, and Financial Security

15.1. Billing and Payment Procedures and Final Accounting. The Area EPS Operator shall bill the Interconnection Customer for the design, engineering, construction, and procurement costs of Interconnection Facilities and Upgrades contemplated by this Agreement, and the Interconnection Customer shall pay each bill, pursuant to the M-MIP Interconnection Process documents, or as otherwise agreed to by the Parties.

15.2. Within 80 Business Days (approximately 4 calendar months) of completing the construction and installation of the Area EPS Operator's Interconnection Facilities and/or Upgrades described in the Attachments to this Agreement, the Area EPS Operator shall provide the Interconnection Customer with a final accounting report, as described in the M-MIP Fast Track Process Section 9.4.3 and the Study Process Section 11.4.3.

15.3. Milestones. Pursuant to the M-MIP Fast Track Process Section 9.1 and the Study Process Section 11.1, the Parties shall agree on milestones for which each Party is responsible and list them in Attachment 4 of this Agreement.

15.4. Financial Security Arrangements. Pursuant to the M-MIP Fast Track Process Section 9.5 and the Study Process Section 11.5, the Interconnection Customer shall provide the Area EPS Operator, at the Interconnection Customer's option, a guarantee, letter of credit or other form of security that is reasonably acceptable to the Area EPS Operator and is consistent with the Minnesota Uniform Commercial Code. Such security for payment shall be in an amount sufficient to cover the costs for constructing, designing, procuring, and installing the applicable portion of the Area EPS Operator's Interconnection Facilities and Upgrades and shall be reduced on a dollar-for-dollar basis for payments made to the Area EPS Operator under this Agreement during its term. In addition:

15.4.1. The guarantee must be made by an entity that meets the creditworthiness requirements of the Area EPS Operator, and contain terms and conditions that guarantee payment of any amount that may be due from the Interconnection Customer, up to an agreed-to maximum amount.

15.4.2. The letter of credit must be issued by a financial institution or insurer reasonably acceptable to the Area EPS Operator and must specify a reasonable expiration not sooner than sixty (60) Business Days (three calendar months) after the due date for the issuance of the final bill.

16 Assignment

16.1. This Agreement may be assigned by either Party upon 15 Business Days prior written notice and opportunity to object by the other Party; provided that:

16.1.1. Either Party may assign this Agreement without the consent of the other Party to any affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement, provided that the Interconnection Customer promptly notifies the Area EPS Operator of any such assignment.

16.1.2. Interconnection Customer shall have the right to assign this Agreement, without the consent of the Area EPS Operator, for collateral security purposes to aid in providing financing for the Distributed Energy Resource, provided that the Interconnection Customer will promptly notify the Area EPS Operator of any such assignment.

16.1.3. Any attempted assignment that violates this article is void and ineffective. Assignment shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. An assignee is responsible for meeting the same financial, credit, and insurance obligations as the Interconnection Customer. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

17 Limitations of Liability

17.1. Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of 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 indirect, special, consequential, or punitive damages, except as authorized by this Agreement.

18 Non-Warranty

18.1. The Area EPS Operator does not 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, including without limitation the Distributed Energy Resource and any structures, equipment, wires, appliances or devices not owned, operated or maintained by the Area EPS Operator.

19 Indemnity

19.1. This provision protects each Party from liability incurred to third parties as a result of carrying out the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Section 17.

19.2. The Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

19.3. If an indemnified person is entitled to indemnification under this article as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under this article, to assume the defense of such claim, such indemnified person may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

19.4. If an indemnifying party is obligated to indemnify and hold any indemnified person harmless under this article, the amount owing to the indemnified person shall be the amount of such indemnified person's actual loss, net of any insurance or other recovery.

19.5. Promptly after receipt by an indemnified person of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this article may apply, the indemnified person shall notify the indemnifying party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying party.

19.6. This indemnification obligation shall apply notwithstanding any negligent or intentional acts, errors or omissions of the Indemnified Party, but the Indemnifying Party's liability to indemnify the Indemnifying Party shall be reduced in proportion to the percentage by which the Indemnified Party's negligent or intentional acts, errors or omissions caused damaged.

19.7. Neither Party shall be indemnified for its damages resulting from its sole negligence, intentional acts or willful misconduct. These indemnity provisions shall not be construed to relieve any insurer of its obligation to pay claims consistent with the provisions of a valid insurance policy.

20 Consequential Damages

20.1. Other than as expressly provided for in this Agreement, neither Party shall be liable under any provision of this Agreement for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

21 Force Majeure

21.1. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, the Party affected by the Force Majeure Event (Affected Party) shall promptly notify the other Party, either in writing or via the telephone, of the existence of the Force Majeure Event. The notification must specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the Affected Party is taking to mitigate the effects of the event on its performance. The Affected Party shall keep the other Party informed on a continuing basis of developments relating to the Force Majeure Event until the event ends. The Affected Party will be entitled to suspend or modify its performance of obligations under this Agreement (other than the obligation to make payments) only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of Reasonable Efforts. The Affected Party will use Reasonable Efforts to resume its performance as soon as possible.

22 Default

22.1. No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of a Force Majeure Event as defined in this Agreement or the result of an act or omission of the other Party. Upon a Default, the non-defaulting Party shall give written notice of such Default to the defaulting Party. Except as provided in Section 21, the defaulting Party shall have sixty (60) calendar days from receipt of the Default notice within which to cure such Default; provided however, if such Default is not capable of cure within sixty (60) calendar days, the defaulting Party shall commence such cure within twenty (20) calendar days after notice and continuously and diligently complete such cure within six (6) months from receipt of the Default notice; and, if cured within such time, the Default specified in such notice shall cease to exist.

22.2. If a Default is not cured as provided in this article, or if a Default is not capable of being cured within the period provided for herein, the non-defaulting Party shall have the right to terminate this Agreement by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this Agreement, to recover from the defaulting Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this article will survive termination of this Agreement.

23 Insurance

23.1. An Area EPS Operator may only require an Interconnection Customer to purchase insurance covering damages pursuant to the applicable M-MIP process document in which the distributed energy resource falls under.

23.2. The Area EPS Operator agrees to maintain general liability insurance or self-insurance consistent with the Area EPS Operator's commercial practice. Such insurance or self-insurance shall not exclude coverage for the Area EPS Operator's liabilities undertaken pursuant to this Agreement.

23.3. The Parties further agree to notify each other whenever an accident or incident occurs resulting in any injuries or damages that are included within the scope of coverage of such insurance, whether or not such coverage is sought.

23.4. Failure of the Interconnection Customer or Area EPS Operator 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.

24 Confidentiality

24.1. Confidential Information shall mean any confidential and/or proprietary information provided by one Party to the other Party that is clearly marked or otherwise designated "Confidential." For purposes of this Agreement, design, operating specifications, and metering data provided by the Interconnection Customer may be deemed Confidential Information regardless of whether it is clearly marked or otherwise designated as such. If requested by either Party, the other Party shall provide in writing the basis for asserting that the information warrants confidential treatment. Parties providing a Governmental Authority trade secret, privileged or otherwise not public data under Minnesota Government Data Privacy Act, Minnesota Statutes Chapter 13, must provide information consistent with the Commission's September 1, 1999 Revised Procedures for Handling Trade Secret and Privileged Data.

24.2. Confidential Information does not include information previously in the public domain with proper authorization, required to be publicly submitted or divulged by Governmental Authorities (after notice to the other Party and after exhausting any opportunity to oppose such publication or release), or necessary to be publicly divulged in an action to enforce this Agreement. Each Party receiving Confidential Information shall hold such information in confidence and shall not disclose it to any third party nor to the public without the prior written authorization from the Party providing that information, except to fulfill obligations under this Agreement, or to fulfill legal or regulatory requirements that could not otherwise be fulfilled by not making the information public.

24.3. 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.

24.4. Critical infrastructure information or information that is deemed or otherwise designated by a Party as Critical Energy/Electric Infrastructure Information (CEII) pursuant to FERC regulation 18 C.F.R. §388.133, as may be amended from time to time, may be subject to further protections for disclosure as required by FERC or FERC regulations or orders and the disclosing Party's CEII policies.

24.5. Each Party shall employ at least the same standard of care to protect Confidential Information obtained from the other Party as it employs to protect its own Confidential Information.

24.6. Each Party is entitled to equitable relief, by injunction or otherwise, to enforce its rights under this provision to prevent the release of Confidential Information without bond or proof of damages, and may seek other remedies available at law or in equity for breach of this provision.

25 Disputes

The Parties agree in a good faith effort to attempt to resolve all disputes arising out of the interconnection process and associated study and Interconnection Agreements. The Parties agree to follow the established dispute resolution policy adopted by the Area EPS Operator.

26 Taxes

26.1. The Parties agree to follow all applicable tax laws and regulations, consistent with Internal Revenue Service and any other relevant local, state and federal requirements.

26.2. Each Party shall cooperate with the other to maintain the other Party's tax status. It is incumbent on the Party seeking to maintain its tax status to provide formal written notice to the other Party detailing what exact cooperation it is seeking from the other Party well prior to any deadlines by which any such action would need to be taken. Nothing in this Agreement is intended to adversely affect, if applicable, the Area EPS Operator's tax-exempt status with respect to the issuance of bonds including, but not limited to, local furnishing bonds.

27 Miscellaneous

27.1. Governing Law, Regulatory Authority, and Rules. The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the Area EPS Operator's board of directors and the laws of the state of Minnesota, without regard to its conflicts of law principles. This Agreement is subject to all

Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

27.2. Amendment. The Parties may amend this Agreement by a written instrument duly executed by both Parties, or under Section 27.12 of this Agreement.

27.3. No Third-Party Beneficiaries. This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and where permitted, their assigns.

27.4. Waiver. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party. Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Area EPS Operator. Any waiver of this Agreement shall, if requested, be provided in writing.

27.5. Entire Agreement. This Agreement, including all Attachments, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, either Party's compliance with its obligations under this Agreement. This Agreement can only be amended or modified in writing signed by both Parties.

27.6. Multiple Counterparts. This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument. Electronic signatures are acceptable if the Area EPS Operator has made such a determination pursuant to M-MIP Process Overview Section 4.1.

27.7. 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.

27.8. Severability. If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

27.9. Security Arrangements. Infrastructure security of electric system equipment and operations and control hardware and software is essential to ensure day-to-day reliability and operational security. All public utilities are expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

27.10. Environmental Releases. Each Party shall notify the other Party, first orally and then in writing, of the release of any hazardous substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Distributed Energy Resource or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party shall (1) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than 24 hours after such Party becomes aware of the occurrence, and (2) promptly furnish to the other Party copies of any publicly available reports filed with any governmental authorities addressing such events.

27.11. Subcontractors. Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement. Each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

27.11.1. The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made. In no event shall the Area EPS Operator be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this

Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

27.11.2. The obligations under this article will not be limited in any way by any limitation of subcontractor's insurance.

27.12. Inclusion of Area EPS Operator Tariff and Rules. The interconnection services provided under this Agreement shall at all times be subject to the terms and conditions set forth in the rate schedules and rules applicable to the electric service provided by the Area EPS Operator, which rate schedules and rules are hereby incorporated into this Agreement by this reference.

28 Notices

28.1. General. Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national currier service, or sent by first class mail, postage prepaid, to the person specified as follows:

Area EPS Operator Information

Area EPS Operator: _____

Attention: _____

Address: _____

_____

Phone: _____

Email: _____

Interconnection Customer Information

Interconnection Customer: _____

Attention: _____

Address: _____

_____

Phone: _____

Email: _____

28.2. Billing and Payment. Billing and payments shall be sent to the addresses set out below:

Area EPS Operator Information

Area EPS Operator: _____

Attention: _____

Address: _____

_____

Phone: _____

Email: _____

Interconnection Customer Information

Interconnection Customer: _____

Attention: _____

Address: _____

_____

Phone: _____

Email: _____

28.3. Alternative Forms of Notice. Any notice or request required or permitted to be given by either Party to the other and not required by this Agreement to be given in writing may be so given by telephone or e mail to the telephone numbers and e-mail addresses set out below:

Area EPS Operator Information

Area EPS Operator: _____

Attention: _____

Address: _____

_____

Phone: _____

Email: _____

Interconnection Customer Information

Interconnection Customer: _____

Attention: _____

Address: _____

_____

Phone: _____

Email: _____

28.4. Designated Operating Representative. The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

Area EPS Operator Information

Area EPS Operator: _____

Attention: _____

Address: _____

_____

Phone: _____

Email: _____

Interconnection Customer Information

Interconnection Customer: _____

Attention: _____

Address: _____

_____

Phone: _____

Email: _____

28.5. Changes to Notification. Either Party may change this information by giving five Business Days written notice to the other Party prior to the effective date of the change.

29 Signatures

IN WITNESS THEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

[Insert name of Area EPS Operator]	[Insert name of Interconnection Customer]
_____	_____
Signed: _____	Signed: _____
Name (Printed):	Name (Printed):
_____	_____
Title: _____	Title: _____

Attachment I: Glossary of Terms

Affected System – Another Area EPS Operator's System, Transmission Owner's Transmission System, or Transmission System connected generation which may be affected by the proposed interconnection.

Applicant Agent – A person designated in writing by the Interconnection Customer to represent or provide information to the Area EPS on the Interconnection Customer's behalf throughout the interconnection process.

Area EPS – The electric power distribution system connected at the Point of Common Coupling.

Area EPS Operator – An entity that owns, controls, or operates the electric power distribution systems that are used for the provision of electric service in Minnesota.

Business Day – Monday through Friday, excluding Holidays as defined by Minn. Stat. §645.44, Subdivision 5. Any communication to have been sent or received after 4:30 p.m. Central Prevailing Time or on a Saturday, Sunday or holiday shall be considered to have been sent on the next Business Day.

Certified Equipment – Certified equipment is equipment that has been tested by a national recognized lab meeting a specific standard. For DER systems, UL 1741 listing is a common form of DER inverter certification. Additional information is seen in the Certification Codes and Standards document.

Confidential Information – Any confidential and/or proprietary information provided by one Party to the other Party and is clearly marked or otherwise designated "Confidential." All procedures, design, operating specifications, and metering data provided by the Interconnection Customer may be deemed Confidential Information. See Process Overview Section 12.1 for further information.

Distributed Energy Resource (DER) – A source of electric power that is not directly connected to a bulk power system or central station service. DER includes both generators and energy storage technologies capable of exporting active power to an EPS. An interconnection system or a supplemental DER device that is necessary for compliance with this standard is part of a DER. For the purpose of the Interconnection Process and interconnection agreements, the DER includes the Customer's Interconnection Facilities but shall not include the Area EPS Operator's Interconnection Facilities.

Distribution System – The Area EPS facilities which are not part of the Local EPS, Transmission System or any generation system.

Distribution Upgrades – The additions, modifications, and upgrades to the Distribution System at or beyond the Point of Common Coupling to facilitate interconnection of the DER and render

the distribution service necessary to affect the Interconnection Customer's connection to the Distribution System. Distribution Upgrades do not include Interconnection Facilities.

Electric Power System (EPS) – The facilities that deliver electric power to a load.

Fast Track Process – The procedure as described in the Interconnection Process - Fast Track Process for evaluating an Interconnection Application for a DER that meets the eligibility requirements in the Process Overview Section 2.3.

Force Majeure Event – An act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, an order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or another cause beyond a Party's control. A Force Majeure Event does not include an act of negligence or intentional wrongdoing.

Good Utility Practice – Any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and act which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

Governmental Authority – Any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, the Area EPS Operator, or any Affiliate thereof. The utility's local governing body is the authority governing interconnection requirements unless otherwise provided for in the Minnesota Technical Requirements.

Interconnection Agreement – The terms and conditions between the Area EPS Operator and Interconnection Customer (Parties). See Section 8 in the Process Overview**Error! Reference source not found.** regarding when the Uniform Contract or Interconnection Agreement applies.

Interconnection Application – The Interconnection Customer's request to interconnect a new or modified, as described in Section 4 of the Process Overview, M-MIP. See Simplified Application Form and Interconnection Application Form.

Interconnection Customer – The person or entity named on the electric utility bill for a premise who proposes to interconnect a DER on that premise with the Area EPS Operator's Distribution

System. The Interconnection Customer is responsible for ensuring the DER is designed, operated and maintained in compliance with the Minnesota Technical Requirements.

Interconnection Facilities – The Area EPS Operator's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the DER and the Point of Common Coupling, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the DER to the Area EPS Operator's System. Some examples of Customer Interconnection Facilities include supplemental DER devices, inverters, and associated wiring and cables up to the Point of DER Connection. Some examples of Area EPS Operator Interconnection Facilities include sole use facilities such as line extensions, controls, relays, switches, breakers, transformers and shall not include Distribution Upgrades or Network Upgrades.

Interconnection Process – The Area EPS Operator's interconnection standards in this document.

Material Modification – A modification to machine data, equipment configuration or to the interconnection site of the DER at any time after receiving notification by the Area EPS Operator of a complete Interconnection Application that has a material impact on the cost, timing, or design of any Interconnection Facilities or Upgrades, or a material impact on the cost, timing or design of any Interconnection Application with a later Queue Position or the safety or reliability of the Area EPS.[1]

MN Technical Requirements – The Minnesota Technical Interconnection and Interoperability Requirements (TIIR) as adopted by the Minnesota Public Utilities Commission on January 22, 2022 as part of Docket No. E-999/CI-16-521.

Nameplate Rating - nominal voltage (V), current (A), maximum active power (kWac), apparent power (kVA), and reactive power (kVar) at which a DER is capable of sustained operation. For a Local EPS with multiple DER units, the aggregate nameplate rating is equal to the sum of all DERs nameplate rating in the Local EPS. For purposes of the Attachment V in the

[1] A Material Modification shall include, but may not be limited to, a modification from the approved Interconnection Application that: (1) changes the physical location of the point of common coupling; such that it is likely to have an impact on technical review; (2) increases the nameplate rating or output characteristics of the Distributed Energy Resource; (3) changes or replaces generating equipment, such as generator(s), inverter(s), transformers, relaying, controls, etc., and substitutes equipment that is not like-kind substitution in certification, size, ratings, impedances, efficiencies or capabilities of the equipment; (4) changes transformer connection(s) or grounding; and/or (5) changes to a certified inverter with different specifications or different inverter control settings or configuration. A Material Modification shall not include a modification from the approved Interconnection Application that: (1) changes the ownership of a Distributed Energy Resource; (2) changes the address of the Distributed Energy Resource, so long as the physical point of common coupling remains the same; (3) changes or replaces generating equipment such as generator(s), inverter(s), solar panel(s), transformers, relaying, controls, etc. and substitutes equipment that is a like-kind substitution in certification, size, ratings, impedances, efficiencies or capabilities of the equipment; and/or (4) increases the DC/AC ratio but does not increase the maximum AC output capability of the Distributed Energy Resource in a way that is likely to have an impact on technical review.

Interconnection Agreement, the DER system's capacity may, with the Area EPS's agreement, be limited thought use of control systems, power relays or similar device settings or adjustments as identified in IEEE 1547. The nameplate ratings referenced in the Interconnection Process are alternating current nameplate DER ratings at the Point of DER Coupling.

Network Upgrades – Additions, modifications, and upgrades to the Transmission System required at or beyond the point at which the DER interconnects with the Area EPS Operator's System to accommodate the interconnection with the DER to the Area EPS Operator's System. Network Upgrades do not include Distribution Upgrades.

Operating Requirements – Any operating and technical requirements that may be applicable due to the Transmission Provider's technical requirements or Minnesota Technical Requirements, including those set forth in the Interconnection Agreement.

Party or Parties – The Area EPS Operator and the Interconnection Customer.

Point of Common Coupling (PCC) – The point where the Interconnection Facilities connect with the Area EPS Operator's Distribution System. See figure 1. Equivalent, in most cases, to "service point" as specified by the Area EPS Operator and described in the National Electrical Code and the National Electrical Safety Code.

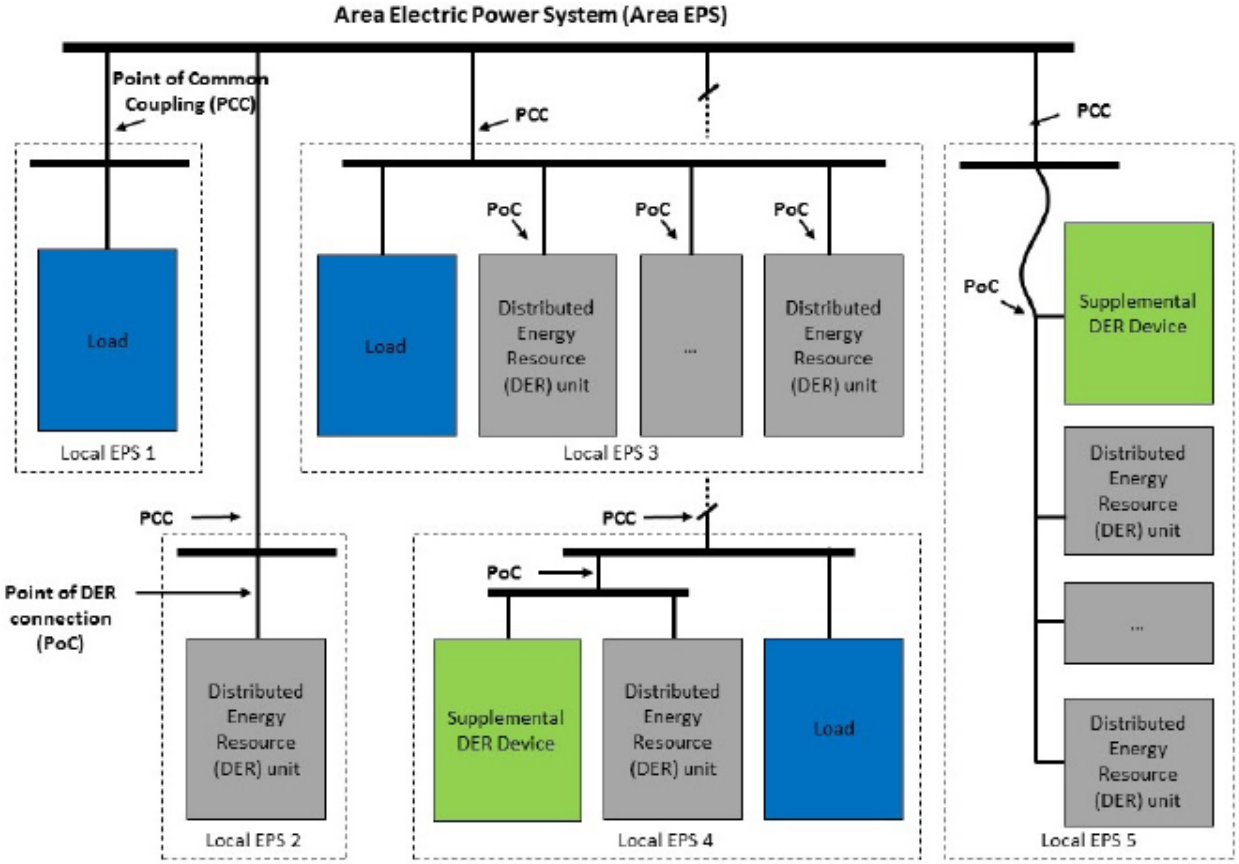

Figure 1: Point of Common Coupling and Point of DER Connection (Source: IEEE 1547)

Point of DER Connection (PoC) – When identified as the Reference Point of Applicability, the point where an individual DER is electrically connected in a Local EPS and meets the requirements of this standard exclusive of any load present in the respective part of the Local EPS (e.g. terminals of the inverter when no supplemental DER device is required.) For DER unit(s) that are not self-sufficient to meet the requirements without a supplemental DER device(s), the Point of DER Connection is the point where the requirements of this standard are met by DER in conjunction with a supplemental DER device(s) exclusive of any load present in the respective part of the Local EPS.

Queue Position – The order of a valid Interconnection Application, relative to all other pending valid Interconnection Applications, that is established based upon the date- and time- of receipt of the complete Interconnection Application as described in Section 4.7 of the Process Overview**Error! Reference source not found.**.

Reasonable Efforts – With respect to an action required to be attempted or taken by a Party under these procedures, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

Reference Point of Applicability – The location, either the Point of Common Coupling or the Point of DER Connection, where the interconnection and interoperability performance requirements specified in IEEE 1547 apply. With mutual agreement, the Area EPS Operator and Customer may determine a point between the Point of Common Coupling and Point of DER Connection. See Minnesota Technical Requirements for more information.

Simplified Process – The procedure for evaluating an Interconnection Application for a certified inverter-based DER no larger than 20 kW that uses the screens described in the Interconnection Process – Simplified Process document. The Simplified Process includes simplified procedures.

Study Process – The procedure for evaluating an Interconnection Application that includes the scoping meeting, system impact study, and facilities study.

Transmission Owner – The entity that owns, leases or otherwise possesses an interest in the portion of the Transmission System relevant to the Interconnection.

Transmission Provider – The entity (or its designated agent) that owns, leases, controls, or operates transmission facilities used for the transmission of electricity. The term Transmission Provider includes the Transmission Owner when the Transmission Owner is separate from the Transmission Provider. The Transmission Provider may include the Independent System Operator or Regional Transmission Operator.

Transmission System – The facilities owned, leased, controlled or operated by the Transmission Provider or the Transmission Owner that are used to provide transmission service. See the Commission's July 26, 2000 Order Adopting Boundary Guidelines for Distinguishing Transmission from Generation and Distribution Assets in Docket No. E-999/CI-99-1261.

Uniform Contract – the Area EPS Operator's Agreement for Cogeneration and Small Power Production Facilities (Uniform Contract) that may be applied to all qualifying new and existing interconnections between the Area EPS Operator and an DER system having capacity less than 40 kilowatts.

Upgrades – The required additions and modifications to the Area EPS Operator's Transmission or Distribution System at or beyond the Point of Interconnection. Upgrades may be Network Upgrades or Distribution Upgrades. Upgrades do not include Interconnection Facilities.

Attachment II: Description and Costs of the Distributed Energy Resource, Interconnection Facilities, and Metering Equipment

Equipment, including the Distribution Energy Resource, Interconnection Facilities, and metering equipment shall be itemized and identified as being owned by the Interconnection Customer or the Area EPS Operator. The Area EPS Operator will provide a good faith estimate itemized cost, including administrative overheads, of its Interconnection Facilities and metering equipment, and a good faith estimate itemized cost of the annual operation and maintenance expenses associated with the Interconnection Facilities and metering equipment.

Attachment III: One-line Diagram Depicting the Distributed Energy Resource, Interconnection Facilities, and Metering Equipment, and Upgrades

Attachment IV: Milestones

The Milestones in line (1) below may be a calendar date. All other dates in this Attachment IV may be the number of Business Days from the calendar date in line (1) or from the completion of a different Milestone described in a specific number line. Similarly, the anticipated In-Service Date may be based on the number of Business Days from the completion of a specified line number.

In-Service Date: _____

Critical milestones and responsibilities as agreed to by the Parties:

	Milestone/Anticipated Date	**Responsible Party**
(1)		
(2)		
(3)		
(4)		
(5)		
(6)		
(7)		
(8)		
(9)		
(10)		
(11)		
(12)		
(13)		

Agreed to by:

Area EPS Operator	_____	Date _____
Transmission Owner (If Applicable)	_____	Date _____
Interconnection Customer	_____	Date _____

Attachment V: Additional Operating and Maintenance Requirements for the Area EPS Operator's Distribution System and Affected Systems Need to Support the Interconnection Customer's Needs

The Area EPS Operator shall also provide requirements that must be met by the Interconnection Customer prior to initiating parallel operation with the Area EPS Operator's Distribution System. Additional operating and maintenance requirements for an Affected System needed to support the Interconnection Customer's needs may be addressed in a separate agreement described in Section 14.6.

Attachment VI: Area EPS Operator's Description of Distribution and Network Upgrades and Good Faith Estimates of Upgrade Costs

The Area EPS Operator shall describe Distribution and Network Upgrades and provide an itemized good faith estimate of the costs, including administrative overheads, of the Upgrade and annual operations and maintenance expenses associated with such Upgrades. The Area EPS Operator shall functionalize Upgrade costs and annual expenses as either transmission or distribution related. Additional Distribution or Network Upgrades required for an Affected System may be addressed in a separate agreement as described in Section 14.6.

Attachment VII: Assignment of Interconnection Agreement

This is an Assignment of Interconnection Agreement ("Agreement").

There is an Interconnection Agreement, including any and all Attachments thereto including any and all amendments ("Agreement") by and between _____ _____, a municipal utility existing under the laws of the State of Minnesota, ("Area EPS Operator"), and _____, ("Assignor") originally signed by the Area EPS Operator on _____ for a Distributed Energy Resource (DER) described as follows:

DER System Information

Type of DER System: _____

Capacity Rating of System (AC): _____

Limited Capacity Rating (AC): _____

Address of DER System: _____

_____

The Assignor intends to convey its interest in the above-referenced DER to _____ _____ ("Assignee"), and the Assignor intends to assign the Agreement to the Assignee.

Upon the execution of this Assignment by the Assignor, Assignee and the Area EPS Operator, agree as follows:

1. **Capitalized Terms**. Capitalized terms used but not defined herein shall have the meanings set forth in the Agreement.

2. **Consent to Assignment**. The Assignor hereby irrevocably assigns the Agreement in all respects to the Assignee and the Assignee accepts the assignment thereof in all respects.

3. **Amendment to Agreement**. The Area EPS Operator consents to this assignment and, as assigned, the Agreement is hereby amended so that wherever the name of the Assignor

is used therein it shall mean the Assignee. It is further agreed that all terms and conditions of the Agreement, as amended by this Assignment, shall remain in full force and effect.

4. **Payments by Area EPS Operator**. Any and all payments made by Area EPS Operator under the Agreement to either the Assignor or the Assignee shall be deemed to have been made to both and shall discharge the Area EPS Operator from any further liability with regard to said payment.

5. **Financial Obligations of Assignor and Assignee**. Any and all financial liability, including but not limited to amounts due, from the Interconnection Customer to the Area EPS Operator, occurring or accruing under the Agreement on or before the date of the signature of the Area EPS Operator to this Assignment shall be deemed to be the obligation of both the Assignor and Assignee, and the Area EPS Operator may recover any such amounts jointly and severally from the Assignor and Assignee.

6. **Contact information**. The following information updates and replaces the designated information as set forth on page 1 of the Agreement, and in Section 28.1, 28.2, 28.3 and 28.4 of the Agreement.

Page 1 Interconnection Customer Information

Interconnection Customer: _____

Attention: _____

Address: _____

_____

Phone: _____

Email: _____

28.1 General Notices. Interconnection Customer Information

Interconnection Customer: _____

Attention: _____

Address: _____

_____

Phone: _____

Email: _____

28.2 Billing and Payment Notices. Interconnection Customer Information

Interconnection Customer: _____

Attention: _____

Address: _____

_____

Phone: _____

Email: _____

28.3 Alternative Forms of Notices. Interconnection Customer Information

Interconnection Customer: _____

Attention: _____

Address: _____

_____

Phone: _____

Email: _____

28.4 Designated Operating Representative. Interconnection Customer Information

Interconnection Customer: _____

Attention: _____

Address: _____

_____

Phone: _____

Email: _____

7. Signatures. Facsimile or electronic signatures, or signatures to this Assignment sent electronically, shall have the same effect as original signatures. Photocopies, or electronically stored versions of this Assignment, shall have the same validity as the original.

The Area EPS Operator, Assignor, and Assignee have executed this Assignment as of the dates as set forth below.

Assignor

[Insert legal name of Assignor]

_____

Signed: _____

Name (Printed): _____

Title: _____

Date: _____

Assignee

[Insert legal name of Assignee]

_____

Signed: _____

Name (Printed): _____

Title: _____

Date: _____

Area EPS Operator

[Insert legal name of Area EPS Operator]

_____

Signed: _____

Name (Printed): _____

Title: _____

Date: _____

Certification of Completion

The Interconnection Customer should complete the Distributed Energy Resource Certification of Completion for a proposed DER interconnection in the Simplified Process Track. As a condition of interconnection, a completed copy of this form must be returned to the utility.

Distributed Energy Resource Information

Interconnection Customer:		
DER project address:		
City:	State:	Zip code:
Application ID:	Meter number:	
Is the DER system owner-installed?	☐ Yes ☐ No (If no please completed Installer Information)	

Installer Information

Contact name:	
Name of business:	
Email:	Phone:
Electrician name:	License #:

Electrical Permitting Authority

The DER has been installed and inspected in compliance with the local electrical permitting authority as verified by the signature below or the additionally attached document.

Inspector signature:	Date:
Inspector name:	Authority having jurisdiction (city/county)*:*

*****Please print clearly or type and return completed along with any additional documentation*****

For Office Use Only

Date received:

SPU
Shakopee Public Utilities

Proposed As Consent Item

3j

PO Box 470 • 255 Sarazin Street
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Main 952.445-1988 • Fax 952.445-7767
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TO: Greg Drent, General Manager

FROM: Joseph D. Adams, Planning & Engineering Director

SUBJECT: City Project No. 21-001 Maras Street, 12th Avenue, Hanson Avenue

DATE: March 17, 2022

ISSUE

This is to advise the Utilities Commission that the City Council awarded the contract, including water main extension, for the subject project to Northwest Asphalt at their March 15, 2022 Council meeting.

BACKGROUND

The subject project will include the installation of a 12-inch diameter water main that will serve the industrial zoned area east of Stagecoach Road and south of 13th Avenue. The project includes an interconnection with the City of Savage water system at the east end of 13th Avenue at the cities' boundary.

DISCUSSION

Staff has been in contact with city of Savage water department staff to coordinate the interconnection and a construction cooperative agreement is being developed for the city of Shakopee's contractor to work in the city of Savage right of way to install the interconnection facilities. It is important to note the interconnection facilities cost will be split equally between SPU and the city of Savage as it is being installed to the mutual benefit of both parties. And SPU's share of the interconnection cost will be funded out of the operating fund and not be a component of the property owner's costs to be recovered via a lateral water main connection charge at the time of water service being connected to each individual parcel.

Attached are the city's staff memo, summary of costs breakdown by funding source and the updated draft Lateral Connection Fees for the project. SPU costs will total $1,710,812.7 under the including city fees for engineering and contract administration. SPU will also have internal costs to absorb for inspecting the water main construction. The 2022 Capital Projects budget for this project is $1,700,000 plus $25,000 for the interconnection with Savage and there is another

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$25,000 in the 2022 Capital Projects budget for projects to be determined if needed. With a 50/50 cost sharing of the interconnection with Savage, staff's expectation is that this project will come in at budget.

REQUESTED ACTION

This is an informational item. No action is necessary at this time.

*5.D.5.

SHAKOPEE

Shakopee City Council
March 15, 2022

FROM: Darin Manning, Project Coordinator
TO: Mayor and Council Members

Subject:
Maras Street, 13th Avenue and Hansen Avenue Utility Extension Project Bid Award.

Policy/Action Requested:
Adopt Resolution R2022-037 accepting bids and awarding a contract in the amount of $4,617,231.96 to Northwest Asphalt, Inc., for the Maras Street, 13th Avenue and Hansen Avenue Utility Extension Project, Sewer-21-001.

Recommendation:
Adopt Resolution R2022-037.

Discussion:
The city's Capital Improvement Plan (CIP) contains the Maras Street, 13th Avenue and Hansen Avenue Utility Extension Project Sewer-21-001. On January 18, 2022, the City Council approved the plans and specifications and authorized bidding of the project.

In accordance with Minnesota Statute Section 471.345 Uniform Municipal Contracting Law, bids were solicited and opened on March 4, 2022. Six bids were received and Northwest Asphalt, from Shakopee, Minnesota, is the lowest bidder in the amount of $4,828,161.36 (see the attached resolution for the bid tabulation summary). Northwest Asphalt has the capacity and experience for the project and is deemed a responsible bidder. The engineer's estimate amounted to $5,012,000.

Also of note, the quantity of the bid proposal item number 79, Construct 84" Diameter Sanitary Sewer Manhole, has been adjusted from 17.0 linear feet to 10.3 linear feet. The adjusted quantity results in a revised contract amount of $4,617,231.96. Northwest Asphalt has acknowledged this discrepancy and has indicated their upfront agreement with this change to be included as part of the official contract.

Budget Impact:
Based on the low bid amount, the total estimated project cost for the Maras Street, 13th Avenue and Hansen Avenue Utility Extension Project is $5,749,231.96. This total project amount includes streetlighting improvements that will be coordinated directly with Shakopee Public Utilities. The below table summarizes the costs and funding sources for the project.

	2022 CIP Budget Estimate	Estimate Based On Bid Award
COSTS		
Construction Cost	$4,113,000.00	$4,617,231.96
Street Lighting	$64,000.00	$64,000.00
Contingency	$370,000.00	$144,000.00
Subtotal	$4,547,000.00	$4,825,231.96
Eng/Admin/Legal	$924,000.00	$924,000.00
Total Estimated Project Cost	**$5,471,000.00**	**$5,749,231.96**
FUNDING		
Special Assessments	$896,100.00	$778,885.43
Capital Improvement Fund	$2,090,900.00	$1,817,399.35

Sanitary Sewer Fund	$754,000.00	$1,193,229.97
Storm Drainage Fund	$71,000.00	$248,904.50
Shakopee Public Utilities	$1,659,000.00	$1,710,812.71
Total Funding	**$5,471,000.00**	**$5,749,231.96**

The amended total project budget of $5,749,231.96 is over the CIP budget by 5.1% and includes a $144,000 contingency amount that would cover any unexpected change orders, quantity adjustments and other miscellaneous expenses encountered as part of the project. The project is to be funded by the Capital Improvement Fund, Special Assessments, Sanitary Sewer Fund, Storm Drainage Fund, and by the Shakopee Public Utilities Commission.

Construction costs related to storm sewer and sanitary sewer improvements came in over the originally estimated amounts as a result of having to lower the depth of the proposed sanitary sewer system during final design to ensure it will provide adequate depth for the entire sewer service area. This increase results in an increase of the proposed estimated Lateral Connection Fee amounts that will be required to be paid by property owners at the time of connection. The updated Lateral Connection Fees based on bid award are attached. Also note that the final fee amounts will be up updated and finalized upon project completion and will be based on final actual project amounts.

Also of note, the proposed special assessment amount for street improvements that was included with the feasibility study was $10,329.90 per developable acreage; however, it is now estimated to be reduced to $9,738.33 based on the updated bid award amounts (this amount will also be finalized at the completion of the project and will be based on final actual project amounts).

Included in the resolution is funding language that would allow the city to reimburse project costs from future bond proceeds. This language allows for greater flexibility in funding current and future projects, should the city desire or need this in the future. The additional language allows the city a period of up to three years to issue and reimburse itself with bond proceeds. The language does not change the requirements or administrative process for issuing debt. All debt issuance will still require separate approval by the City Council.

ATTACHMENTS:

- Resolution R2022-037
- CIP Sheet
- Updated Lateral Connection Fees

SHAKOPEE

TO: Mayor & City Council
Bill Reynolds, City Administrator

FROM: Darin Manning, Project Coordinator

SUBJECT: Financing and Connection Timing Options for the
Maras Street, 13th Avenue, and Hansen Avenue Utility Extension Project

DATE: January 18, 2022 Updated March 9, 2022 based on the bid award amounts.

This memorandum summarizes proposed funding and connection timing options for the Maras Street, 13th Avenue and Hansen Avenue Utility Extension Project. While City Code 52.08 establishes the standard conditions for hook-up pertaining to routine utility extension projects (e.g. within three years), the extensive cost to hook-up, the variability of property types, and the varying age and investment of some properties in their existing septic systems and wells have prompted optional considerations for this project. The below options have been coordinated with and approved by Shakopee Public Utilities Commission.

A "Lateral Sanitary Sewer Connection Charge" and a similar water fee will be established for this project, consistent with past practice and other similar fees that exist in the city's fee schedule for project specific areas. These fees are used for projects that provide sanitary sewer and water service to an area that is not currently developed or a developed area where the properties will not be required to connect immediately to the utility.

Funding Options:
Property owners may pay the full fees at the time of connection or request the city to specially assess the fees over a ten-year period. Typically, an annual cost escalation is included in the connection fees; however, a three-year grace period would apply to the fees for this project to aid and promote volunteer connections. The typical annual cost escalation will be applied thereafter. See attachment A for the draft language that will be included in the city's fee schedule for this project.

Connection Timing Options:
Property owners will be required to connect to the utilities if one of the following occur:

1. Property is redeveloped (lateral fee's must be paid when final plat is recorded)
2. Sale of property
3. Failure of system
4. Voluntary connection

Property owners may connect to the sewer and water systems concurrently or non-concurrently. If a property owner experiences failure of one of their systems, they may decide to connect to both utilities concurrently due to economy of scale. If they chose this option, the connection fee for the system that didn't fail could be deferred for a period of three years. No annual cost escalation would be applied to the system that didn't fail for that three-year period.

Property owners may also decide to connect non-concurrently. This option allows for property owners with newer systems to obtain the maximum return on their investment. If property owners choose this option, the non-failing system would be required to be connected within 15-years. If sanitary sewer is connected without water, a flat rate will be developed and used to charge for sewer service.

ATTACHMENT A

Draft Lateral Connection Fee Language in the City Fee Schedule (Sanitary Sewer):

A. Maras Street, Hansen Avenue, and 13th Avenue Sanitary Sewer Lateral Connection Charge.....~~$5,077~~/Developable Acre
$6,088.36

This charge applies to all properties and developments connecting to the sanitary sewer extending along Maras Street between 13th Avenue and Hansen Avenue, Hansen Avenue between Maras Street and Stagecoach Road and 13th Avenue between Stagecoach Road and the City of Savage boundary.

The charge is to be collected at the time of connection to the public sanitary sewer, sale of the property, or the recording of a final plat for a future development utilizing the sanitary sewer, whichever is earlier.

B. Stagecoach Road Sanitary Sewer Lateral Connection Charge....~~$4,625~~/Developable/Acre
$5,835.18

This charge applies to all properties and developments connecting to the sanitary sewer extending along the east side of Stagecoach Road between 13th Avenue and Hansen Avenue.

The charge is to be collected at the time of connection to the public sanitary sewer, sale of the property, or the recording of a final plat for a future development utilizing the sanitary sewer, whichever is earlier.

2. **Draft Lateral Connection Fee Language in the SPUC Fee Schedule (Water):**

A. Maras Street, Hansen Avenue, Stagecoach Road, and 13th Avenue Watermain Lateral Connection Charge.....~~$14,083~~/Developable Acre
$16,551.98

This charge applies to all properties and developments connecting to the watermain extending along Maras Street between 13th Avenue and Hansen Avenue, Hansen Avenue between Maras Street and Stagecoach Road, east side of Stagecoach Road between 13th Avenue and Hansen Avenue and 13th Avenue between Stagecoach Road and the City of Savage boundary.

The charge is to be collected at the time of connection to the public watermain, sale of the property, or the recording of a final plat for a future development utilizing the watermain, whichever is earlier.

Proposed As Consent Item

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TO: Greg Drent, General Manager

FROM: Joseph D. Adams, Planning & Engineering Director

SUBJECT: DR Horton Exchange Agreement and Completion of Closing Under Exchange Agreement

DATE: March 17, 2022

ISSUE

Staff is updating the Commission that the final agreement and easement description/depiction are complete to all parties' satisfaction and we are ready to proceed.

BACKGROUND

The Commission previously approved Resolution 2021-21 A Resolution Approving Exchange Agreement and All Documents Necessary to Carry Out Exchange Agreement and Completion of Closing Under Exchange Agreement. The resolution's purpose was to approve a land swap with DR Horton to trade a permanent drainage easement to the city of Shakopee over a portion of the Tank #8 site to use for regional storm water ponding in exchange for Outlot B in Windermere South 5th Addition to provide SPU a site for a future water supply well.

DISCUSSION

Attached are Resolution 2021-21 and the final agreement and easement description/depiction.

RECOMMENDATION

This is an informational item and no action is necessary at this time.

RESOLUTION NO. 2021-21

RESOLUTION APPROVING EXCHANGE AGREEMENT AND ALL DOCUMENTS NECESSARY TO CARRY OUT EXCHANGE AGREEMENT AND COMPLETION OF CLOSING UNDER EXCHANGE AGREEMENT

WHEREAS, the Shakopee Public Utilities Commission, a municipal utility commission organized under Minnesota law (the "Commission"), is proposing to enter into an Exchange Agreement (the "Exchange Agreement") with D.R. Horton, Inc.-Minnesota, a Delaware corporation (the "Seller"), to receive a parcel of real property depicted in Exhibit A to the Exchange Agreement (the "Property") in exchange for granting certain temporary easements to the Seller and permanent easements to the City of Shakopee; and

WHEREAS, the Commission has determined that it is appropriate to execute, accept and deliver the Exchange Agreement; and

WHEREAS, the Commission has determined that it is appropriate to finalize and close the transaction contemplated by the Exchange Agreement and to execute, accept and deliver such documents as are necessary to acquire the Property and carry out the transaction; and

WHEREAS, the Commission has determined that the acquisition of the Property and the granting of the easements is in the public interest.

NOW, THEREFORE, BE IT RESOLVED BY THE SHAKOPEE PUBLIC UTILITIES COMMISSION AS FOLLOWS:

1. That the Commission hereby ratifies, confirms, authorizes and approves the execution of the Exchange Agreement and authorizes and approves the transactions contemplated by the Exchange Agreement.

2. That the Commission hereby ratifies, confirms, authorizes and approves, and directs the President or the General Manager of the Commission to finalize, accept and/or deliver in the name and on behalf of the Commission, the Exchange Agreement and all documents, affidavits and certificates in such form and on such terms and conditions as deemed necessary or appropriate in connection with the Exchange Agreement and the acquisition of the Property, including all closing documents and other documents as may be required to complete the transactions contemplated by the Exchange Agreement.

3. That the President or the General Manager of the Commission is hereby authorized, empowered and directed to make such changes to the foregoing documents, affidavits and certificates and any other closing documents necessary to carry out the transactions contemplated by the Exchange Agreement as the President or the General Manager of the Commission deems reasonable and necessary.

4. That the President or General Manager of the Commission are authorized, empowered and directed to do all other acts and things as are deemed necessary or desirable in their discretion to effectuate the acquisition.

BE IT FURTHER RESOLVED, that all things necessary to carry out the terms and purposes of this Resolution are hereby authorized and performed.

Passed in regular session of the Shakopee Public Utilities Commission this 18th day of October, 2021.

Commission President: Kathi Mocol

ATTEST:

Secretary: Greg Drent

1373610.DOCX

EXCHANGE AGREEMENT

DATE: _____, 2022

BETWEEN: **D.R. HORTON, INC.-MINNESOTA, a Delaware corporation** **("DHI")**

AND: **SHAKOPEE PUBLIC UTILITIES COMMISSION, a Minnesota municipal utility commission** **("SPUC")**

RECITALS

A. DHI is the fee owner of Lot 1, Block 1, Outlots at La Tour Terrace (the "Parent Parcel"). DHI has obtained Preliminary Plat approval from the City of Shakopee (the "City") for a subdivision of the Parent Parcel, to be named Windermere South 5th Addition, which subdivision will contain the Access Parcel, as defined below.

B. SPUC is the fee owner of Lot 1, Block 1, La Tour Terrace (the "SPUC Parcel") and in exchange for the Access Parcel, which DHI wishes to convey and SPUC wishes to receive, SPUC wishes to convey and DHI wishes the City of Shakopee (the "City") and itself to obtain permanent and temporary easements, over portions of the SPUC Parcel as further described below.

C. The SPUC Parcel, the Access Parcel (defined below), and all of the easements contained in the Drainage and Utility Easement Agreement and the Three Temporary Easements (both as defined below) are further depicted on Exhibit A-2.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing Recitals, the mutual covenants and promises contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

I. EXCHANGE – FEE TITLE TO ACCESS PARCEL

1.1 Access Parcel. DHI is in the process of platting the parcel of real property depicted in Exhibit A-1 as Outlot B, Windermere South 5th Addition, in the proposed plat of Windermere South 5th Addition (the "Plat"), together with all improvements thereon and all rights, privileges, easements, licenses, appurtenances and hereditaments relating thereto (collectively, the "Access Parcel"). The exact dimensions, location and legal description of the Access Parcel will not be finally determined until the Plat is finalized. Notwithstanding any current insufficiency of the legal description of the Access Parcel, the parties desire to proceed to enter into this Exchange Agreement (this "Agreement") and to mutually agree on the exact dimensions, location and legal description of the Access Parcel pursuant to the Plat, which Plat will be recorded at or prior to Closing.

1.2 Conveyance of Access Parcel. Subject to the terms and conditions of this Agreement, DHI will transfer and convey to SPUC, and SPUC will receive and accept from DHI, the Access Parcel. SPUC intends to use the Access Parcel as an access parcel to the SPUC Parcel.

1.3 Closing. The closing of the conveyance ("Closing") will occur at such time as DHI has received all approvals and is prepared to record the Plat.

II. EXCHANGE – GRANT OF EASEMENTS

2.1 Payment in Form of Exchange. In exchange for the Access Parcel, SPUC will grant to DHI three temporary easements (collectively the "Three Temporary Easements" and individually the "Temporary Easement Agreement," the "Temporary Construction Easement Agreement," and the "Temporary Storm Pipe Construction Easement Agreement") and SPUC will grant to the City a permanent easement (the "Drainage and Utility Easement Agreement"), all over portions of the SPUC Parcel, for drainage, ponding, grading, and construction purposes. The terms of the Drainage and Utility Easement Agreement are more specifically defined in Exhibit B. The terms of the Temporary Easement Agreement are more specifically defined in Exhibit C. The terms of the Temporary Construction Easement Agreement are more specifically defined in Exhibit D. The terms of the Temporary Storm Pipe Construction Easement Agreement are more specifically defined in Exhibit E.

2.2 Timing of Exchange. SPUC and DHI will sign and deliver the Three Temporary Easements to each other immediately following the execution of this Agreement and SPUC will sign and deliver the Drainage and Utility Easement Agreement to the City and the City will sign and deliver the Drainage and Utility Easement Agreement at or before Closing.

III. TITLE TO ACCESS PARCEL

3.1 Preliminary Title Commitment. Within fifteen (15) days of the date of this Agreement, DHI will furnish to SPUC a commitment for an owner's policy of title insurance (ALTA Form 06/17/06) covering the tax parcel of land underlying the Access Parcel (the "Preliminary Title Commitment"), issued by Old Republic National Title Insurance Company, through Scott County Abstract and Title, Inc., or such other title insurer as may be acceptable to SPUC (the "Title Company"), with standard exceptions for mechanic's liens and parties in possession deleted, with searches for special assessments and with an amount of coverage equal to $125,000.00. The Preliminary Title Commitment will include a copy of each instrument listed as an exception to title or referred to therein. The service charge for the Preliminary Title Commitment will be paid by DHI.

3.2 Final Title Commitment. As soon as the Access Parcel is able to be platted, DHI will furnish to SPUC a final commitment for an owner's policy of title insurance (ALTA Form 06/17/06) covering the Access Parcel (the "Final Title Commitment") issued by the Title Company, with standard exceptions for mechanic's liens, survey and parties in possession deleted, with searches for special assessments and with an amount of coverage equal to $125,000.00. The Final Title Commitment will include a copy of each instrument listed as an exception to title or referred to therein, except for any instruments previously furnished

(Drainage and Utility)

EASEMENT

This Easement is made as of _____, 2022, by SHAKOPEE PUBLIC UTILITIES COMMISSION, a Minnesota municipal utility commission ("Owner") in favor of the CITY OF SHAKOPEE, MINNESOTA, a Minnesota municipal corporation (the "City").

RECITALS

WHEREAS, Owner is the fee owner of the real property described on Exhibit A (the "Property").

WHEREAS, Owner desires to grant to the City certain easements over a portion of the Property described on Exhibit B and depicted on Exhibit C (the "Easement Area").

TERMS OF EASEMENTS

1. Grant of Easements. For good and valuable consideration, receipt of which is acknowledged by Owner, Owner grants and conveys to the City a perpetual non-exclusive easement for drainage and utility purposes over the Easement Area for public drainage and utility related purposes subject to the terms and conditions hereof.

2. Scope of Easements. The perpetual drainage and utility easements granted herein include the right of the City, its contractors, agents, and employees to enter the Easement Area at all reasonable times for the purpose of installing, constructing, reconstructing, operating, maintaining, inspecting, altering and repairing within the described Easement Area any of the following facilities and amenities: storm sewer, storm water treatment basins and ground surface drainage ways, in the described Easement Area. The facilities and amenities shall be maintained, repaired and replaced by the City. The easements granted herein also include the right to cut, trim, or remove from the Easement Area any trees, shrubs, or other vegetation as in the City's judgment unreasonably interfere with the easement or improvements of the City.

3. Environmental Matters. The City shall not be responsible for any costs, expenses, damages, demands, obligations, including penalties and reasonable attorney's fees, or losses resulting from any claims, actions, suites or proceedings based upon a release or threat of release

of any hazardous substances, pollutants, or contaminants which may have existed on, or which relate to, the Easement area or Property prior to the date of this instrument.

4. Binding Effect. The terms and conditions of this instrument shall run with the land and be binding on the Owner, its successors and assigns.

IN WITNESS WHEREOF, Owner and the City have executed this Easement effective as of the date and year first above written.

OWNER: SHAKOPEE PUBLIC UTILITIES COMMISSION
a Minnesota municipal utility commission

By: _____
Its: _____

STATE OF MINNESOTA)
) ss.
COUNTY OF SCOTT)

The foregoing instrument was acknowledged before me on _____, 2022, by _____, the _____, of Shakopee Public Utilities Commission, a Minnesota municipal utility commission, on behalf of the commission.

_____
Notary Public

CITY OF SHAKOPEE, MINNESOTA, a Minnesota municipal corporation

By: _____

Name: William P. Mars

Title: Mayor

By: _____

Name: William H. Reynolds

Title: City Administrator

STATE OF MINNESOTA)
) ss.
COUNTY OF SCOTT)

The foregoing instrument was acknowledged before me on _____, 2022, by William P. Mars, the Mayor, and by William H. Reynolds, the City Administrator, of the CITY OF SHAKOPEE, MINNESOTA, a Minnesota municipal corporation, on behalf of said municipal corporation.

_____

Notary Public

THIS INSTRUMENT WAS DRAFTED BY:
City of Shakopee
Public Works Department
485 Gorman Street
Shakopee, MN 55379
(952) 233-9369

EXHIBIT A

Legal Description of Property

Lot 1, Block 1, LA TOUR TERRACE, according to the recorded plat thereof, Scott County, Minnesota.

EXHIBIT B

Description of Easement Area

An easement lying over, under and across that part of Lot 1, Block 1, LA TOUR TERRACE, according to the recorded plat thereof, Scott County, Minnesota, described as follows:

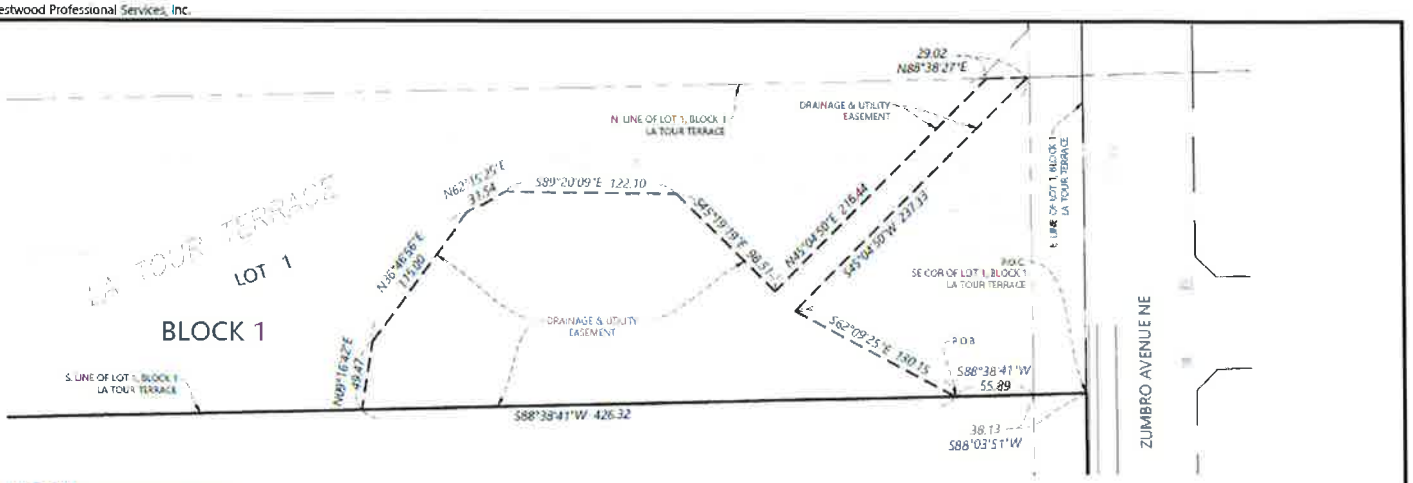
Commencing at the southeast corner of said Lot 1; thence South 88 degrees 03 minutes 51 seconds West, assumed bearing along the south line of said Lot 1, a distance of 38.13 feet; thence South 88 degrees 38 minutes 41 seconds West, along said south line a distance of 55.89 feet to the point of beginning; thence South 88 degrees 38 minutes 41 seconds West, along said south line a distance of 426.32 feet; thence North 09 degrees 16 minutes 42 seconds East, a distance of 49.47 feet; thence North 36 degrees 46 minutes 56 seconds East, a distance of 115.00 feet; thence North 62 degrees 15 minutes 25 seconds East, a distance of 31.54 feet; thence South 89 degrees 20 minutes 09 seconds East, a distance of 122.10 feet; thence South 45 degrees 19 minutes 19 seconds East, a distance of 98.51 feet; thence North 45 degrees 04 minutes 50 seconds East, a distance of 216.44 feet to the north line of said Lot 1; thence North 88 degrees 38 minutes 27 seconds East, along said north line a distance of 29.02 feet; thence South 45 degrees 04 minutes 50 seconds West, a distance of 237.33 feet; thence South 62 degrees 09 minutes 25 seconds East, a distance of 130.15 feet to the point of beginning.

Area: 46,312 sf or 1.06 ac

EXHIBIT C

Depiction of Easement Area

[See attached]



LEGAL DESCRIPTION

An Easement lying over, under and across that part of Lot 1, Block 1, LA TOUR TERRACE, according to the recorded plat thereof, Scott County, Minnesota, described as follows:

Commencing at the southeast corner of said Lot 1; thence South 88 degrees 03 minutes 51 seconds West, assumed bearing along the south line of said Lot 1, a distance of 38.13 feet; thence South 88 degrees 38 minutes 41 seconds West, along said south line a distance of 55.89 feet to the point of beginning; thence South 88 degrees 38 minutes 41 seconds West, along said south line a distance of 426.32 feet; thence North 09 degrees 16 minutes 42 seconds East, a distance of 49.47 feet; thence North 36 degrees 46 minutes 56 seconds East, a distance of 115.00 feet; thence North 62 degrees 15 minutes 25 seconds East, a distance of 31.54 feet; thence South 89 degrees 20 minutes 09 seconds East, a distance of 122.10 feet; thence South 45 degrees 19 minutes 19 seconds East, a distance of 98.51 feet; thence North 45 degrees 04 minutes 50 seconds East, a distance of 216.44 feet to the north line of said Lot 1; thence North 88 degrees 38 minutes 27 seconds East, along said north line a distance of 29.02 feet; thence South 45 degrees 04 minutes 50 seconds West, a distance of 237.33 feet; thence South 62 degrees 09 minutes 25 seconds East, a distance of 130.15 feet to the point of beginning.

Area: 46,312 sf or 1.06 ac

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA

MATHEW J. WERANSKI

DATE: 02/07/22 LICENSE NO. 53596

03/11/2022 CITY CHANGES (SRM)

N:\0029534.00\DWG\SURVEY\0029534-ESF07.DWG

WINDERMERE SOUTH 5TH ADDITION

DESIGNED
CHECKED MJW
DRAWN DW
FIELD REVIEW
SUBMITTAL DATE

WINDERMERE SOUTH 5TH ADDITION

SHAKOPEE, MINNESOTA

Westwood

Phone (952) 937-5150 12701 Whitewater Drive, Suite #300
Fax (952) 937-5822 Minnetonka, MN 55343
Toll Free (888) 937-5150 westwoodps.com

Westwood Professional Services, Inc.

DRAINAGE & UTILITY EASEMENT

PROJECT NUMBER: 0029534.00

SHEET NUMBER: 1 OF 1

DATE: 02/07/2022

V1

Shakopee Public Utilities

PO Box 470 • 255 Sarazin Street
Shakopee, Minnesota 55379
Main 952.445-1988 • Fax 952.445-7767
www.shakopeeutilities.com

TO: Greg Drent, General Manager

FROM: Lon R. Schemel, Water Superintendent

SUBJECT: Backflow Prevention and Cross-Connection Policy Presentation and Adoption

DATE: March 17, 2022

Presenting this evening is Tony Myers, Water Supervisor in charge of water production. Tony oversees the pumpage, storage, and treatment of our system as well as the installation and replacement of water meters. Tony has 17 years of experience with SPU.

Backflow prevention takes place at or near the water meter on a non-single family customer's service and all irrigation systems. This presentation will describe the most common conditions under which backflow can occur and why it is important to the utility.

Attached is the current policy statements and requested policy changes to be included in the Water Policy Manual. Staff requests the adoption of the Backflow Prevention and Cross-Connection Policy.

SHAKOPEE PUBLIC UTILITIES

BACKFLOW PREVENTION

AND

CROSS-CONNECTION CONTROL

POLICY

TABLE OF CONTENTS

1. Purpose

1.1.1 To protect the public potable water supply for the City of Shakopee, Minnesota, operated by Shakopee Public Utilities (SPU) from the possibility of contamination or pollution. This is accomplished by isolating, within the owner's internal distribution system, such contaminants or pollution sources which otherwise could backflow or back-siphon into the public potable water supply.

1.1.2 To promote the prevention of cross-connections, actual or potential, between the Owner's potable water system and the public potable water supply for the City of Shakopee, Minnesota. This is being accomplished by containment protection at the water service entrance to a premise.

1.1.3 To provide for the maintenance of a continuing backflow prevention and a cross-connection control policy that will systematically and effectively prevent the contamination or pollution of the public potable water supply for the City of Shakopee, Minnesota.

1.2 Responsibility

1.2.1 SPU shall be responsible for the protection of the public potable water supply from contamination or pollution due to backflow or back-siphonage of contaminants or pollutants through the water service connection. If in the judgment of SPU an approved backflow preventer is required, notice in writing will be given to said Owner to install an approved backflow preventer at the water service entrance immediately downstream of the SPU-owned water meter on the premises at the Owner's expense. The Owner shall, within sixty (60) days install such approved assembly or assemblies at their own expense, and failure or refusal, or inability on the part of the Owner to install said assembly or assemblies within sixty (60) days, shall constitute a ground for discontinuing water service to the premises until such assembly or assemblies have been properly installed.

1.2.2 SPU will operate a Backflow Prevention and Cross-Connection Control Policy, to include the keeping of necessary records, which fulfills the requirements of the SPU Backflow Prevention and Cross-Connection Control Policy.

1.2.3 The Owner shall be responsible for ensuring the protection of the water system beyond the termination of SPU's public water system. This includes installing and maintaining all backflow preventer assemblies for containment and isolation purposes.

1.2.4 The Owner shall allow SPU staff or SPU designated representative access to their premise/s served by SPU provided, public water supply for evaluation of possible cross-connections and shall follow the provisions of the SPU Backflow Prevention Program and Cross-Connection Control Policy.

1.2.5 If SPU requires the public water supply to be protected by containment, the Owner shall provide the proper backflow prevention at the water service entrance to the premise/s immediately downstream of the SPU owned water meter and shall be responsible for water quality beyond the outlet end of the backflow preventer assembly. The Owner shall utilize point of use protection per the current Minnesota State Plumbing Code for this purpose (see section 8, Degree of Hazard Table).

1.3 Authority

1.3.1 The Federal Safe Drinking Water Act of 1974, MN Water Supply Rule 4720.0025, and the current Minnesota State Plumbing Code.

1.3.2 SPU, the water purveyor having jurisdiction in charge of the public water system is vested with authority and responsibility for the implementation of an effective Cross Connection Control and Backflow Prevention Policy and the enforcement of the provisions of this specification.

2. Definitions

The following definitions shall apply to this specification. These definitions shall be used in conjunction with definitions and guidelines of the Minnesota Plumbing Code, Minnesota Rules, “Chapter 4714, Definitions and Standards”.

2.1 Terms

2.1.1 Approved: Accepted by SPU as meeting an applicable specification stated or cited in this regulation, or as suitable for the proposed use.

2.1.2 Approved: When used in reference to an air gap, pressure vacuum breaker assembly, a double check valve assembly, a reduced pressure principle backflow prevention assembly or other backflow prevention assemblies, device or methods shall mean any such assembly, device or method approved by the State of Minnesota Plumbing Code, SPU and/or The City of Shakopee Building Department.

2.2 Auxiliary Water Supply: Any water supply on or available to the premises other than SPU’s water supply will be considered as an auxiliary water supply. These auxiliary waters may include water from another city’s water utility or public potable water supply, or any natural source(s) such as a well, spring, river, stream, harbor, etc., or used water of industrial fluids. These waters may be contaminated or polluted or they may be objectionable and constitute an unacceptable water source over which SPU does not have sanitary control.

2.3 Backflow: The flow of water or other liquids, mixtures, or substances, under positive or reduced pressure into the distribution pipes of a potable water supply from any source other than its intended source.

2.4 Backflow Preventer Assembly: A testable backflow prevention assembly, which inhibits backflow or back-siphonage into the public potable water supply. Most commonly categorized as double check valve assembly (DCV), pressure vacuum breaker assembly (PVB), or reduced pressure zone assembly (RPZ).

2.4.1 Air Gap: A physical separation between the free-flowing discharge end of a potable water supply pipeline and an open and non-pressure receiving vessel.

2.4.2 Approved Air Gap: Shall be at least double the diameter of the supply pipe measured vertically above the flood rim of the fixture but in no case less than 1”.

2.4.3 Atmospheric Vacuum Breaker (AVB) (ASSE 1001): A device that performs similarly to a pressure vacuum breaker assembly. The AVB consists of a float check, a check seat, and an air inlet port. During normal flow conditions, the float within the AVB seals against the air inlet seat. When a back-siphonage condition develops the cessation of normal flow permits the float to drop, thus opening the air inlet valve. If the float seals against a check seat, there is no

backsiphonage from the AVB body or downstream piping. However, if the float check is fouled, the air entering through the air inlet valve dissipates. An AVB shall not be installed where it will be in continuous operation for more than 12 hours.

2.4.4 Double Check Valve Backflow Prevention Assembly (DCV) (ASSE 1015): An assembly composed of two (2) independently acting approved check valves, including tightly closing resilient seated shutoff valves attached at each end of the assembly and fitted with properly located resilient seated test cocks. This assembly shall only be used to protect against a non-health hazard (i.e., pollutant).

2.4.5 Double Check Detector Fire Protection Backflow Prevention Assembly (DCDA) (ASSE1048): An assembly composed of two (2) independently acting approved check valves with a parallel detector assembly consisting of a water meter and a double check valve backflow prevention assembly, including tightly closing resilient seated shutoff valves attached at each end of the assembly and fitted with properly located resilient seated test cocks. This assembly shall only be used to protect against a non-health hazard (i.e., pollutant)

2.4.6 Pressure Vacuum Breaker (PVB) (ASSE 1020): An assembly which consists of an independently operating internally loaded check valve and an independently operating loaded air inlet valve located on the discharge side of the check valve, with properly located resilient seated test cocks and tightly closing resilient seated shutoff valves attached at each end of the assembly.

2.4.7 Reduced Pressure Principle Backflow Prevention Assembly (RPZ) (ASSE 1013): An assembly containing two (2) independently acting approved check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves and at the same time below the first checkvalve. The unit shall include properly located resilient seated test cocks and tightly closing resilient shutoff valves at each end of the assembly. This assembly is used to protect against a non-health (i.e., pollutant) or a health hazard (i.e., contaminant).

2.4.8 Spill-Resistant Vacuum Breaker (SVB) (ASSE 1056): A type of cross-connection control assembly which contains a check valve force – loaded closed and an air inlet vent valve force - loaded open to the atmosphere, positioned downstream of the check valve, and located between and including two (2) tightly closing shutoff valves and two (2) test cocks.

2.5 Backpressure: A condition in which the building plumbing system pressure is greater than the supplier’s system pressure.

2.6 Backsiphonage: The flow of water or other liquids, mixtures, or substances into the distribution pipes of a potable water supply system from any source other than its intended source caused by the sudden reduction of pressure in the potable water supply system.

2.7 City of Shakopee Building Department: Authority Having Jurisdiction to enforce the Minnesota Plumbing Code.

2.8 City of Shakopee Fire Department: Authority Having Jurisdiction to enforce the Minnesota State Fire Code.

2.9 Containment: A method of backflow prevention that requires backflow prevention at the water service entrance to the premise(s) immediately downstream of the SPU-owned water meter.

2.10 Contaminant: A substance that impairs the quality of the water to a degree that it creates a serious health hazard to the public leading to poisoning or the spread of disease.

2.11 Cross Connection: Any connection between the public water supply and a source of contamination or pollution.

2.12 Isolation: A method of backflow prevention in which a backflow preventer is located at the source or "point of use" of the potential hazard to correct a cross-connection at a location within the owner's building or facility.

2.13 Owner: Any person, who has legal title to a property or license to operate or inhabit a property.

2.14 Person: Any individual, partnership, company, public or private corporation, political subdivision or agency of the State Department, agency or instrumentality of the United States or any other legal entity.

2.15 Physical Disconnection: A physically measured separation of the water supply piping to eliminate the potential of a cross-connection between the public water system and an auxiliary water system. An installed backflow preventer assembly between the municipally supplied water system and an auxiliary water system does not meet the requirements of this document for a physical disconnection.

2.16 Pollutant: A foreign substance that, if introduced into the public water system, will degrade its quality constituting a moderate hazard, or impair the usefulness or quality of the water to a degree that does not create an actual hazard to the public health, but that does adversely and unreasonably affect such water for domestic use.

2.17 Private fire protection water service: A water service line that is supplied by SPU, but is owned and maintained by the Owner for the sole purpose of fire protection on the Owner's property. These services can serve fire suppression systems, private fire hydrants, or a combination of both.

2.18 Shakopee Public Utilities (SPU): Water purveyor for the City of Shakopee, Minnesota.

2.19 Water Service Entrance: That point in the Owner's water system beyond the sanitary control of SPU; generally considered to be the outlet end of the SPU-owned water meter and always before any unprotected branch.

2.20 Water System: The water system shall be considered as made of two (2) parts. The SPU public water system and the Owner's system.

3. REQUIREMENTS

3.1 SPU

3.1.1 For new Commercial, Industrial, Apartment, Multifamily (containing more than one unit and has a shared laundry facility), Institutional and Dedicated Lawn Irrigation Service installations; a Reduced Pressure Zone (RPZ) shall be installed immediately downstream of the SPU owned water meter regardless of the degree of hazard within the building (Containment). In the event that a bypass line and meter are installed, an additional Reduced Pressure Zone (RPZ) shall be installed immediately downstream of the SPU owned water meter on the bypass line.

3.1.2 For Commercial, Industrial, Apartment, Residential (containing more than one unit and has a shared laundry facility, Institutional, and Dedicated Irrigation Service Installations existing prior to the start of this program; SPU staff, or an SPU-designated representative, may perform an evaluation of potential backflow into the public water system (Containment) and inform the Owner by letter of any corrective action deemed necessary, the method of achieving the correction and the time allowed for the correction to be made. Ordinarily, sixty (60) days will be allowed; however, this period may be shortened or lengthened depending upon the degree of hazard involved.

3.1.3 Properties with an auxiliary water supply.

3.1.3.1 No water pipe which provides water supplied by the SPU public water system shall be connected with any pump, well, or tank that is connected with an auxiliary water supply.

3.1.3.2 Single Family Residential- a physical disconnection of water supply piping between the interior potable plumbing and the non-potable auxiliary water system must exist when a residential property is utilizing an auxiliary water supply for outside watering purposes. A testable double check valve shall be installed immediately downstream of the SPU owned water meter to protect the municipal water system from any potential cross-connection.

3.1.3.3 Commercial, Industrial, Residential (containing more than one unit with shared laundry facilities), and Institutional. - a physical disconnection of the water supply piping between the municipally supplied water and the auxiliary water supply is required. A Reduced Pressure Zone (RPZ) shall be installed on the municipal supplied water service immediately downstream of the SPU owned water meter.

3.1.3.4 The Owner will be notified by mail of any cross-connection violation. The Owner will have sixty (60) days to correct the violation. If the violation has not been corrected after sixty (60) days, SPU may terminate water service to the premises. In the event the Owner informs SPU of extenuating circumstances as to why the correction of the violation has not been made, a time extension may be granted by SPU, but in no case will it exceed an additional thirty (30) days. If SPU determines at any time that a serious threat to public health exists, the water service may be terminated immediately.

3.1.4 For any Residential or Commercial irrigation system, a Pressure Vacuum Breaker (PVB) or Reduced Pressure Zone (RPZ) backflow preventer assembly shall be installed. Irrigation systems that are supplied by a dedicated water service line or are plumbed with an SPU owned irrigation-only water meter, shall have an RPZ install immediately downstream of the meter. For a single-family residential irrigation system or a commercial irrigation system that is supplied after the SPU owned domestic water meter, a PVB is an acceptable backflow prevention device.

3.1.5 Private fire water services and/or private fire hydrant service leads that are over the standard 20’ length may be required to be protected by a Double Check Valve Backflow

Prevention Assembly (DCV). When required, it is preferable for the Double Check Valve Backflow Prevention Assembly (DCV) to be located above ground in a heated structure for access and testing purposes. SPU will make the determination when a Double Check Valve Backflow Prevention Assembly (DCV) is required.

3.1.6 SPU staff, or a representative of SPU, will send a Notice of Violation when the required backflow preventer assembly test is thirty (30) days past due. SPU will send a final notice of violation when the test is sixty (60) days past due. After the final notice, the Owner will have thirty (30) days to become compliant or face possible termination of water service to their premise and may be subject to a reconnection charge. In the event the Owner informs SPU of extenuating circumstances as to why the test has not been made, a time extension may be granted by SPU, but in no case will exceed an additional thirty (30) days.

3.1.7 Fire suppression systems shall have a Double Check Detector Fire Protection Backflow Prevention Assembly installed per the requirements of the Shakopee Fire Department, City of Shakopee Building Department, and SPU.

3.2 Owner

3.2.1 The Owner is responsible for the prevention and elimination of all cross-connections on their premises. SPU will assist the Owner with the identification of any cross-connection.

3.2.2 The Owner, after having been informed by letter from SPU, shall at their expense, install, maintain, and test, or have tested, any backflow preventer assemblies on their premises.

3.2.3 The Owner shall correct any malfunction of the backflow preventer assembly.

3.2.4 The Owner shall not install a bypass around any backflow preventer assembly unless there is a backflow preventer assembly of the same type on the bypass. Owners who cannot shut down operation for testing of the backflow preventer assembly(s) must install an additional SPU-owned water meter and backflow preventer assembly as necessary to allow testing to take place.

3.2.5 The Owner shall install backflow preventer assemblies in a manner approved by the current Minnesota Plumbing Code, SPU, or the City of Shakopee Building Department requirements and shall install only backflow preventer assemblies approved by the current Minnesota Plumbing Code.

3.2.6 Any Residential or Commercial Owner having a private well or auxiliary water source shall not be connected to any SPU supplied residential or commercial customer house piping per SPU Policy. A testable double check valve (DCV) shall be installed on any single-family residential service line when a private well is used for outside watering purposes. An RPZ device shall be installed per this document on SPU supplied water service lines for the purpose of containment.

3.2.7 The Owner shall be responsible for the payment of all fees for permits, testing, repairs, and additional required retesting in cases where the backflow preventer assembly fails to operate correctly.

3.2.8 The Owner shall inform SPU of any known, proposed, existing, or modified cross-connections.

3.2.9 The Owner is responsible to ensure all points of use are protected with the proper backflow preventer assemblies per the current Minnesota Plumbing Code.

4. EXISTING BACKFLOW PREVENTER ASSEMBLIES

4.1 Any existing backflow preventer assembly shall be allowed to continue in service until or unless the degree of hazard is such as to supersede the effectiveness of the present backflow preventer assembly or result in an unreasonable risk to the public health. If the Owner of a premise wishes to remove an existing backflow preventer assembly from service, prior approval must be obtained from SPU and the City of Shakopee Building Department before doing so.

5. PERIODIC TESTING AND MAINTENANCE

5.1 All-new testable backflow preventer assemblies must be tested upon installation.

5.2 All testable backflow preventer assemblies, regardless of the install date, must be tested at intervals not to exceed twelve (12) months from the date of the previous test date by an American Society of Sanitary Engineers (ASSE) certified backflow preventer tester and shall be submitted to SPU, via The Compliance Engine, no more than thirty (30) days after the test date. Any backflow repair needs to be completed by a Licensed Plumber.

5.3 The required testing and/or repairs will be done at the Owner's expense.

5.4 Any backflow preventer assembly which fails during a periodic test shall be immediately repaired or replaced. Upon completion of the repair, the backflow preventer assembly will be retested at the owner's expense to ensure correct operation. Parallel installation of two (2) backflow preventer assemblies and SPU-owned water meters are an effective means to ensure uninterrupted water service during testing or repair of the assembly and is strongly recommended when the Owner desires such continuity.

5.5 SPU may require more frequent backflow preventer assembly testing in cases where there is a history of test failures and where SPU determines that due to the degree of hazard involved, additional testing is warranted. The cost of the additional tests will be the responsibility of the Owner.

5.6 The State of Minnesota requires backflow preventer assemblies on all in-ground irrigation systems. The testing of all irrigation system backflow preventer devices must be completed each year at the time of the system start-up. This is due to the nature of the system being taken in/out of service to protect it from our local climate.

6. RECORDS AND REPORTS

6.1 Records: SPU staff or a representative of SPU will initiate and maintain master files on all customer-owned containment backflow preventer assemblies and tests required by this program.

6.2 Private Records: SPU staff or a representative of SPU will initiate and maintain master files on all Owner's private isolation "point of use" backflow preventer assemblies as required by the current Minnesota Plumbing Code.

6.3 SPU utilizes The Compliance Engine to track backflow prevention reporting. It shall be the responsibility of the backflow tester to enter the test reports and pay associated fees with submitting the reports through their website www.thecomplianceengine.com. Any backflow test reports that are submitted directly to SPU or the City of Shakopee will not be accepted and will be considered delinquent until they are entered by the backflow tester into The Compliance Engine database.

7. FAILURE TO COMPLY

7.1 SPU may terminate water supply to the Owner for any failures to perform the requirements of these Specifications. The Owner will be subject to fees as outlined in the SPU Water Policy Manual for the re-establishment of water service following compliance.

8. Degree of Hazard Table

TABLE 603.2
BACKFLOW PREVENTION DEVICES, ASSEMBLIES, AND METHODS

DEGREE OF HAZARD						
DEVICE, ASSEMBLY, OR METHOD[1]	APPLICABLE STANDARDS	POLLUTION (LOW HAZARD)		CONTAMINATION (HIGH HAZARD)		INSTALLATION[2,3]
		BACK-SIPHONAGE	BACK-PRESSURE	BACK-SIPHONAGE	BACK-PRESSURE	
Air gap	ASME A112.1.2	X	—	X	—	See Table 603.3.1 in this chapter.
Air gap fittings for use with plumbing fixtures, appliances and appurtenances	ASME A112.1.3	X	—	X	—	Air gap fitting is a device with an internal air gap and typical installation includes plumbing fixtures, appliances and appurtenances. The critical level shall not be installed below the flood level rim.
Atmospheric vacuum breaker (consists of a body, checking member and atmospheric port)	ASSE 1001 or CSA B64.1.1	X	—	X	—	Upright position. No valve downstream. Minimum of 6 inches or listed distance above all downstream piping and flood-level rim of receptor.[4,5]
Antisiphon fill valve (ballcocks) for gravity water closet flush tanks and urinal tanks	ASSE 1002 or CSA B125.3	X	—	X	—	Installation on gravity water closet flush tank and urinal tanks with the fill valve installed with the critical level not less than 1 inch above the opening of the overflow pipe.[4,5]
Vacuum breaker wall hydrants, hose bibbs, frost resistant, automatic draining type	ASSE 1019 or CSA B64.2.1.1	X	—	X	—	Installation includes wall hydrants and hose bibbs. Such devices are not for use under continuous pressure conditions (means of shutoff downstream of device is prohibited).[4,5]
Backflow preventer for Carbonated Beverage Dispensers (two independent check valves with a vent to the atmosphere)	ASSE 1022	X	—	—	—	Installation includes carbonated beverage machines or dispensers. These devices operate under intermittent or continuous pressure conditions.
Spill-Resistant Pressure Vacuum Breaker (single check valve with air inlet vent and means of field testing).	ASSE 1056	X	—	X	—	Upright position. Minimum of 12 inches or listed distance above all downstream piping and flood-level rim of receptor.[5]
Double Check Valve Backflow Prevention Assembly (two independent check valves and means of field testing)	ASSE 1015; AWWA C510; CSA B64.5 or CSA B64.5.1	X	X	—	—	Horizontal unless otherwise listed. Access and clearance shall be in accordance with the manufacturer's instructions, and not less than a 12 inch clearance at bottom for maintenance. May need platform/ladder for test and repair. Does not discharge water.
Double Check Detector Fire Protection Backflow Prevention Assembly (two independent check valves with a parallel detector assembly consisting of a water meter and a double check valve backflow prevention assembly and means of field testing)	ASSE 1048	X	X	—	—	Horizontal unless otherwise listed. Access and clearance shall be in accordance with the manufacturer's instructions, and not less than a 12 inch clearance at bottom for maintenance. May need platform/ladder for test and repair. Does not discharge water. Installation includes a fire protection system and is designed to operate under continuous pressure conditions.

TABLE 603.2
BACKFLOW PREVENTION DEVICES, ASSEMBLIES, AND METHODS (continued)

DEGREE OF HAZARD						
DEVICE, ASSEMBLY, OR METHOD[1]	APPLICABLE STANDARDS	POLLUTION (LOW HAZARD)		CONTAMINATION (HIGH HAZARD)		INSTALLATION[2,3]
		BACK-SIPHONAGE	BACK-PRESSURE	BACK-SIPHONAGE	BACK-PRESSURE	
Pressure Vacuum Breaker Backflow Prevention Assembly (loaded air inlet valve, internally loaded check valve and means of field testing)	ASSE 1020 or CSA B64.1.2	X	—	X	—	Upright position. May have valves downstream. Minimum of 12 inches above all downstream piping and flood-level rim of receptor. May discharge water.
Reduced Pressure Principle Backflow Prevention Assembly (two independently acting loaded check valves, a differential pressure relief valve and means of field testing)	ASSE 1013; AWWA C511; CSA B64.4 or CSA B64.4.1	X	X	X	X	Horizontal unless otherwise listed. Access and clearance shall be in accordance with the manufacturer's instructions, and not less than a 12 inch clearance at bottom for maintenance. May need platform/ladder for test and repair. May discharge water.
Reduced Pressure Detector Fire Protection Backflow Prevention Assembly (two independently acting loaded check valves, a differential pressure relief valve, with a parallel detector assembly consisting of a water meter and a reduced-pressure principle backflow prevention assembly, and means of field testing)	ASSE 1047	X	X	X	X	Horizontal unless otherwise listed. Access and clearance shall be in accordance with the manufacturer's instructions, and not less than a 12 inch clearance at bottom for maintenance. May need platform/ladder for test and repair. May discharge water. Installation includes a fire protection system and is designed to operate under continuous pressure conditions.

For SI units: 1 inch = 25.4 mm

Notes:

1 See description of devices and assemblies in this chapter.

2 Installation in pit or vault requires previous approval by the Authority Having Jurisdiction.

3 Refer to general and specific requirement for installation.

4 Not to be subjected to operating pressure for more than 12 hours in a 24 hour period.

5 For deck-mounted and equipment-mounted vacuum breaker, see Section 603.5.14.

BACKFLOW PREVENTION AND CROSS CONNECTION CONTROL POLICY

SPU
Shakopee Public Utilities

WHAT IS BACKFLOW?

BACKFLOW IS THE REVERSAL OF FLOW OF A LIQUID, GAS, OR OTHER SUBSTANCE IN A PIPING SYSTEM.


Without Backflow Prevention Assembly
Irrigation System
Boiler
Internal Plumbing
Internal Plumbing
Meter
Meter
Meter
Main Break
Back Siphonage/ Reversal of Waterflow

HOW CAN BACKFLOW INCIDENTS BE PREVENTED?

REDUCED PRESSURE ZONE (RPZ)

DOUBLE CHECK VALVE

PRESSURE VACUUM BREAKER (PVB)

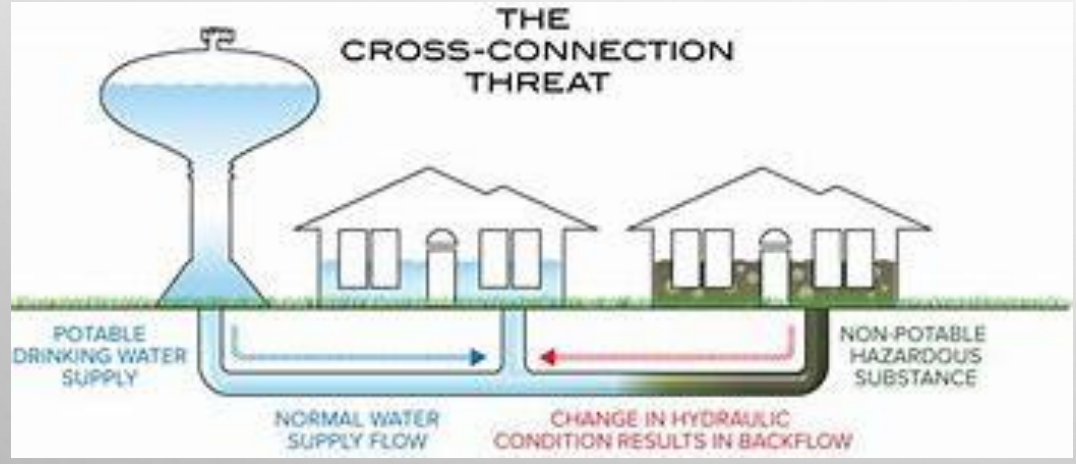

With Backflow Prevention Assembly
Irrigation System
Boiler
Internal Plumbing
Internal Plumbing
Meter
Meter
Meter
Main Break
Back Siphonage/ Reversal of Waterflow

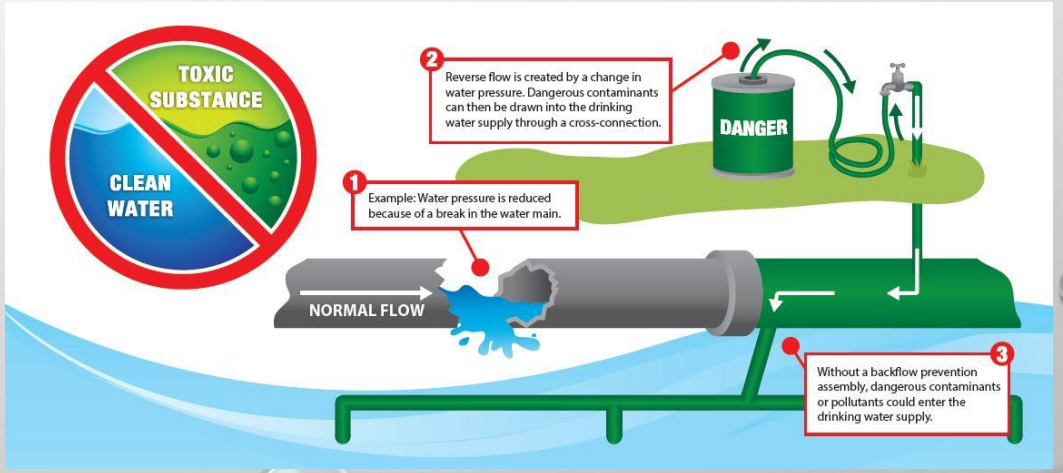
WHAT DOES THIS POLICY INTEND TO DO?

- THE BACKFLOW AND CROSS CONNECTION POLICY IS A DOCUMENT THAT WOULD BE IN PLACE TO PREVENT THE CONTAMINATION AND ENSURE THE PROTECTION OF THE PUBLIC WATER SYSTEM FROM THE BACKFLOW OF WATER AND CROSS CONNECTIONS BETWEEN NON POTABLE WATER SOURCES OR CONTAMINATES.
- OFFERS MORE DETAIL ON THE REQUIREMENTS (SPU AND MINNESOTA PLUMBING CODE) FOR CUSTOMERS AND BUILDERS ON THE INSTALLATION, MAINTENANCE, AND TESTING OF BACKFLOW PREVENTION ASSEMBLIES.
- MORE CLEARLY DEFINES SPU POLICY ON CROSS CONNECTIONS BETWEEN THE PUBLIC WATER SYSTEM AND NON POTABLE WATER SOURCES.
- SPU HAS HAD REQUIREMENTS IN PLACE FOR BACKFLOW PREVENTION AND CROSS CONNECTIONS SINCE THE 1980'S. SPU HAS REQUIRED RPZ'S ASSEMBLIES IMMEDIATELY AFTER THE WATER METER (CONTAINMENT) ON COMMERCIAL, INDUSTRIAL, MULTI-FAMILY RESIDENTIAL AND COMMERCIAL LAWN IRRIGATION SYSTEMS TO PREVENT BACKFLOW FROM THE CUSTOMERS WATER SYSTEM INTO THE PUBLIC WATER SYSTEM.
- THE MINNESOTA STATE PLUMBING CODE REFERENCES WHERE BACKFLOW PREVENTION WOULD BE REQUIRED ON THE CUSTOMERS WATER SYSTEM (AFTER THE POINT OF THE CONTAINMENT BACKFLOW ASSEMBLY).

WHAT ARE CROSS CONNECTIONS?

A CROSS CONNECTION IS AN ACTUAL CONNECTION OR A POTENTIAL CONNECTION BETWEEN ANY PART OF A POTABLE WATER SYSTEM AND ANY OTHER ENVIRONMENT THAT WOULD ALLOW SUBSTANCES TO ENTER A POTABLE WATER SYSTEM.





PREVENTION OF CROSS CONNECTIONS

- THIS POLICY REINFORCES THAT CROSS CONNECTIONS OF MULTIPLE WATER SUPPLIES (PUBLIC AND AUXILIARY) ARE NOT ALLOWED BETWEEN THE PUBLIC WATER SYSTEM AND ANY AUXILIARY WATER SOURCE.
- THIS IS ACCOMPLISHED BY REQUIRING THAT ANY PLUMBING THAT IS SUPPLIED BY THE PUBLIC WATER SYSTEM IS NOT CONNECTED IN ANY WAY TO ANY PLUMBING THAT IS SERVED FROM A AUXILIARY WATER SOURCE ALSO BY REQUIRING BACKFLOW PREVENTION ASSEMBLIES IMMEDIATELY AFTER THE SPU OWNED WATER METER (CONTAINMENT).
- THE MINNESOTA STATE PLUMBING CODE REQUIRES BACKFLOW PREVENTION ASSEMBLIES ON CERTAIN POINT OF USE EQUIPMENT (ISOLATION) TO PROTECT THE CUSTOMERS WATER SYSTEM.

Containment Backflow Assembly

Isolation Backflow Assembly

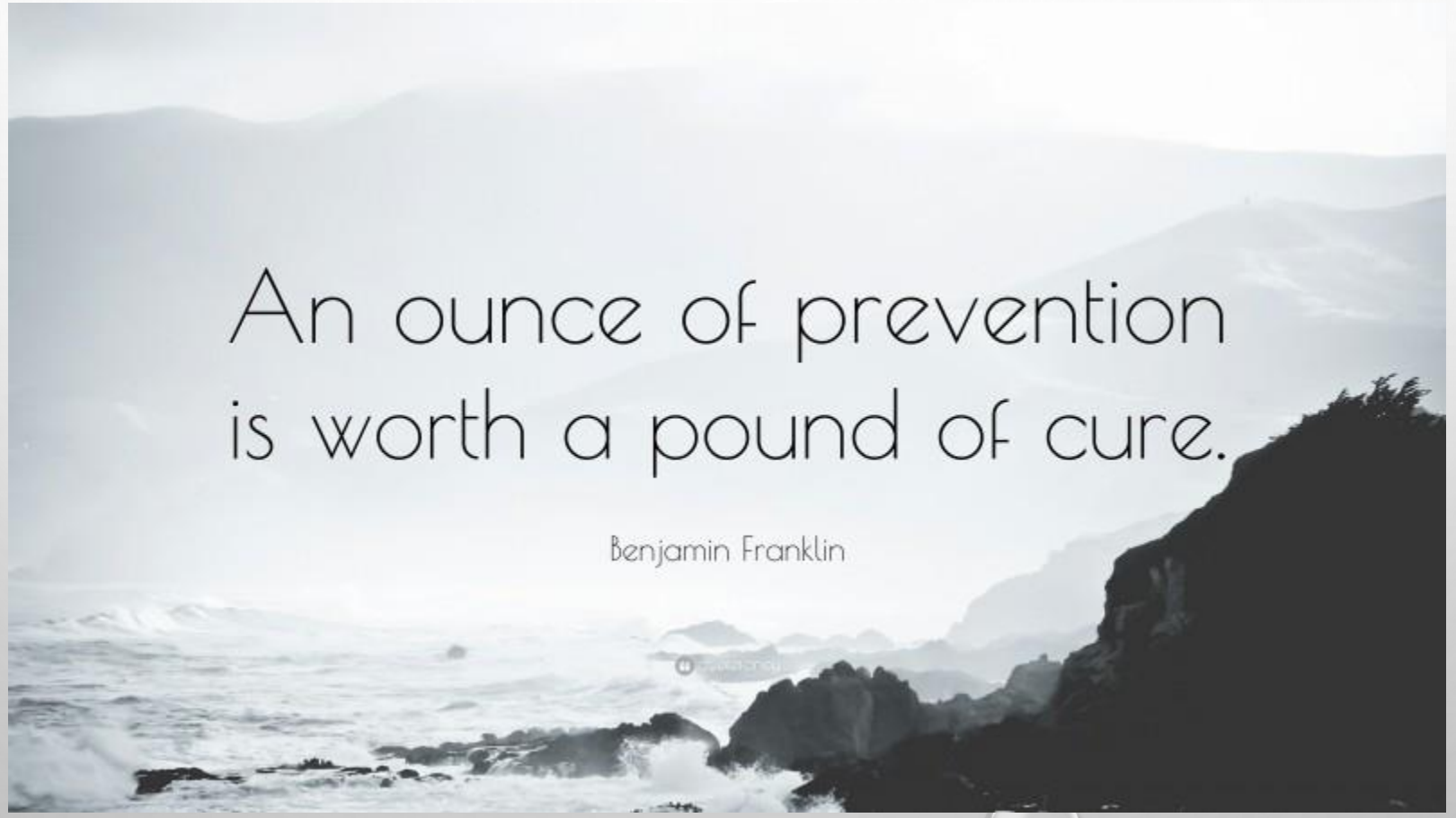
WHAT IS SPU CURRENTLY DOING AS FAR AS BACKFLOW PREVENTION?

- IN SEPTEMBER OF 2021-SPU CHANGED TO USING A BACKFLOW PREVENTION TESTING TRACKING SYSTEM CALLED THE COMPLIANCE ENGINE (SPU WATER STAFF HAD BEEN TRACKING IN HOUSE FOR MANY YEARS).
- WINTER/SPRING 2022-SPU WATER DEPARTMENT HAS BE INVENTORYING BACKFLOW PREVENTION ASSEMBLIES ON COMMERCIAL/INDUSTRIAL PROPERTIES TO MAKE SURE THE CURRENT BACKFLOW DATA BASE IS UP TO DATE.
- SPRING/SUMMER 2022 AND BEYOND-WORK ON GETTING PROPERTIES THAT HAVE BACKFLOW ASSEMBLIES THAT ARE OVER DUE FOR TESTING IN COMPLIANCE (THROUGH EDUCATION AND WITH THE HELP OF THE COMPLIANCE ENGINE).

CHANGES TO SPU'S CURRENT POLICY

- THE NEW POLICY WOULD ALIGN WITH CURRENT CODES AND ACCEPTED STANDARDS.
- THE 2015 MINNESOTA PLUMBING CODE REQUIRED IRRIGATION SYSTEMS THAT HAVE PRESSURE VACUUM BREAKERS (PVB) THAT WERE INSTALLED ON OR AFTER JANUARY 23, 2016 TO BE TESTED ANNUALLY. THIS INCLUDES ALL SINGLE FAMILY RESIDENTIAL HOMES THAT HAVE THEIR OWN IRRIGATION SYSTEM.
- THIS POLICY WOULD REQUIRE ALL IRRIGATION SYSTEMS THAT HAVE PVB'S TO BE TESTED ANNUALLY.
- RPZ'S AND TESTABLE DOUBLE CHECK VALVES AS WELL AS OTHER TESTABLE BACKFLOW DEVICES ALREADY HAD AN ANNUAL TESTING REQUIREMENT.

QUESTIONS?


An ounce of prevention
is worth a pound of cure.
Benjamin Franklin

Shakopee Public Utilities

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TO: Greg Drent, General Manager

FROM: Joseph D. Adams, Planning & Engineering Director

SUBJECT: West Shakopee Substation 15 kV Switchgear and Control Building Bid Award

DATE: March 18, 2022

ISSUE

On March 15, 2022, bids for the construction and delivery of the West Shakopee Substation switchgear and control building were opened.

BACKGROUND

The West Shakopee Substation will increase the electric distribution system's capacity to serve the growing load on the west side of Shakopee and planned annexation areas of Jackson Township, which SPU is acquiring service territory rights for from Minnesota Valley Electric Cooperative. The site of the substation will be along Colburn Drive and CR 69 on the parcel acquired from the Breeggeemann family.

DISCUSSION

There is a total of $5,400,000 in the Capital Project budget for all substation construction costs. Our consulting project engineer Kevin Favero of Leidos Engineering LLC has estimated the cost of the switchgear and control building to be $1,700,000. Kevin summarizes the bid results in the attached report. He has thoroughly evaluated the bid options and carefully taken into account delivery timing vs. the projected loading scenarios and need for the substation to be energized.

RECOMMENDATION

Staff concurs with the engineer's recommendation that the Commission award the 15 kV Switchgear and Control Building contract to States Manufacturing for $1,533,000.

REQUESTED ACTION

Staff requests the Commission award the West Shakopee Substation Switchgear and Control Building contract to States Manufacturing for $1,533,000 with a delivery date of May 5, 2023.

March 18, 2022

Mr. Joe Adams
Shakopee Public Utilities
255 Sarazin Street
Shakopee, MN 55379

Subject: **West Shakopee Substation 15 kV Switchgear - Bid Evaluation**

Dear Mr. Adams:

Per your request, we have reviewed and evaluated the bids received for supplying the 15 kV[1] West Shakopee Substation switchgear. The West Shakopee Substation switchgear will connect the low-voltage output of the proposed West Shakopee power transformer to circuits which will serve the western portion of Shakopee. Each circuit will be protected by a circuit breaker in the switchgear building. The switchgear building will also include a main breaker to protect the main primary voltage bus and a bus tie breaker for connection to a future switchgear building under Phase 2 development of West Shakopee Substation.

Bids were received from the following suppliers:

- M&I Electric, LLC / Myers Power Products
- Siemens Industry, Inc.
- States Manufacturing

Economic Evaluation

The bids were evaluated based on the purchase price which includes the bid price plus any adjustments due to exceptions taken by the bidder. All bidders included a 5% bid bond.

The economic evaluation of bids for the switchgear and delivery dates are summarized below in Table 1.

[1] kV means kilo-volt which equals 1,000 volts.

Table 1
Bid Evaluation ($)

Supplier / Beaker Manufacturer	Bid Amount	Adjustment for Exceptions [1]	Adjusted Price	Difference	% Difference	Option / Delivery Date 2023 [2]
Myers / Eaton	1,713,380	101,000	1,814,380	281,380	18.4%	2-A & 2-B Jan. 31, 2023 May 5, 2023
Siemens / Siemens	1,723,494	86,354	1,809,848	276,848	18.1%	1-A & 1-B Jan. 31, 2023 May 5, 2023
Siemens / Siemens	1,618,086	86,354	1,704,440	171,440	11.2%	2-A and 2-B Jan. 31, 2023 May 5, 2023
States Mfg./ Eaton	1,533,000		1,533,000	0	0.0%	2-B May 5, 2023
States Mfg./ Schneider	1,263,000		1,263,000	Non-resp.		2-C Jan. 31, 2024

[1] The Myers adjustment reflects the estimated costs of a thin brick exterior ($86,000) and of off-loading at the project site ($15,000), both of which are required by the specifications. The bid includes exceptions as described in this report.

The Siemens adjustment reflects the cost of a thin brick exterior which is required by the specifications. The bid includes exceptions as described in this report.

[2] For options 1-A, 1-B, and 1-C, the breakers are in one tier.
For options 2-A, 2-B, and 2-C, the breakers are in two tiers.

For options 1-A and 2-A, delivery is by January 31, 2023
For options 1-B and 2-B, delivery is by May 5, 2023 (estimated based on removal of road restrictions)
For options 1-C and 2-C, delivery is by bidder-designated date.

The bid documents included six bid options:

- Option 1-A: Delivery by January 31, 2023 and 1-tier breakers
- Option 2-A: Delivery by January 31, 2023 and 2-tier breakers
- Option 1-B: Delivery by fifteen days after road restrictions are released and 1-tier breakers. The delivery date is estimated to be May 5, 2023.
- Option 2-B: Delivery by fifteen days after road restrictions are released and 2-tier breakers. The delivery date is estimated to be May 5, 2023.
- Option 1-C: Deliver by a date selected by the bidder and 1-tier breakers
- Option 2-C: Delivery by a date selected by the bidder and 2-tier breakers

Options 1-A, 2-A, 1-B, and 2-B were included to provide delivery early enough to meet an in-service date before the 2023 summer peak load.

Option 1-C and 2-C were included to receive bids if no manufacturers could meet the Option A and Option B delivery dates.

States Manufacturing

As shown in Table 1, the lowest-cost bid ($1,236,000) by States Manufacturing is not responsive since it has a delivery date of January 31, 2024, which is too late to meet the summer 2023 peak load requirements to be served in the western portion of the SPU service territory by West Shakopee Substation. The lowest-cost responsive bid is for $1,533,000 by States Manufacturing for two-tiered breaker construction. As described below, delivery would be provided by five days after removal of road restrictions in spring 2023.

States Manufacturing did not take any exceptions to the bid documents.

States Manufacturing has previously provided similar switchgear building installation for the following SPU substations: Shakopee Substation, South Shakopee Substation, Dean Lake Substation (2), and Pike Lake Substation. SPU staff reports that the switchgear buildings supplied by States Manufacturing operate well and as intended.

States Manufacturing procures the switchgear breakers, relays, and other equipment from major manufacturers (in this case an Eaton breaker assembly and Schweitzer Engineering Laboratory relays) and installs them in a building and relay panels fabricated by States Manufacturing in Minneapolis.

States Manufacturing has been responsive to resolving issues that have arisen such as a leak in one of the Dean Lake buildings during driving rain and failed voltage transformers supplied by a switchgear manufacturer. For a previous installation, the third-party testing firm found some wiring issues that had to be addressed.

States Manufacturing has confirmed the following approach to avoid similar wiring issues and expedite shipment and testing so that the switchgear can be in service before the summer 2023 peak load levels:

- Have the switchgear building fully completed, tested, and ready for shipment by the first week of April and ship within a few days after road restrictions are lifted. Since the construction is with two-tiered breakers and separate relay panels, States Manufacturing can fabricate the relay panels before the switchgear assembly is delivered from Eaton.
- Complete the on-site assembly of the external HVAC and external junction box within one to two days after delivery.
- Ship the building with the batteries installed and tested.
- Test the breakers in the factory and confirm the breaker travel in the compartments immediately after delivery.
- Thoroughly test wiring and equipment operation after assembly and installation at the States Manufacturing facility.
- Mark up wiring diagrams to verify each circuit is connected and equipment is functioning correctly. Provide to SPU and Leidos copies of completed test wiring diagrams and reports of equipment functions.
- Label all wire with to/from labels at each wire end and provide unique terminal block numbers for all wiring terminations.

Siemens

The Siemens bid (as adjusted) for two-tier breaker construction is $171,440 or 11.2% higher than the lowest responsive bid by States Manufacturing. The Siemens one-tier breaker bid (as adjusted) is $276,848 or 18.1% higher than the lowest responsive bid by States Manufacturing. Both two-tier and one-tier Siemens bids provide for delivery by January 31, 2023 or by 15 days after removal of road restrictions (delivery estimated to be May 5, 2023).

As shown in Table 1, the bid prices entered by Siemens on the bid form did not include the cost of a thin brick veneer which is required in the specifications. The thin brick veneer is needed to meet the City of Shakopee code which does not allow metal exteriors. The Siemens bid included an optional amount of $86,354 for supplying the thin brick veneer.

The Siemens switchgear equipment would be manufactured in Mexico and shipped to Tea, South Dakota where it would be installed in the switchgear building and connected to relay panels, both fabricated by Harvard Integrations.

The Siemens bid had exceptions, including the following significant exceptions:

- The warranty period is for 12 months after shipment or 18 months after commissioning, whichever is first. Note that these appear to be reversed. The specifications require a 5-year warranty.
- In the event shipment is delayed for any reason that is beyond the control of Siemens, the price will be increased by 0.5% per month and if the equipment needs to be kept in storage, a storage fee in the amount of 1.5% of the equipment value will be charged per month.
- The $32,000 estimated delivery charge is not firm and subject to adjustment based on freight charges at time of shipment.
- Progress payments are required including 10% upon order acknowledgement, 25% upon submittal of drawings, 30% upon delivery of switchgear to building manufacturer, 30% upon completion of factory acceptance tests, and 5% upon delivery. The contract documents provide for payment of 90% of the contract price upon delivery with the balance paid after successful commissioning.
- Insurance requirements need to be negotiated.
- A point-to-point spreadsheet is provided rather than the point-to-point drawings required by the specifications.

I spoke with one Siemens reference who had six separate buses with six feeder breakers, main breaker, and bus tie breaker per bus. This switchgear was installed in a utility-constructed building. Siemens provided the breakers and relays fully wired. A good report was provided. This reference did not provide the integration of switchgear with a building and relay panels that the West Shakopee Substation switchgear would require.

Another reference had purchased Siemens switchgear in a manufactured building but the building was manufactured by AZZ and not Harvard Integrations. This project does not provide information on the building manufacturer and equipment integrator that would be used by Siemens for the West Shakopee Substation switchgear. The reference is satisfied with the installation and said Siemens was very responsive.

M&I Electric, LLC / Myers Power Products

The Myers bid (as adjusted) is $281,380 or 18.4% higher than the lowest responsive bid by States Manufacturing. As shown in Table 1, the bid prices entered by M&I Electric on the bid form did not include the cost of a thin brick veneer (estimated at $86,000) which is required in the specifications. The thin brick veneer is needed to meet the City of Shakopee code which does not allow metal exteriors. The M&I Electric bid also did not include off-loading at the site. An allowance of $15,000 for off-loading is included in the adjustment. With M&I Electric not providing off-loading, the risk of off-loading is transferred to the SPU contractor that supplies the service.

The Eaton switchgear equipment would be shipped to Beaumont, Texas where it would be installed in the switchgear building and connected to the relay panels, both fabricated by M&I Electric. The M&I Electric bid indicates the fabrication could occur in Ontario, Canada or North Canton, Ohio depending on shop loadings at the time of contract execution.

The M&I Electric bid had exceptions, including the following significant exceptions:

- The warranty period is for 18 months after shipment or 12 months after commissioning, whichever is first. The specifications require a 5-year warranty.
- The $89,873 estimated delivery charge is not firm and subject to adjustment based on freight charges at time of shipment and any costs to remove overhead obstructions along the delivery route.
- Progress payments are required including 25% upon submittal of drawings, 25% upon release for fabrication, 30% upon manufacturing complete, 15% when ready for factory acceptance tests, and 5% upon delivery. The contract documents provide for payment of 90% of the contract price upon delivery with the balance paid after successful commissioning.
- SPU inspection of equipment at the fabrication location is included but SPU witnessing of factory tests is charged at $2,500 per day.
- On-site battery installation is to be performed by others.

- Any M&I Electric on-site technician must be accompanied by an SPU site safety representative
- Liquidated damages for not meeting the delivery date are not accepted.

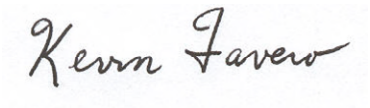
Summary

We recommend that SPU purchase the 15 kV switchgear for West Shakopee Substation from States Manufacturing for a purchase price of $1,533,000 with delivery by 5 days after removal of road restriction in spring 2023. The States Manufacturing bid is the lowest responsive bid, does not have exceptions to the contract documents, and States Manufacturing has performed well on several previous projects.

Let me know if you would like any additional analysis on this matter. Thank you for the opportunity to assist SPU with this assignment.

Sincerely,

Leidos Engineering, LLC



Kevin Favero, P.E.
Senior Project Manager

Shakopee Public Utilities

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To: Greg Drent, General Manager

From: James Keltgen, IT Supervisor

Date: March 17, 2022

Subject: IT Projects Update

The IT Department is currently involved and managing a number of projects and initiatives, the following is a summary of current status:

NISC Conversion – Ongoing, Estimated Completion February 2023

- Project Initiation
  - Feb. 14-16 - Final Proposal Delivered to SPU
  - Feb. 22 - Commission Approval
  - Feb. 23-26 - Final Contracts Delivered to SPU for signature (Purchase Order & Statement of Work)
- IVUE Financials Implementation:
  - March 2022 – Initial set of data delivered to NISC
  - April 2022 – Analysis (business process and data conversion discussions)
  - Mid-October 2022 – Go-Live
- IVUE Service Implementation:
  - June 2022 – Initial set of data
  - Early August 2022 – Analysis (business process and data conversion discussions)
  - Early Feb 2023 – Go-Live (January month-end)

Microsoft 365 Conversion – Substantially Complete

- Jan. 31 - Procure government tenant
- Feb. 14 - Email Migration
- Apr. 15 - Computer Mgmt Enrollment (All)
- Apr. 15 - Teams Implementation
- Training – Ongoing

Fiber Ring – Ongoing, Estimated Completion Summer 2023

- Mar. 31 – Legal agreement w/ Scott County
- Mar. 31 – Inventory of locations
- Early May – Project requirements complete
- Late May – Project plan
- Jun. 1 – Start construction of infrastructure