

414 Nicollet Mall Minneapolis, MN 55401

October 30, 2017

-Via Electronic Filing-

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

RE: PETITION FOR APPROVAL OF AN INTERCONNECTION AGREEMENT WITH FLINT HILLS RESOURCES PINE BEND, LLC DOCKET NO. E002/M-17-____

Dear Mr. Wolf:

Northern States Power Company, doing business as Xcel Energy, submits the attached Petition for approval of an Interconnection Agreement with Flint Hills Resources Pine Bend, LLC (the Customer) to support an approximately 49.9 megawatt combined heat and power system which will be constructed at the Customer's Rosemount, Minnesota refinery and operated in parallel with the Company's electrical system to serve the Customer's on-site electrical energy and steam requirements.

We have electronically filed this document with the Minnesota Public Utilities Commission, and a copy of the Summary of Filing has been served on the parties on the attached service list. Please contact Cyndee Harrington at (612) 330-5953 or <u>cynthia.d.harrington@xcelenergy.com</u> or me at <u>bria.e.shea@xcelenergy.com</u> or (612) 330-6064 if you have any questions regarding this filing.

Sincerely,

/s/

BRIA E. SHEA DIRECTOR, REGULATORY & STRATEGIC ANALYSIS

Enclosures c: Keith Lightfoot, Flint Hills Resources (w/Encls.) Service List

STATE OF MINNESOTA BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Nancy Lange Dan Lipschultz Matthew Schuerger Katie J. Sieben John Tuma Chair Commissioner Commissioner Commissioner

IN THE MATTER OF THE PETITION OF NORTHERN STATES POWER COMPANY FOR APPROVAL OF AN INTERCONNECTION AGREEMENT WITH FLINT HILLS RESOURCES PINE BEND, LLC DOCKET NO. E002/M-17-____

PETITION

INTRODUCTION

Northern States Power Company, doing business as Xcel Energy, respectfully submits this Petition to the Minnesota Public Utilities Commission for approval of a proposed Interconnection Agreement (the Agreement) with Flint Hills Resources Pine Bend, LLC (the Customer) to support an approximately 49.9 megawatt (MW) combined heat and power (CHP) system which will be constructed at the Customer's refinery in Rosemount, Minnesota and operated in parallel with the Company's electrical system to serve the Customer's on-site electrical energy and steam requirements. The Company's estimated cost for building out its network to accommodate this project is estimated at \$700,000, which will be funded by the Customer.

The Agreement is primarily based on the tariffed form of Interconnection Agreement as set forth in Section 10 – Distributed Resources – of the Company's Minnesota Electric Rate Book. The CHP system is less than 80 MWs and the Customer has no intent to export any energy to Xcel Energy, so no PPA is needed between the parties for this project.

I. GENERAL FILING INFORMATION

Pursuant to Minn. R. 7829.1300, subp. 3, the Company provides the following information.

Name, Address, and Telephone Number of Utility Northern States Power Company doing business as: Xcel Energy 414 Nicollet Mall Minneapolis, MN 55401 (612) 330-5500

 B. Name, Address, and Telephone Number of Utility Attorney James Denniston Assistant General Counsel Xcel Energy Services Inc. 414 Nicollet Mall, 401 – 8th Minneapolis, Minnesota 55401 (612) 215-4656

C. Date of Filing

A.

The date of this filing is October 30, 2017.

D. Statute Controlling Schedule for Processing the Filing

This filing is made under Minn. Stat. § 216B.05, sub. 2a (Electric Service Contract). No specific statute imposes a schedule controlling the processing of this filing. Under the Commission's Rules, this Petition falls within the definition of a "miscellaneous" filing under Minn. R. 7829.0100, subp. 11, since no determination of Xcel Energy's general revenue requirement is necessary. However, the Commission has usually set a comment schedule by notice to interested parties for miscellaneous filings and we request the Commission do so here.

E. Utility Employee Responsible for Filing

Bria E. Shea Director, Regulatory and Strategic Analysis Xcel Energy 414 Nicollet Mall, 401 - 7th Minneapolis, MN 55401 (612) 330-6064

II. DESCRIPTION AND PURPOSE OF FILING

The Company seeks approval of an Interconnection Agreement for a CHP System at the Customer's refinery in Rosemount, Minnesota, which is primarily based on Section 10 of our Minnesota Electric Rate Book.

Included in this Petition is the following information about the project:

- Background;
- Overview of the Generation Resources and Project Costs; and
- Interconnection agreement information.

A. Background

Flint Hills Resources Pine Bend, LLC produces a diverse range of fuels, chemicals and other products with manufacturing assets at its refinery in Rosemount, Minnesota which has been in operation since 1955.

In 2015, the Customer approached Xcel Energy to discuss a project to self-generate a portion of their on-site electrical energy requirements and on December 1, 2015, they submitted an application to Xcel Energy indicating their intention to own and operate a CHP system for the sole purpose to supply the refinery with steam and a portion of the refinery's electrical energy requirements. The Customer has also requested a July 2018 commercial in-service date. A copy of pertinent parts of the Customer's application is provided as Exhibits A and C to the Agreement.

Xcel Energy's engagement with the Customer for a mutually accepted design and integration of their electric system, specifically a CHP system, will allow the Customer to accomplish their primary goal of off-setting its electric retail load with owned base load generation.

B. Overview of the Generation Resource and Project Costs

The CHP system will be located at the Customer's refinery in Rosemount, Minnesota and will contain two generators, one steam generator and one gas generator, that will be interconnected to its existing 13.8 kV internal distribution system and have a net operational output not to exceed 49.9 MW.

All power generated by the CHP system will be used exclusively by the Customer on their site and that energy will not be sold or exported beyond its own facility uses or to other parties under any circumstance. Minor modifications will be made to the Customer's existing 13.8 kV internal distribution system to accommodate a new 13.8 kV switchgear lineup and generation, which will also stop the export of excess Customer produced energy across Company owned electric facilities (i.e. protection against "Retail Wheeling").

The Customer indicated in its application that the Rated Output (Prime kW) for their "Gas" generator is 65400 kW and for their "Steam" generator is 13000 kW. Both the stated operating output not to exceed 49.9 MW and Rated Output of 78.4 MW of their CHP system exceed the 10 MW cap outlined in Section 10 of the NSP Minnesota Rate Book Distributed Generation Standard Interconnection Agreement.

Furthermore since the Customer does not intend to export its CHP production energy beyond its own facility uses and is connecting the CHP system to their existing 13.8 kV system the MISO Open Access Transmission, Energy, and Operating Reserve Tariff (MISO OATT), administered by MISO, does not apply. In addition, the Company's cost for building out its network to accommodate this project is estimated at \$700,000 which will be funded by the Customer. Further details about the expected payments from the Customer can be found in Exhibit B of the Agreement and in the provisions in Section V.2 of the Agreement.

C. Interconnection Agreement

If approved by the Commission, the Company will execute the Agreement. This Agreement is primarily based on the standard Distributed Generation Interconnection Agreement as approved in Section 10 of our Minnesota Electric Rate Book. The Company is requesting approval of this Agreement pursuant to Minn. Stat. § 216B.05, subd. 2a, which provides:

"[A] contract for electric service entered into between a public utility and one of its customers, in which the public utility and the customer agree to customer-specific rates, terms, or service conditions not already contained in the approved schedule, tariff or rules of the utility must be filed for approval by the Commission..."

A number of modifications have been made to the Standard Distributed Generation Interconnection Agreement (the Standard DG Interconnection Agreement) to accommodate the Customer and its plan to construct and own a CHP system. The modifications made to the Standard DG Interconnection Agreement reflect the unique nature of the Project and the atypical configuration of the Company's and Customer's electrical systems at the Customer's refinery. We believe these revisions are reasonable from a company perspective and a customer perspective.

Attachment A is a redlined version of the proposed Agreement showing changes made from the Standard DG Interconnection Agreement. A clean version of the Agreement is provided as Attachment B, which will be executed by the parties upon approval by the Commission.

The Company believes the provisions in the Agreement do not raise any safety, reliability or policy interest concerns. The notable redlined changes in the Agreement from the tariffed version of the Interconnection Agreement are as follows:

- New language that allows the Agreement to apply to a system larger than 10 MWs, and identifies the CHP System as having a total operational output not to exceed 49.9 MWs;
- New definition of "Material Modification" that means a change to the design or the physical configuration of the Generation System and/or the Interconnection Customer's related equipment that could be reasonably expected to have, or in fact has, an adverse effect on the safety, reliability, or engineering of Xcel Energy's equipment or operations. This change coincides with other changes to provisions regarding Material Modifications described in Sections V.A.1.b and VIII.G;
- New definition of "Operational Output" added which further explains the operational output of the new CHP System;
- New language in Section V.A.1 has been added and existing language modified to specify responsibilities between the Customer and Xcel Energy for installation and modification costs related to "Dedicated Facilities;"
- The language in Section V.A.2 has been modified regarding payments made or to be made by the Customer to the Company to better align with the Company's work flow process and costs associated with a project of this nature;
- Obligations with regard to the disclosure of confidential information have been modified under Section XII.B of the Agreement due to security concerns at the Customer's refinery. The provisions, which were mutually negotiated between the Company and the Customer, provide for the appropriate handling and disclosing of confidential information to third-parties as well as provisions pertaining to each party providing the other party with adequate and advance notice prior to the disclosure of any confidential information related to the Agreement or to the Project; and

• The Agreement's effective date described in Section VII.A has been amended to be the later of: 1) the date when both of the parties have signed the Agreement; or 2) the date that the Commission issues its written Order approving the Agreement.

The tariffed Interconnection Agreement does not set forth specific wording to be used for the Operating Agreement (Exhibit D to the Interconnection Agreement) or for the Maintenance Agreement (Exhibit E to the Interconnection Agreement). The versions of Exhibits D and E are very similar to what the Company typically has for projects subject to the Section 10 Interconnection Agreement, with the exception of detailing that the Section 10 tariff still applies even though the generation system is over 10 MW, and describing the power factor requirement in Exhibit D, par. 2.0. The Customer currently is and will remain a retail customer of Xcel Energy and as such the Customer's power factor will be calculated by Xcel Energy each month through use of the applicable tariff and rider terms.

III. EFFECT OF CHANGE UPON XCEL ENERGY REVENUE

There will be no effect on Xcel Energy's Revenue from this project.

IV. MISCELLANEOUS INFORMATION

A. Service List

Pursuant to Minn. R. 7829.0700, the Company requests that the following persons be placed on the Commission's official service list for this proceeding:

James R. Denniston	Carl Cronin
Assistant General Counsel	Records Analyst
Xcel Energy	Xcel Energy
414 Nicollet Mall, $401 - 8^{th}$	414 Nicollet Mall, $401 - 7^{\text{th}}$
Minneapolis, MN 55401	Minneapolis, MN 55401
james.r.denniston@xcelenergy.com	regulatory.records@xcelenergy.com

Any information requests in this proceeding should be submitted to Mr. Cronin at the Regulatory Records email address above.

B. Service on Other Parties

Pursuant to Minn. R. 7829.1300, subp. 2 and Minn. Stat. § 216.17, subd. 3, Xcel Energy has electronically filed this document. A summary of the filing has been served on all parties on Xcel Energy's miscellaneous electric service list.

C. Summary of Filing

A one-paragraph summary of the filing accompanies this Petition pursuant to Minnesota Rule 7829.1300, subp. 1.

CONCLUSION

The Company respectfully requests Commission approval of the proposed Interconnection Agreement between Xcel Energy and the Customer for its proposed 49.9 MW CHP system.

Dated: October 30, 2017

Northern States Power Company

STATE OF MINNESOTA BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Nancy Lange Dan Lipschultz Matthew Schuerger Katie J. Sieben John Tuma Chair Commissioner Commissioner Commissioner

IN THE MATTER OF THE PETITION OF NORTHERN STATES POWER COMPANY FOR APPROVAL OF AN INTERCONNECTION AGREEMENT WITH FLINT HILLS RESOURCES PINE BEND, LLC DOCKET NO. E002/M-17-____

PETITION

SUMMARY OF FILING

Please take notice that on October 30, 2017 Northern States Power Company, doing business as Xcel Energy, filed with the Minnesota Public Utilities Commission a Petition for approval of an Interconnection Agreement with Flint Hills Resources Pine Bend, LLC (the Customer) to support an approximately 49.9 megawatt combined heat and power system which will be constructed at the Customer's Rosemount, Minnesota refinery and operated in parallel with the Company's electrical system to serve the Customer's on-site electrical energy and steam requirements.

Redline

APPENDIX E: Interconnection Agreement

State of Minnesota

Proposed Interconnection Agreement

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

This Generating System Interconnection Agreement <u>("Agreement" or "Interconnection Agreement")</u> is entered into by and between Northern States Power Company, a Minnesota corporation d/b/a Xcel Energy ("Xcel Energy") and the Interconnection Customer "Flint Hills Resources Pine Bend, LLC". The Interconnection Customer and Xcel Energy are sometimes also referred to in this Agreement jointly as "Parties" or individually as "Party". Except as otherwise provided for in this Agreement or in the Exhibits D or E to this Agreement, all other provisions of the Section 10 tariff of Xcel Energy shall apply even though the size of the Generation System exceeds 10 MW. For example, the "Technical Requirements" in the tariff generally apply, even though these Technical Requirements state that they cover installations with an aggregated capacity of 10 MW's or less.

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

I. SCOPE AND PURPOSE

- A. Establishment of Point of Common Coupling. This Agreement is intended to provide for the Interconnection Customer to interconnect and operate a Generation System with a total <u>Operational OutputNameplate</u> Capacity of <u>49.9–10</u> MWs or less in parallel with Xcel Energy at the location identified in Exhibit C and shown in the Exhibit A one-line diagram.
- B. This Agreement governs the facilities required to and contains the terms and condition under which the Interconnection Customer may <u>operateinterconnect</u> the Generation System <u>in parallel</u> to Xcel Energy. This Agreement does not authorize the Interconnection Customer to export power or constitute an agreement to purchase or wheel the Interconnection Customer's power. Other services that the Interconnection Customer may require from Xcel Energy, or others, may be covered under separate agreements.
- C. To facilitate the operation of the Generation System, this agreement also allows for the occasional and inadvertent export of energy to Xcel Energy. The amount, metering, billing and accounting of such inadvertent energy exporting shall be governed by Exhibit D (Operating Agreement). This Agreement does not constitute an agreement by Xcel Energy to purchase or pay for any energy, inadvertently or intentionally exported, unless expressly noted in Exhibit D or under a separately executed power purchase agreement (PPA).
- D. This agreement does not constitute a request for, nor the provision of any transmission delivery service or any local distribution delivery service.
- E. The Technical Requirements for interconnection are covered in a separate Technical Requirements document know as, the "State of Minnesota Distributed Generation Interconnection Requirements", a copy of which ashas been made available to the Interconnection Customer and incorporated and made part of this Agreement by this reference.

II. DEFINITIONS

- A. "Area EPS" is an electric power system (EPS) that serves Local EPS's. For the purpose of this agreement, the Xcel Energy system is the Area EPS. Note: Typically, Xcel Energy has primary access to public rightsof-way, priority crossing of property boundaries, etc.
- B. "Area EPS Operator" is the entity that operates the electric power system. For purpose of this agreement, Xcel Energy is the Area EPS Operator.
- C. "Dedicated Facilities" is the equipment that is installed due to the <u>operation</u> of the Generation System and not required to serve other Xcel Energy customers.

- D. "EPS" (Electric Power System) are facilities that deliver electric power to a load. Note: This may include generation units.
- E. "Extended Parallel" means the Generation System is designed to remain connected with Xcel Energy for an extended period of time.
- F. "Generation" is any device producing electrical energy, i.e., rotating generators driven by wind, steam turbines, internal combustion engines, hydraulic turbines, solar, fuel cells, etc.; or any other electric producing device, including energy storage technologies.
- G. "Generation Interconnection Coordinator" is the person or persons designated by Xcel Energy to provide a single point of coordination with the Applicant for the generation interconnection process.
- H. "Generation System" is the interconnected generator(s), controls, relays, switches, breakers, transformers, inverters and associated wiring and cables, up to the Point of Common Coupling.
- I. "Interconnection Customer" is the party or parties who will own/operate the Generation System and are responsible for meeting the requirements of the agreements and Technical Requirements. This could be the Generation System applicant, installer, owner, designer, or operator.
- J. "Local EPS" is an electric power system (EPS) contained entirely within a single premises or group of premises.
- J.K. "Material Modification" means a change to the design or the physical configuration of the Generating System and/or the Interconnection Customer's related equipment that could be reasonably expected to have, or in fact has, an adverse effect on the safety, reliability, or engineering of Xcel Energy's equipment or operations.
- K.L. "Nameplate Capacity" is the total nameplate capacity rating of all the Generation included in the Generation System. For this definition the "standby" and/or maximum rated kW capacity on the nameplate shall be used.

II. **DEFINITIONS (Continued)**

- M. "Operational Output" is the amount of electrical energy produced by the Generation System as measured at the two (2) new production (Ion) meters installed and owned by Xcel Energy, and located near the Interconnection Customers Generation System. The Operational Output will be the sum of the coincidental output values as measured by the two new production meters. The Operational Output cannot exceed 49.9 MWs, which is the value used by Xcel Energy in its system impact study and facilities study.
- L.N. "Point of Common Coupling" is the point where the Local EPS is connected to Xcel Energy
- M.O. "Point of Delivery" is the point where the energy changes possession from one party to the other. Typically this will be where the metering is installed but it is not required that the Point of Delivery is the same as where the energy is metered
- N.P. "Technical Requirements" are the State of Minnesota Requirements for Interconnection of Distributed Generation

III. DESCRIPTION OF INTERCONNECTION CUSTOMER'S GENERATION SYSTEM

A) A description of the Generation System, including a single-line diagram showing the general arrangement of how the Interconnection Customer's Generation System is interconnected with Xcel Energy's distribution system, is attached to and made part of this Agreement as Exhibit A. The single-line diagram shows the following:

- 1) Point of Delivery (if applicable)
- 2) Point of Common Coupling
- 3) Location of Meter(s)
- 4) Ownership of the equipment
- 5) Generation System maximum total Operational Output Nameplate Capacity of 49.9 MW
- 6) Scheduled operational (on-line) date for the Generation System July 19, 2018.

IV. RESPONSIBILITIES OF THE PARTIES

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

IV. RESPONSIBILITIES OF THE PARTIES (Continued)

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

V. CONSTRUCTION

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

A) Charges and payments

The Interconnection Customer is responsible for the actual costs to <u>operateinterconnect</u> the Generation System <u>in parallel</u> with Xcel Energy, including, but not limited to <u>any Dedicated Facilities attributable to the</u> addition of the Generation System, Xcel Energy labor for installation coordination, installation testing and engineering review of the Generation System and interconnection design. <u>The costs for designing</u>, <u>constructing</u>, <u>installing</u>, <u>operating</u>, and <u>maintaining the Dedicated Facilities are addressed in Sub. V.A.1</u> <u>below</u>. Estimates of these costs are outlined in Exhibit B. While estimates, for budgeting purposes, have been provided in Exhibit B, the actual costs are still the responsibility of the Interconnection Customer, even if they exceed the estimated amount(s). All costs, for which the Interconnection Customer is responsible for under this Agreement, must be reasonable under the circumstances of the design and construction.

- 1) Dedicated Facilities
 - a) During the term of this Agreement, Xcel Energy shall design, construct and install the Dedicated Facilities outlined in Exhibit B. The Interconnection Customer shall be responsible for paying the actual <u>purchase and installation</u> costs of the Dedicated Facilities attributable to the addition of the Generation System.
 - b) Once installed, tThe Dedicated Facilities shall be owned and once installed, operated by Xcel Energy, and all costs associated with the operating and maintenance of the Dedicated Facilities,

after the Generation System is operational, shall be the responsibility of Xcel Energy, unless otherwise agreed. _-If Interconnection Customer makes a Material Modification that requires Xcel Energy to install additional Dedicated Facilities not identified in Xcel Energy's original scope, Xcel Energy reserves the right to charge Interconnection Customer all incremental costs associated with the operating and maintenance of the additional Dedicated Facilities.

c) By executing this Agreement, the Interconnection Customer grants permission for Xcel Energy to begin construction and to procure the necessary facilities and equipment to complete the installation of the Dedicated Facilities, as outlined in Exhibit B. If for any reason, the Generation System project is canceled or modified, so that any or all of the Dedicated Facilities are not required, the Interconnection Customer shall be responsible for all costs incurred by Xcel Energy,

V. CONSTRUCTION (Continued)

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

- 2) Payments
 - a) The Interconnection Customer shall provide reasonable adequate assurances of credit, including a letter of credit or personal guaranty of payment and performance from a creditworthy entity acceptable under Xcel Energy credit policy and procedures for the unpaid balance of the estimated amount shown in Exhibit B.
 - b) The payment for the costs outlined in Exhibit B, shall be as follows:
 - i. 1/3-2 of estimated costs, outlined in Exhibit B, shall be due-upon <u>30 calendar days after the</u> <u>effective date execution</u> of this agreement <u>less any amount prepaid under the Statement of</u> <u>Work</u>.
 - ii. 1/3-2 of estimated costs, outlined in Exhibit B, shall be due prior to <u>construction start of Xcel</u> <u>Energy facilitiesinitial energization of the Generation System, with Xcel Energy</u>.
 - iii. <u>Xcel Energy will provide final accounting</u>Remainder of actual costs, incurred by Xcel Energy, to <u>Interconnection Customer within 90 days of actual in service date</u>. <u>shall be due within 30 days</u> from the date the bill is mailed by Xcel Energy after project completion.

VI. DOCUMENTS INCLUDED WITH THIS AGREEMENT

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

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

VII. TERMS AND TERMINATION

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

VII. TERMS AND TERMINATION

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

VIII. OPERATIONAL ISSUES

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

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

VIII. OPERATIONAL ISSUES (Continued)

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

in this paragraph, at least <u>ninetytwenty</u> (<u>9020</u>) business days prior to undertaking such <u>Material</u> <u>M</u>modification(s). <u>Material</u> Modifications to any of the interconnection equipment, including, all interconnection required protective systems, the generation control systems, the transfer switches/breakers, interconnection protection VT's & CT's, and Generation System capacity, shall be included in the notification to Xcel Energy. When reasonably possible the

VIII. OPERATIONAL ISSUES (Continued)

Interconnection Customer agrees not to commence installation of any <u>Material M</u>modifications to the Generating System until Xcel Energy has approved the <u>Material M</u>modification, in writing, which approval shall not be unreasonably withheld. Xcel Energy shall have a minimum of five (5) business days to review and respond to the planned modification. Xcel Energy shall not take longer then a maximum of <u>ninetyten</u> (940) business days, to review and respond to the <u>Material M</u>modification after the receipt of the information required to review the modifications. Upon receipt of the information required to review the modifications. Upon receipt of the information required to review the modification if Xcel Energy determines it will take longer than ninety (90) business days to respond, Xcel Energy shall promptly notify Interconnection Customer of the delay. When it is not reasonably possible for the Interconnection Customer to provide prior written notice, the Interconnection Customer shall provide written notice to Xcel Energy as soon as reasonably possible, after the completion of the modification(s).

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

IX. LIMITATION OF LIABILITY

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

X. DISPUTE RESOLUTION

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

X. DISPUTE RESOLUTION (Continued)

B) In the event a dispute arises under this Agreement, and if it cannot be resolved by the Parties within thirty (30) days after written notice of the dispute to the other Party, the Parties agree to submit the dispute to mediation by a mutually acceptable mediator, in a mutually convenient location in the State of Minnesota.

The Parties agree to participate in good faith in the mediation for a period of 90 days. If the parties are not successful in resolving their disputes through mediation, then the Parties may refer the dispute for resolution to the Minnesota Public Utilities Commission (MPUC), which shall maintain continuing jurisdiction over this Agreement.

XI. INSURANCE

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

XI. INSURANCE (Continued)

- C) If the Generation System is connected to an account receiving residential service from Xcel Energy and its total generating capacity is smaller than 40kW, then the endorsements required in Section XI.B shall not apply.
- D) The Interconnection Customer shall furnish the required insurance certificates and endorsements to Xcel Energy prior to the initial operation of the Generation System. Thereafter, Xcel Energy shall have the right to periodically inspect or obtain a copy of the original policy or policies of insurance
- E) Evidence of the insurance required in Section XI.A. shall state that coverage provided is primary and is not excess to or contributing with any insurance or self-insurance maintained by Xcel Energy.
- F) If the Interconnection Customer is self-insured with an established record of self-insurance, the Interconnection Customer may comply with the following in lieu of Section XI.A E:
 - Interconnection Customer shall provide to Xcel Energy, at least thirty (30) days prior to the date of initial operation, evidence of an acceptable plan to self-insure to a level of coverage equivalent to that required under section XI.A.
 - 2) If Interconnection Customer ceases to self-insure to the level required hereunder, or if the Interconnection Customer is unable to provide continuing evidence of it's ability to self-insure, the Interconnection Customer agrees to immediately obtain the coverage required under Section XI.A.

- G) Failure of the Interconnection Customer or Xcel Energy to enforce the minimum levels of insurance does not relieve the Interconnection Customer from maintaining such levels of insurance or relieve the Interconnection Customer of any liability.
- H) All insurance certificates, statements of self-insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued and submitted to the Generation Interconnection Coordinator assigned.

XII. MISCELLANEOUS

A) FORCE MAJEURE

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

XII. MISCELLANEOUS (Continued)

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

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

B) NOTICES

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

a) Generation Interconnection Coordinator assigned <u>Northern States Power Company</u> with a copy to: <u>Attn: Manager, Transmission Business Relations</u> <u>414 Nicollet Mall, 414-06</u> <u>Minneapolis, MN 55401</u>

Xcel Energy General Counsel 414 Nicollet Mall Minneapolis, Minnesota 55447

b) If to Interconnection Customer: <u>Flint Hills Resources</u> with a copy to: <u>Attn: Exec. VP Operations</u> <u>4111 East 37th Street North</u> <u>Wichita, Kansas 67220</u>

<u>Flint Hills Resources</u> <u>General Counsel</u> <u>4111 East 37th Street North</u> Wichita, Kansas 67220

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

C) ASSIGNMENT

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

D) NON-WAIVER

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

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

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

F) AMENDMENT AND MODIFICATION

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

G) ENTIRE AGREEMENT

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

A) ENTIRE AGREEMENT (Continued)

or understandings, whether verbal or written. It is expressly acknowledged that the Parties may have other agreements covering other services not expressly provided for herein, which agreements are unaffected by this Agreement. Each party also represents that in entering into this Agreement, it has not relied on the promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the incorporated attachments, exhibits and appendices. Notwithstanding this paragraph, if the Interconnection Agreement is in connection with a Solar*Rewards Community application, then the provisions in the Section 9 tariff applicable to the Solar*Rewards Community Program also apply.

H) CONFIDENTIAL INFORMATION

Except as otherwise agreed or provided herein, each Party shall hold in confidence and shall not disclose <u>the other Party's</u> confidential information, to any person (except employees, officers, <u>affiliates</u>, representatives and agents <u>of the receiving Party</u>, who agree to be bound by <u>obligations at least as broad as</u> <u>the obligations in</u> this section). Confidential information shall be clearly marked as such on each page or

otherwise affirmatively identified. <u>No information in any document filed with the Minnesota Public Utilities</u> <u>Commission may be considered to be confidential information, unless it meets one of the requirements of</u> <u>being "security information", "trade secret information", or "nonpublic data" as set forth in Minn. Stat. § 13.02</u> <u>or § 13.37.</u> 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. <u>The</u> <u>obligations in this section will not apply to:</u>

- Information which at the time of disclosure by a Party (the "Disclosing Party") is publicly available, or information which later becomes publicly available through no act or omission of the recipient (the "Receiving Party") or its Representatives;
- 2) Information which the Receiving Party can demonstrate was in its possession (on a non-confidential basis) prior to disclosure hereunder by the Disclosing Party;
- 3) Information received by the Receiving Party from a third party who, to the best of the Receiving Party's knowledge, did not acquire such information on a confidential basis either directly or indirectly from the Disclosing Party; and
- 1)4) Information which Receiving Party can demonstrate was independently developed by it or for it without direct or indirect use of the information for which the Receiving Party has obligations hereunder.

Notwithstanding the above, in the event that Xcel Energy receives a request for information or documents from the Minnesota Public Utilities Commission, Minnesota Department of Commerce, of the Minnesota Office of Attorney General, Xcel Energy will notify Interconnection Customer (as provided for above) and may respond in full and provide documents or information to any of these entities even if these documents are marked as being confidential. Where applicable, Xcel Energy will follow then existing practice to mark as non-public such information and documents when producing this to these governmental entities.

NON-WARRANTY

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

J) NO PARTNERSHIP

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

XIII. SIGNATURES

IN WITNESS WHEREOF, the Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives. This Agreement is effective as of the last date set forth below, later of: 1) the date when both the Interconnection Customer and Xcel Energy have signed this Agreement, and 2) the date that the Minnesota Public Utilities Commission issues a written order approving this Agreement.

Interconnection Customer

Ву:	 	 	
Name:	 	 	

Title: _____

Date: _____

Xcel Energy

Ву: _____

Name: _____

Title: _____

Date: _____

EXHIBIT A

GENERATION SYSTEM DESCRIPTION AND SINGLE-LINE DIAGRAM



EXHIBIT B

INTERCONNECTION AGREEMENT ESTIMATED INSTALLATION AND TESTING COSTS

Interconnection Customer is installing a combined heat and power (CHP) system to supply their on-site equipment with steam and power. The CHP system will consist of a gas combustion turbine and a steam turbine with a maximum combined Operational Output of 49.9 Megawatts.

As part of the CHP installation project, Interconnection Customer will be adding two new 13.8kV switchgear lineups; Bus 13 and Bus 14. Bus 13 and Bus 14 will be inserted between Bus 11 and Bus 12 in the existing four position ring bus, thus creating a six position ring bus. Interconnection Customer's generation will be connected to a CHP Bus which will connect to Bus 13 and Bus 14.

Interconnection Customer will be transferring the 13.8kV feeds for transformers TR21 and TR22 from Xcel Energy's 13.8kV buses to positions in their 13.8kV switchgear.

<u>Xcel Energy's scope of this project is to modify the relaying and controls to accommodate the addition of</u> <u>Interconnection Customer's new 13.8kV switchgear lineups and generation. The equipment associated with the Xcel</u> <u>Energy owned 13.8kV sources to TR 21 and TR 22 will be removed. Costs to make the necessary modifications by</u> <u>Xcel Energy and funded by Interconnection Customer are estimated at \$700,000 + 20 percent in 2017 dollars.</u>

Table 1: Modifications by Xcel Energy (Interconnection Customer Funded)

Type	Description	Cost
Substation	Modify certain Xcel Energy controls and relaying.	<u>\$502,210</u>
Testing/Commissioning	LTC controls and relaying.	<u>\$52,959</u>
Removal	Equipment associated with the Xcel Energy owned 13.8kV sources to TR 21 and TR 22.	<u>\$116,252</u>
Transmission		<u>\$0</u>
Permitting/Project Management		<u>\$6,161</u>
Administrative & General		<u>\$22,418</u>
	TOTAL COST	<u>\$700,000</u>

Table 2: Interconnection Customer Payments to Xcel Energy

	Due Date	Amount
Milestone #1	30 calendar days after the Effective date of Interconnection Agreement	\$350,000 (less any amount prepaid under thea Statement of Work)
Milestone #2	Prior to construction start of Xcel Energy facilities	<u>\$350,000</u>
Final Cost True-up Following Project completion	6 months after project completion. Estimated date is November 1, 2018.	To Be Determined

EXHIBIT C

APPENDIX B: Generation Interconnection Application Form

GENERATOR						
Manufacturer: Kato Engineering					Mod	el:-
Type (Synchronous Induction, Inverter, et	C): Sync	hronous			Phases: 1 or 3 3 phase	
Rated Output (Prime kW): 13000	(Stan	dby kW):-			Freq	uency: 60 Hz
Rated Power Factor (%): 90%	Rate	d Voltage (Volts):	Voltage (Volts): 14,200 V			ed Current (Amperes):622
Energy Source (gas, steam, hydro, wind, e	Energy Source (gas, steam, hydro, wind, etc.) Steam					
TYPE OF INTERCONNECTED OPERATION	1					
Interconnection / Transfer method:		Closed] Sot	ft Loading	[Inverter
Proposed use of generation: (Check all that may apply) Duration Parallel: Peak Reduction Standby Energy Sales Cover Load Continuous Continuous					Limited	
Pre-Certified System Yes (No) (Circle o				Y	Exporting Energy Yes / No (Circle one)	
ESTIMATED LOAD INFORMATION						
The following information will be used Information is not intended as a commitm			_		onne	ction. This
Minimum anticipated load (generation not	opera	ting):	kW	: 85,000		kVA: 90,000
Maximum anticipated load (generation not operating): kW:		132,000		kVA: 142,000		
ESTIMATED START/COMPLETION DATES	;	_	•			
Construction start date: March 2017		Completion (op	erati	ional) date:	Ma	y 2018
DESCRIPTION OF PROPOSED INSTALLA		ND OPERATION				
Attach a single line diagram showing the switchgear, transformers, and generation facilities. Give a general description of the manner of operation of the generation (cogeneration, closed-transition peak shaving, open-transition peak shaving, emergency power, etc.). Also, does the Applicant intend to sell power and energy or ancillary services and/or wheel power over Xcel Energy facilities? If there is an intent to sell power and energy, also define the tenest mediat						
define the target market.	de pumper to	sunde functionale on elle a - formation	turn of	en end name The eve	day an ar	deland payment output from CHD support
The applicant intends to operate a combined heat and power (CHP) system, for the sole purpose to supply Applicants on-site equipment with steam and power. The maximum combined power output from CHP system, which						
contains two generators, will be 49.9 MW. The generator(s) output will be interconnected to Applicants 13.8 kV internal distribution system, as shown on the attached one line diagram.						
All power generated by the CHP system will be use	d by the Appli	cant on-site. CHP system power will	not be so	aid to other Parties, und	er any circu	unstances.

APPENDIX B: Generation Interconnection Application Form (Continued)

GENERATOR						
Manufacturer: Brush					Mod	el: LM6000
Type (Synchronous Induction, Inverter, et	tc):Synch	hronous			Phases: 1 or 33 phase	
Rated Output (Prime kW): 65400	(Stan	ndby kW):			Freq	uency: 60 Hz
Rated Power Factor (%): 90	Rated	d Voltage (Volts): 14200			Rate	d Current (Amperes): 3219
Energy Source (gas, steam, hydro, wind, etc.) Gas						
TYPE OF INTERCONNECTED OPERATION	N					
Interconnection / Transfer method:						
Proposed use of generation: (Check all that may apply) Duration Parallel: Peak Reduction Standby Energy Sales Cover Load Continuous					Limited	
Pre-Certified System Yes /(No) (Circle o				1	Exporting Energy es /No (Circle one)	
ESTIMATED LOAD INFORMATION				-		
The following information will be used Information is not intended as a commitm			_		onne	ction. This
Minimum anticipated load (generation not	t operat	ting):	kW	: 85,000		kVA: 90,000
Maximum anticipated load (generation no	Maximum anticipated load (generation not operating): kW:		132,000		kVA: 142,000	
ESTIMATED START/COMPLETION DATES	s		-			
Construction start date: March 2017		Completion (op	erati	ional) date:	Ma	y 2018
DESCRIPTION OF PROPOSED INSTALLA	TION A	ND OPERATION				
Attach a single line diagram showing the switchgear, transformers, and generation facilities. Give a general description of the manner of operation of the generation (cogeneration, closed-transition peak shaving, open-transition peak shaving, emergency power, etc.). Also, does the Applicant intend to sell power and energy or ancillary services and/or wheel power over Xcel Energy facilities? If there is an intent to sell power and energy, also define the target market.						
contains two generators, will be 40.9 MW. The generator(s) output will be interconnected to Applicants 13.8 kV internal distribution system, as shown on the attached one line diagram.						
All power generated by the CHP system will be use	ed by the Applic	cent on-site. CHP system power will	not be so	aid to other Parties, unde	er any circu	implances.

Exhibit D Operating Agreement

Developer/Customer: <u>Flint Hills Resources Pine Bend, LLC</u> Service Address: <u>Flint Hills Resources LP 12415 Courthouse Blvd. Rosemount, MN</u> <u>55068-2619</u>

Generator Operational Output: <u>49.9 MW</u>

This Exhibit D – Operating Agreement (Exhibit D), is an Exhibit to the Generation System Interconnection Agreement between the Parties and provides the specific operating information and requirements for, and facilitates the operation of, the Generation System. The Interconnection Customer must operate the Generation System in accordance with the Technical Requirements, this Exhibit D as well as all provisions of Section 10 of the Xcel Energy Minnesota tariff even though the Section 10 tariff does not otherwise apply to distributed generation systems above 10 MW. Unless otherwise defined in this Exhibit D, capitalized terms herein shall have the meaning provided such terms in the Generation System Interconnection Agreement.

Nothing in this Exhibit D is intended to or shall be construed as limiting Xcel Energy's rights under the Xcel Energy Minnesota tariff. In the event of a conflict between this Operating Agreement and any law, regulation and/or the Xcel Energy Minnesota tariff, the law regulation or Xcel Energy Minnesota tariff shall control, and the conflicting Operating Agreement provision shall have no effect, provided however that the provisions of the Xcel Energy Minnesota tariff shall apply even though the size of the Generation System exceeds 10 MW. In the event of such a conflict, the remaining terms of this Operating Agreement shall remain in effect.

The Parties may, upon written agreement of the Parties, amend this Exhibit D. In addition, upon written agreement of the Parties, this Operating Agreement may be reviewed and updated periodically, to allow the operation of the Generation System to change to meet the needs of both Xcel Energy and Interconnection Customer, provided that change does not negatively affect the other Party. In addition, the Parties may agree to amend this Operating Agreement to reflect operating changes required by regulatory authorities having jurisdiction over the matters governed by this Exhibit D, such as changes required by the Minnesota Public Utility Commission, the Federal Energy Regulatory Commission or the Midcontinent Independent System Operator. It is also specifically recognized by the Parties that during and after testing of the Generation System more information will be learned which may necessitate amending this current Exhibit D, and the Parties will work cooperatively in entering into any such amendment or replacement Exhibit D so as to address issues relating to safety, reliability, accuracy of information, and timely communication of information.

This Exhibit D sets forth the technical terms pursuant to which Interconnection Customer may operate its Generation System in parallel with the Xcel Energy system. This Exhibit D does not provide for the amount, billing and accounting for the export of energy from the Generation System, nor does it constitute Xcel Energy's agreement to purchase or pay for any such energy. Any such arrangements will be provided for in a separate written agreement, but there is an expectation between the Parties that there will be very little, if any, export of such energy. Accordingly, the Parties anticipate that any such export of energy to the Xcel Energy system will be freely given without charge or cost to Xcel Energy and that no such separate written agreement will be put in place.

Unless otherwise noted, capitalized terms shall have the meaning set forth in the Generating System Interconnection Agreement.

1.0 Definitions

- **1.1.** "Engineering Study" means the Engineering Study Xcel Energy performed as part of the Interconnection Process conducted pursuant to its Distributed Generation Standard Interconnection and Power Purchase Tariff, Minnesota Electric Rate Book MPUC No. 2, Section 10.
- **1.2.** "Xcel Energy Control Center Contact" is as defined in Section 8.2.
- **1.3.** "Interconnection Customer Control Center Contact" is as defined in Section 8.2.
- **1.4.** Unless specifically defined otherwise, all measurements and performance requirements will be measured at the point of common coupling.
- **2.0 Power Factor Requirements.** Interconnection Customer is a retail customer of Xcel Energy and as such the Interconnection Customer's power factor will be calculated by Xcel Energy each month through use of the applicable tariff and rider terms (for example, A-15 and Standby Rider), which are set forth in Xcel Energy's Minnesota Electric Rate Book (current and future).
 - **2.1.** Normal operation:
 - **2.1.1.** In the future, system reconfigurations, capacity constraints, or other external factors may require that the Generation System be served from another system and/or may also require that the Generation System change power factors, within the range described in Section 2.0, in order to prevent voltage rise. Xcel Energy shall provide reasonable advance notice to Interconnection Customer pursuant to Section XII (B) of the Generating System Interconnection Agreement in order to coordinate the implementation of such changes. Section 2.1.1 does not apply when the Generation System is separated from the Xcel Energy system for islanded operation.
 - **2.2.** Contingency operation:
 - **2.2.1.** Temporary system conditions, such as overvoltage, may require Xcel Energy's Control Center Contact, in accordance with good utility practice and avoiding, to the extent reasonably possible, a reduction in the Generation System output (in the sole discretion of Xcel Energy), to direct the Interconnection Customer's Control Center Contact to disconnect or partially curtail the output of the Generation System. In some cases, and in its sole discretion, Xcel Energy may permit Interconnection Customer to partially operate or fully restore operation by temporarily applying different power factor settings. Section

2.2.1 does not apply when the Generation System is separated from the Xcel Energy system for islanded operation.

3.0 Start-Up, Shut-Down, and Ramp Rates

3.1. Interconnection Customer shall have the ability to limit the up-ramp or skew rate of the Generation System. Xcel Energy reserves the right to specify a ramp rate after testing.

4.0 Local and Remote Control

- **4.1.** The Interconnection Customer shall ensure that at all times operators are available that could isolate the Generation System from Xcel Energy's systems if called upon by Xcel Energy Control Center in case of an emergency. If there is an emergency described in Section 4.1.1 or 4.1.2 below and Xcel Energy Control Center is unable to communicate with the Interconnection Customer's Control Center, Xcel Energy may open the upstream Xcel Energy supply breakers. Where reasonably possible Xcel Energy shall use commercially reasonable efforts to reconnect the Generation System in a timely manner.
 - **4.1.1.** Electric or Generator System emergency
 - **4.1.2.** Public emergency
 - **4.1.3.** Planned switching with prior coordination between Interconnection Customer and Xcel Energy.
 - **4.1.4.** Interconnection Customer's failure to promptly respond to and execute on Xcel Energy's request to curtail the output of, or disconnect, the Generation System.
- **4.2.** Local or Remote Close
 - **4.2.1.** If the Generation System has caused an outage on Xcel Energy's System, Interconnection Customer shall contact Xcel Energy's Control Center Contact and, consistent with Section 5 below, verify that the Xcel Energy System is in a normal operating configuration and Xcel Energy's Control Center Contact confirms that conditions exist such that Generator System can be paralleled with Xcel Energy's system prior to the Interconnection Customer synchronizing and connecting the Generator System with Xcel Energy's system.

5.0 Outages of Xcel Energy's Electric System

- **5.1.** Upon the occurrence of an emergency outage(s) to Xcel Energy's system, Interconnection Customer shall do the following:
 - **5.1.1.** Obtain permission from the Xcel Energy Control Center Contact to synchronize the Generation System with the Xcel Energy's system.

- **5.2.** Xcel Energy shall use commercially reasonable efforts to promptly restore the Generation System to service, consistent with good utility practice.
- **6.0 Interference.** If the Generation System causes radio, television or electrical service interference to other customers, via the electric power system or interference with the operation of Xcel Energy, the Interconnection Customer shall disconnect the Generation System. The Interconnection Customer shall either effect repairs to the Generation System or reimburse Xcel Energy for the cost of any required Xcel Energy modifications due to the interference.

7.0 Electric System Modification:

- **7.1.** At its sole discretion Xcel Energy may modify its electric system. Xcel Energy shall provide written notice to Interconnection Customer explaining the plans and schedule for any modifications to its electric system that may impact operation or protection of Generation System. Xcel Energy shall provide such notice as soon as reasonably practicable prior to the time Xcel Energy intends to begin to modify its electric distribution system. Xcel Energy shall utilize good utility practice to minimize any curtailment of energy for the Generation System. Interconnection Customer shall inform Xcel Energy of any planned Material Modifications to their generating system.
- **7.2.** Xcel Energy shall include the Generation System in its substation and feeder additions planning and system reconfigurations and make all necessary and required accommodations to Interconnection Customer to insure that the Generation System retains its capability to operate per the Engineering Study, subject to the provisions of paragraph 7.1 above. Interconnection Customer shall provide generator modeling information to Xcel Energy that meets the NERC MOD Standards upon request.
- **7.3.** The Generation System must be designed and interconnected such that the reliability and the service quality for all customers of the electrical power system are not compromised. The Interconnection Customer is responsible for all costs associated with the installation, operation, and maintenance of the Generation System. The Interconnection Customer shall be responsible for any expenses, which may be incurred by Xcel Energy as a result of any changes or modifications of the Interconnection Customer's Generation System.

8.0 Contingency Configurations

8.1. During contingency operations, if the Interconnection Customer is unable to use power factor control to mitigate voltage or power quality issues created by the Generation System, whether the voltage or power quality issues are due to steady state voltage rise or in the event of voltage regulation issues due to reverse power flow, at the direction of Xcel Energy's Control Center Contact the Interconnection Customer shall disconnect the Generation System if, in Xcel Energy's sole discretion, it believes disconnection would facilitate maintaining compliance with acceptable voltage limits.

- **8.2.** During contingency operations, if the Generation System creates loading, overloading or protection issues, at the direction of Xcel Energy's Control Center Contact the Interconnection Customer shall disconnect the Generation System if, in Xcel Energy's sole discretion, it believes disconnection is consistent with good utility practice.
- **8.3.** If the Generation System is taken offline during contingency operations, Xcel Energy's Control Center Contact may, in its sole discretion, direct the Interconnection Customer's Control Center Contact to keep the Generation System offline or operate it on a limited basis.
- **8.4.** If the Generation System ground referencing equipment is disconnected, when the Generation System is in parallel operation with Xcel Energy's system, the Generation System shall be automatically disconnected. Section 8.4 does not apply when the Generation System is separated from the Xcel Energy system for islanded operation.

9.0 Control Center Contacts

- **9.1.** Each Party shall contact each other's Control Center Contact for all operational issues related to the Generation System. In order to permit Xcel Energy and Interconnection Customer to take immediate action, Interconnection Customer and Xcel Energy shall at all times provide to each other the contact information of each other's Control Center Contact, who shall be available twenty-four (24) hours a day, seven (7) days a week and be able to take action with respect to the operation of the Generation System and the Electric System, respectively.
- **9.2.** The contact information for the Xcel Energy Control Center contact that is available to Interconnection Customer twenty (24) hours a day, seven (7) days a week is: <u>Transmission Control Center: (612) 321-7433</u>
- **9.3.** The contact information for Interconnection Customer's Control Center contact that is available to Xcel Energy twenty (24) hours a day, seven (7) days a week is:

FHR Communication Center: (651) 437-0676 FHR Refinery Shift Managers: (651) 437-0662

9.4. Each Party shall keep the other informed of their Control Center contact information. Notice of changes to Control Center contact information shall be provided immediately pursuant to Section XII B of the Generating System Interconnection Agreement.

10.0 Right of Access.

10.1. At all times, Xcel Energy shall have access to the Interconnection Customer's switchgear main breakers to verify that they are open during periods of maintenance, planned outage or emergency outage (recognizing that such breakers are located within an operational facility, the time and manners of entrances will be coordinated with the Interconnecting Customer).

10.2. At all times, the Interconnection Customer shall give Xcel Energy access to Xcel Energy's equipment and facilities located on the Interconnection Customer's premises when necessary for Xcel Energy to: perform its obligations under the Generating System Interconnection Agreement (including this Operating Agreement); meet its obligation to operate the Xcel Energy system safely and reliably; to comply with law or regulation; or, provide service to its customers (recognizing that such breakers are located within an operational facility, the time and manners of entrances will be coordinated with the Interconnecting Customer)..

11.0 Metering.

- **11.1.** Two (2) new Ion meters, located adjacent to Interconnection Customers generator plant, are required by Xcel Energy to meter generator net power output to the new Bus 13 and Bus 14. Interconnection Customer shall provide each individual Ion meter with a connection to collect output data from billing class CTs and PTs installed to collect net generator output to the Interconnection Customers Bus 13 and Bus 14. Interconnection Customers shall also provide a 120v power supply to each Xcel Energy Ion meter location for power during generator system outages.
- **11.2.** Xcel Energy shall install, own and maintain the new Ion meters which shall be paid for by the Interconnection Customer.
- **11.3.** Interconnection Customer shall install, own and maintain single-mode fiber optic cable from Xcel Energy's new Ion meters to Xcel Energy's Electric Equipment Enclosure ("EEE") which shall be paid for by the Interconnection Customer.
- **11.4.** The Interconnection Customer shall test the Bus 13 and Bus 14 net generator power production meter billing class CTs and PTs in accordance with best practices in the industry to maintain accurate CT and PT output data to the two (2) Xcel Energy Ion meters.

12.0 Control Cable

12.1 Xcel Energy will install new control cables between Xcel Energy's EEE and Interconnection Customers switchgear building. Cables will be used for control and relaying interfaces between Interconnection Customer and Xcel Energy. Interconnection Customer shall own, maintain and be responsible for all costs associated with new control cables.

13.0 Fault Current.

13.1 The addition of Interconnection Customer generation will increase the available fault current at the Koch Refinery substation. The most significant increases will be seen on 13.8kV Bus 13 and Bus 14. Interconnection Customer is installing Current Limiting Protectors (CLiPs) EE4766 and EE4767 to limit the fault current contributions from the generators. If the CLiPs are not functional due to loss of control power, failure, maintenance or any other reason, Interconnection Customer shall open the tie breaker (EE4762TBKR) associated with the CLiPs.

13.2 The fault currents seen on Xcel Energy's 13.8kV Buses 13 and 14 exceed the limits of Xcel Energy's protective grounds. Interconnection Customer will be required to rack out and hold their Bus 13 (EE4760MBKR) or Bus 14 (EE4761MBKR) switchgear main breaker and open the corresponding Generation System tie breaker (EE4762TBKR) to reduce the available fault current when either of these buses needs to be grounded.

SIGNATURES

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

Interconnection Customer

By:		
Name:		
Title:		
Date:		
Xcel Eı	nergy	
By:		_
		_

Date:

Exhibit E Maintenance Agreement

Developer/Customer: <u>Flint Hills Resources Pine Bend, LLC</u> Service Address: <u>Flint Hills Resources LP 12415 Courthouse Blvd. Rosemount, MN</u> <u>55068-2619</u>

Generator Operational Output: <u>49.9 MW</u>

Each Generation System interconnection will be unique and will require a unique Maintenance Agreement. It is intended that this Maintenance Agreement Exhibit will be reviewed and updated periodically, to allow the maintenance of the Generation System be allowed to change to meet the needs of both Xcel Energy and the Interconnection Customer, provided that change does not negatively affect the other Party. There may also be changes required by outside issues; such has changes in FERC and MISO requirements and/or policies that will require this agreement to be modified.

1.0 Routine Maintenance Requirements –

- **1.1.** Interconnection Customer shall maintain the system in good working order.
- **1.2.** Interconnection Customer shall perform maintenance in accordance with manufacturer recommendations and intervals.

2.0 Generation Metering, Monitoring, and Control; O&M Costs; Capital Costs

- **2.1.** The Interconnection customer is financially responsible for the communications channel to Xcel Energy's Control Center for metering and control requirements. The communication channel shall comply with Xcel Energy requirements and standards. For the remote terminal unit (RTU) and communication channel provided by Xcel Energy, the Interconnection Customer shall be responsible for operating and maintenance costs, and replacement of any failed parts or materials.
- **2.2.** Interconnection Customer shall be responsible for costs associated with emergency repairs, scheduled repairs, or replacement of parts for the telemetry system.
- **2.3.** Interconnection Customer shall be responsible for replacement costs for advanced metering equipment, such as the two new NSPM owned ION meters.

3.0 Modifications to the Generation System -

- **3.1.** The Interconnection Customer shall notify Xcel Energy, in writing of plans for any Material Modifications to the Generation System interconnection equipment, including all information needed by Xcel Energy as part of the review described in this section, at least ninety (90) business days prior to undertaking such modification.
- **3.2.** Material Modifications to the generator or any of the interconnection equipment, including all interconnection required protective systems, the generation control systems, the transfer switches/breakers, VT's & CT's, generating capacity and associated wiring shall be included in the notification to Xcel Energy.
- **3.3.** The Interconnection Customer agrees not to commence installation of any Material Modifications to the Generating System until Xcel Energy has approved the Material Modification, in writing, which approval shall not be unreasonably withheld.
- **3.4.** Xcel Energy shall have a maximum of ninety (90) business days, to review and respond to the Material Modification, after the receipt of the information required to review the modifications. Upon receipt of the information required to review the modification if Xcel Energy determines it will take longer than ninety (90) business days to respond, Xcel Energy shall promptly notify Interconnection Customer of the delay.

4.0 Special Facilities

- **4.1.** If the Interconnection Customer makes a request for any facilities not identified in the Xcel Energy annual reliability assessment Xcel Energy will study the request to ensure no adverse effect on the system reliability, operational integrity, or schedule of required work. The Interconnection Customer shall be responsible for the cost associated with the study which will be initiated upon execution of the study agreement.
- **4.2.** The Interconnection Customer shall be responsible for Installation, Operating, Maintenance and Replacement costs of any special facilities installed by Xcel Energy.

SIGNATURES

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

Interconnection Customer

В	y:
Ν	ame:
T	itle:
D	ate:
Xcel Ene	ergy
В	y:
Ν	ame:
T	itle:
	ate:

Clean

Interconnection Agreement

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

This Generating System Interconnection Agreement ("Agreement" or "Interconnection Agreement") is entered into by and between Northern States Power Company, a Minnesota corporation d/b/a Xcel Energy ("Xcel Energy") and the Interconnection Customer "Flint Hills Resources Pine Bend, LLC". The Interconnection Customer and Xcel Energy are sometimes also referred to in this Agreement jointly as "Parties" or individually as "Party". Except as otherwise provided for in this Agreement or in the Exhibits D or E to this Agreement, all other provisions of the Section 10 tariff of Xcel Energy shall apply even though the size of the Generation System exceeds 10 MW. For example, the "Technical Requirements" in the tariff generally apply, even though these Technical Requirements state that they cover installations with an aggregated capacity of 10 MW's or less.

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

I. SCOPE AND PURPOSE

- A. Establishment of Point of Common Coupling. This Agreement is intended to provide for the Interconnection Customer to interconnect and operate a Generation System with a total Operational Output of 49.9 MWs or less in parallel with Xcel Energy at the location identified in Exhibit C and shown in the Exhibit A one-line diagram.
- B. This Agreement governs the facilities required to and contains the terms and condition under which the Interconnection Customer may operate the Generation System in parallel to Xcel Energy. This Agreement does not authorize the Interconnection Customer to export power or constitute an agreement to purchase or wheel the Interconnection Customer's power. Other services that the Interconnection Customer may require from Xcel Energy, or others, may be covered under separate agreements.
- C. To facilitate the operation of the Generation System, this agreement also allows for the occasional and inadvertent export of energy to Xcel Energy. The amount, metering, billing and accounting of such inadvertent energy exporting shall be governed by Exhibit D (Operating Agreement). This Agreement does not constitute an agreement by Xcel Energy to purchase or pay for any energy, inadvertently or intentionally exported, unless expressly noted in Exhibit D or under a separately executed power purchase agreement (PPA).
- D. This agreement does not constitute a request for, nor the provision of any transmission delivery service or any local distribution delivery service.
- E. The Technical Requirements for interconnection are covered in a separate Technical Requirements document know as, the "State of Minnesota Distributed Generation Interconnection Requirements", a copy of which has been made available to the Interconnection Customer and incorporated and made part of this Agreement by this reference.

II. DEFINITIONS

- A. "Area EPS" is an electric power system (EPS) that serves Local EPS's. For the purpose of this agreement, the Xcel Energy system is the Area EPS. Note: Typically, Xcel Energy has primary access to public rights-of-way, priority crossing of property boundaries, etc.
- B. "Area EPS Operator" is the entity that operates the electric power system. For purpose of this agreement, Xcel Energy is the Area EPS Operator.
- C. "Dedicated Facilities" is the equipment that is installed due to the operation of the Generation System and not required to serve other Xcel Energy customers.
- D. "EPS" (Electric Power System) are facilities that deliver electric power to a load. Note: This may include generation units.

- E. "Extended Parallel" means the Generation System is designed to remain connected with Xcel Energy for an extended period of time.
- F. "Generation" is any device producing electrical energy, i.e., rotating generators driven by wind, steam turbines, internal combustion engines, hydraulic turbines, solar, fuel cells, etc.; or any other electric producing device, including energy storage technologies.
- G. "Generation Interconnection Coordinator" is the person or persons designated by Xcel Energy to provide a single point of coordination with the Applicant for the generation interconnection process.
- H. "Generation System" is the interconnected generator(s), controls, relays, switches, breakers, transformers, inverters and associated wiring and cables, up to the Point of Common Coupling.
- I. "Interconnection Customer" is the party or parties who will own/operate the Generation System and are responsible for meeting the requirements of the agreements and Technical Requirements. This could be the Generation System applicant, installer, owner, designer, or operator.
- J. "Local EPS" is an electric power system (EPS) contained entirely within a single premises or group of premises.
- K. "Material Modification" means a change to the design or the physical configuration of the Generating System and/or the Interconnection Customer's related equipment that could be reasonably expected to have, or in fact has, an adverse effect on the safety, reliability, or engineering of Xcel Energy's equipment or operations.
- L. "Nameplate Capacity" is the total nameplate capacity rating of all the Generation included in the Generation System. For this definition the "standby" and/or maximum rated kW capacity on the nameplate shall be used.
- M. "Operational Output" is the amount of electrical energy produced by the Generation System as measured at the two (2) new production (Ion) meters installed and owned by Xcel Energy, and located near the Interconnection Customers Generation System. The Operational Output will be the sum of the coincidental output values as measured by the two new production meters. The Operational Output cannot exceed 49.9 MWs, which is the value used by Xcel Energy in its system impact study and facilities study.
- N. "Point of Common Coupling" is the point where the Local EPS is connected to Xcel Energy
- O. "Point of Delivery" is the point where the energy changes possession from one party to the other. Typically this will be where the metering is installed but it is not required that the Point of Delivery is the same as where the energy is metered
- P. "Technical Requirements" are the State of Minnesota Requirements for Interconnection of Distributed Generation

III. DESCRIPTION OF INTERCONNECTION CUSTOMER'S GENERATION SYSTEM

- A) A description of the Generation System, including a single-line diagram showing the general arrangement of how the Interconnection Customer's Generation System is interconnected with Xcel Energy's distribution system, is attached to and made part of this Agreement as Exhibit A. The single-line diagram shows the following:
 - 1) Point of Delivery (if applicable)
 - 2) Point of Common Coupling
 - 3) Location of Meter(s)

- 4) Ownership of the equipment
- 5) Generation System maximum total Operational Output of 49.9 MW
- 6) Scheduled operational (on-line) date for the Generation System July 19, 2018.

IV. RESPONSIBILITIES OF THE PARTIES

- A) The Parties shall perform all obligations of this Agreement in accordance with all applicable laws and regulations, operating requirements and good utility practices.
- B) Interconnection Customer shall construct, operate and maintain the Generation System in accordance with the applicable manufacture's recommended maintenance schedule, the Technical Requirements and in accordance with this Agreement.
- C) Xcel Energy shall carry out the construction of the Dedicated Facilities in a good and workmanlike manner, and in accordance with standard design and engineering practices.

V. CONSTRUCTION

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

A) Charges and payments

The Interconnection Customer is responsible for the actual costs to operate the Generation System in parallel with Xcel Energy, including, but not limited to Xcel Energy labor for installation coordination, installation testing and engineering review of the Generation System and interconnection design. The costs for designing, constructing, installing, operating, and maintaining the Dedicated Facilities are addressed in Sub. V.A.1 below. Estimates of these costs are outlined in Exhibit B. While estimates, for budgeting purposes, have been provided in Exhibit B, the actual costs are still the responsibility of the Interconnection Customer, even if they exceed the estimated amount(s). All costs, for which the Interconnection Customer is responsible for under this Agreement, must be reasonable under the circumstances of the design and construction.

- 1) Dedicated Facilities
 - a) During the term of this Agreement, Xcel Energy shall design, construct and install the Dedicated Facilities outlined in Exhibit B. The Interconnection Customer shall be responsible for paying the actual purchase and installation costs of the Dedicated Facilities attributable to the addition of the Generation System.
 - b) The Dedicated Facilities shall be owned and once installed, operated by Xcel Energy, and all costs associated with the operating and maintenance of the Dedicated Facilities shall be the responsibility of Xcel Energy. If Interconnection Customer makes a Material Modification that requires Xcel Energy to install additional Dedicated Facilities not identified in Xcel Energy's original scope, Xcel Energy reserves the right to charge Interconnection Customer all incremental costs associated with the operating and maintenance of the additional Dedicated Facilities.
 - c) By executing this Agreement, the Interconnection Customer grants permission for Xcel Energy to begin construction and to procure the necessary facilities and equipment to complete the installation of the Dedicated Facilities, as outlined in Exhibit B. If for any reason, the Generation System project is canceled or modified, so that any or all of the Dedicated Facilities are not

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

- 2) Payments
 - a) The Interconnection Customer shall provide reasonable adequate assurances of credit, including a letter of credit or guaranty of payment and performance from a creditworthy entity acceptable under Xcel Energy credit policy and procedures for the unpaid balance of the estimated amount shown in Exhibit B.
 - b) The payment for the costs outlined in Exhibit B, shall be as follows:
 - i. 1/2 of estimated costs, outlined in Exhibit B, shall be due 30 calendar days after the effective date of this agreement less any amount prepaid under the Statement of Work.
 - ii. 1/2 of estimated costs, outlined in Exhibit B, shall be due prior to construction start of Xcel Energy facilities.
 - iii. Xcel Energy will provide final accounting of actual costs, incurred by Xcel Energy, to Interconnection Customer within 90 days of actual in service date.

VI. DOCUMENTS INCLUDED WITH THIS AGREEMENT

- A) This agreement includes the following exhibits, which are specifically incorporated herein and made part of this Agreement by this reference: (if any of these Exhibits are deemed not applicable for this Generation System installation, they may be omitted from the final Agreement by Xcel Energy.)
 - <u>Exhibit A</u> Description of Generation System and single-line diagram. This diagram shows all major equipment, including, visual isolation equipment, Point of Common Coupling, Point of Delivery for Generation Systems that intentionally export, ownership of equipment and the location of metering.
 - 2) <u>Exhibit B</u> Estimated installation and testing costs payable by the Interconnection Customer. Included in this listing shall be the description and estimated costs for the required Dedicated Facilities being installed by Xcel Energy for the interconnection of the Generation System and a description and estimate for the final acceptance testing work to be done by Xcel Energy.
 - Exhibit C Engineering Data Submittal A standard form that provides the engineering and operating information about the Generation System.
 - Exhibit D Operating Agreement This provides specific operating information and requirements for this Generation System interconnection. This Exhibit has a separate signature section and may be modified, in writing, from time to time with the agreement of both parties.
 - 5) <u>Exhibit E</u> Maintenance Agreement This provides specific maintenance requirements for this Generation System interconnection. This Exhibit has a separate signature section and may be modified, in writing, from time to time with the agreement of both parties.

VII. TERMS AND TERMINATION

- A) This Agreement shall become effective as of the later of; 1) the date when both the Interconnection Customer and Xcel Energy have both signed this Agreement, or 2) the date that the Minnesota Public Utilities Commission issues a written order approving this Agreement. The Agreement shall continue in full force and effect until the earliest date that one of the following events occurs:
 - 1) The Parties agree in writing to terminate the Agreement; or
 - 2) The Interconnection Customer may terminate this agreement at any time, by written notice to Xcel Energy, prior to the completion of the final acceptance testing of the Generation System by Xcel Energy. Once the Generation System is operational, then VII.A.3 applies. Upon receipt of a cancellation notice, Xcel Energy shall take reasonable steps to minimize additional costs to the Interconnection Customer, where reasonably possible.
 - Once the Generation System is operational, the Interconnection Customer may terminate this agreement after 30 days written notice to Xcel Energy, unless otherwise agreed to within the Exhibit D, Operating Agreement; or
 - 4) Xcel Energy may terminate this agreement after 30 days written notice to the Interconnection Customer if:
 - a) The Interconnection Customer fails to interconnect and operate the Generation System per the terms of this Agreement; or
 - b) The Interconnection Customer fails to take all corrective actions specified in Xcel Energy's written notice that the Generation System is out of compliance with the terms of this Agreement, within the time frame set forth in such notice, or
 - c) If the Interconnection Customer fails to complete Xcel Energy's final acceptance testing of the generation system within 24 months of the date proposed under section III.A.6.
- B) Upon termination of this Agreement the Generation System shall be disconnected from Xcel Energy. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing, at the time of the termination.

VIII. OPERATIONAL ISSUES

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

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

- C) <u>Electric Service Supplied</u>: Xcel Energy will supply the electrical requirements of the Interconnection Customer's Local EPS that are not supplied by the Generation System. Such electric service shall be supplied, to the Interconnection Customer's Local EPS, under the rate schedules applicable to the Interconnection Customer's class of service as revised from time to time by Xcel Energy.
- D) <u>Operation and Maintenance</u>: The Generation System shall be operated and maintained, by the Interconnection Customer in accordance with the Technical Standards and any additional requirements of Exhibit D and Exhibit E, attached to this document, as amended, in writing, from time to time.
- E) <u>Cooperation and Coordination</u>: Both Xcel Energy and the Interconnection Customer shall communicate and coordinate their operations, so that the normal operation of the electric power system does not unduly effect or interfere with the normal operation of the Generation System and the Generation System does not unduly effect or interfere with the normal operation of the electric power system. Under abnormal operations of either the Generation System or the Xcel Energy system, the responsible Party shall provide reasonably timely communication to the other Party to allow mitigation of any potentially negative effects of the abnormal operation of their system.
- F) Disconnection of Unit: Xcel Energy may disconnect the Generation System as reasonably necessary, for termination of this Agreement; non-compliance with this Agreement; system emergency, imminent danger to the public or Xcel Energy personnel; routine maintenance, repairs and modifications to the electric power system. When reasonably possible, Xcel Energy shall provide prior notice to the Interconnection Customer explaining the reason for the disconnection. If prior notice is not reasonably possible, Xcel Energy shall after the fact, provide information to the Interconnection Customer as to why the disconnection was required. It is agreed that Xcel Energy shall have no liability for any loss of sales or other damages, including all consequential damages for the loss of business opportunity, profits or other losses, regardless of whether such damages were foreseeable, for the disconnection of the Generation System in a timely manner and to work towards mitigating damages and losses to the Interconnection Customer where reasonably possible.
- G) <u>Modifications to the Generation System</u>: The Interconnection Customer shall notify Xcel Energy, in writing, of plans for any Material Modifications to the Generation System interconnection equipment, including all information needed by Xcel Energy as part of the review described in this paragraph, at least ninety (90) business days prior to undertaking such Material Modification(s). Material Modifications to any of the interconnection equipment, including, all interconnection required protective systems, the generation control systems, the transfer switches/breakers, interconnection protection VT's & CT's, and Generation System capacity, shall be included in the notification to Xcel Energy.

Interconnection Customer agrees not to commence installation of any Material Modifications to the Generating System until Xcel Energy has approved the Material Modification, in writing, which approval shall not be unreasonably withheld. Xcel Energy shall not take longer then a maximum of ninety (90) business days, to review and respond to the Material Modification after the receipt of the information required to review the modifications. Upon receipt of the information required to review the modification if Xcel Energy determines it will take longer than ninety (90) business days to respond, Xcel Energy shall promptly notify Interconnection Customer of the delay.

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

IX. LIMITATION OF LIABILITY

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

X. DISPUTE RESOLUTION

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

XI. INSURANCE

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

insurance carrier for the payment of premium for such insurance. The Interconnection Customer will provide at least thirty (30) calendar days' written notice to Xcel Energy prior to cancellation, termination, alteration, or material change of such insurance.

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

XII. MISCELLANEOUS

A) FORCE MAJEURE

- 1) An event of Force Majeure means any act of God, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. An event of Force Majeure does not include an act of negligence or intentional wrongdoing. Neither Party will be considered in default as to any obligation hereunder if such Party is prevented from fulfilling the obligation due to an event of Force Majeure. However, a Party whose performance under this Agreement is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations hereunder.
- 2) Neither Party will be considered in default of any obligation hereunder if such Party is prevented from fulfilling the obligation due to an event of Force Majeure. However, a Party whose performance under this Agreement is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations hereunder.

B) NOTICES

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

Northern States Power Company	with a copy to:	Xcel Energy
Attn: Manager, Transmission Business Rela	ations	General Counsel
414 Nicollet Mall, 414-06		414 Nicollet Mall
Minneapolis, MN 55401		Minneapolis, Minnesota 55447

b) If to Interconnection Customer:

Flint Hills Resources	with a copy to:	Flint Hills Resources
Attn: Exec. VP Operations		General Counsel
4111 East 37 th Street North		4111 East 37 th Street North
Wichita, Kansas 67220		Wichita, Kansas 67220

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

C) ASSIGNMENT

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

D) NON-WAIVER

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

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

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

F) AMENDMENT AND MODIFICATION

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

G) ENTIRE AGREEMENT

This Agreement, including all attachments, exhibits, and appendices, constitutes the entire Agreement between the Parties with regard to the interconnection of the Generation System of the Parties at the Point(s) of Common Coupling expressly provided for in this Agreement and supersedes all prior agreements or understandings, whether verbal or written. It is expressly acknowledged that the Parties may have other agreements covering other services not expressly provided for herein, which agreements are unaffected by this Agreement. Each party also represents that in entering into this Agreement, it has not relied on the promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the incorporated attachments, exhibits and appendices. Notwithstanding this paragraph, if the Interconnection Agreement is in connection with a Solar*Rewards Community application, then the provisions in the Section 9 tariff applicable to the Solar*Rewards Community Program also apply.

H) CONFIDENTIAL INFORMATION

Except as otherwise agreed or provided herein, each Party shall hold in confidence and shall not disclose the other Party's confidential information, to any person (except employees, officers, affiliates, representatives and agents of the receiving Party, who agree to be bound by obligations at least as broad as the obligations in this section). Confidential information shall be clearly marked as such on each page or otherwise affirmatively identified. No information in any document filed with the Minnesota Public Utilities Commission may be considered to be confidential information, unless it meets one of the requirements of being "security information", "trade secret information", or "nonpublic data" as set forth in Minn. Stat. § 13.02 or § 13.37. 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. The obligations in this section will not apply to:

- Information which at the time of disclosure by a Party (the "Disclosing Party") is publicly available, or information which later becomes publicly available through no act or omission of the recipient (the "Receiving Party") or its Representatives;
- 2) Information which the Receiving Party can demonstrate was in its possession (on a non-confidential basis) prior to disclosure hereunder by the Disclosing Party;
- Information received by the Receiving Party from a third party who, to the best of the Receiving Party's knowledge, did not acquire such information on a confidential basis either directly or indirectly from the Disclosing Party; and
- 4) Information which Receiving Party can demonstrate was independently developed by it or for it without direct or indirect use of the information for which the Receiving Party has obligations hereunder.

Notwithstanding the above, in the event that Xcel Energy receives a request for information or documents from the Minnesota Public Utilities Commission, Minnesota Department of Commerce, of the Minnesota Office of Attorney General, Xcel Energy will notify Interconnection Customer (as provided for above) and may respond in full and provide documents or information to any of these entities even if these documents are marked as being confidential. Where applicable, Xcel Energy will follow then existing practice to mark as non-public such information and documents when producing this to these governmental entities.

I) NON-WARRANTY

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

J) NO PARTNERSHIP

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

XIII. SIGNATURES

IN WITNESS WHEREOF, the Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives. This Agreement is effective as of the later of: 1) the date when both the Interconnection Customer and Xcel Energy have signed this Agreement, and 2) the date that the Minnesota Public Utilities Commission issues a written order approving this Agreement.

Interconnection Customer

Title:

Xcel Energy

By:			
-			

Name: _____

Title: _____

Date: _____

EXHIBIT A

GENERATION SYSTEM DESCRIPTION AND SINGLE-LINE DIAGRAM Docket No. E002/M-17-Initial Filing: October 30, 2017 Attachment B - Page 14 of 28



EXHIBIT B

INTERCONNECTION AGREEMENT ESTIMATED INSTALLATION AND TESTING COSTS

Interconnection Customer is installing a combined heat and power (CHP) system to supply their on-site equipment with steam and power. The CHP system will consist of a gas combustion turbine and a steam turbine with a maximum combined Operational Output of 49.9 Megawatts.

As part of the CHP installation project, Interconnection Customer will be adding two new 13.8kV switchgear lineups; Bus 13 and Bus 14. Bus 13 and Bus 14 will be inserted between Bus 11 and Bus 12 in the existing four position ring bus, thus creating a six position ring bus. Interconnection Customer's generation will be connected to a CHP Bus which will connect to Bus 13 and Bus 14.

Interconnection Customer will be transferring the 13.8kV feeds for transformers TR21 and TR22 from Xcel Energy's 13.8kV buses to positions in their 13.8kV switchgear.

Xcel Energy's scope of this project is to modify the relaying and controls to accommodate the addition of Interconnection Customer's new 13.8kV switchgear lineups and generation. The equipment associated with the Xcel Energy owned 13.8kV sources to TR 21 and TR 22 will be removed. Costs to make the necessary modifications by Xcel Energy and funded by Interconnection Customer are estimated at \$700,000 ± 20 percent in 2017 dollars.

Table 1: Modifications by Xcel Energy (Interconnection Custo	mer Funded)
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Туре	Description	Cost
Substation	Modify certain Xcel Energy controls and relaying.	\$502,210
Testing/Commissioning	LTC controls and relaying.	\$52,959
Removal	Equipment associated with the Xcel Energy owned 13.8kV sources to TR 21 and TR 22.	\$116,252
Transmission		\$0
Permitting/Project Management		\$6,161
Administrative & General		\$22,418
	TOTAL COST	\$700,000

Table 2: Interconnection Customer Payments to Xcel Energy

	Due Date	Amount
Milestone #1	30 calendar days after the Effective date of Interconnection Agreement	\$350,000 (less any amount prepaid under the Statement of Work)
Milestone #2	Prior to construction start of Xcel Energy facilities	\$350,000
Final Cost True-up Following Project completion	6 months after project completion. Estimated date is November 1, 2018.	To Be Determined

EXHIBIT C

APPENDIX B: Generation Interconnection Application Form

GENERATOR						
Manufacturer: Kato Engineering				Model: -		
Type (Synchronous Induction, Inverter, etc): Synchronous				Phases: 1 or 33 phase		
Rated Output (Prime kW): 13000	(Stan	dby kW):-			Frequency: 60 Hz	
Rated Power Factor (%): 90%	Rate	d Voltage (Volts):	14,200	v	Rate	d Current (Amperes):622
Energy Source (gas, steam, hydro, wind, e	^{etc.)} S	team				
TYPE OF INTERCONNECTED OPERATION	1					
Interconnection / Transfer method:		Closed] Soft	t Loading		Inverter
Proposed use of generation: (Check all the Peak Reduction Standby Energy			bad	Duration None Contin		Limited
Pre-Certified System Exporting Energy Yes /No (Circle one) Yes / No (Circle one)						
ESTIMATED LOAD INFORMATION			Ī			
The following information will be used Information is not intended as a commitm					onne	ction. This
Minimum anticipated load (generation not	opera	ting):		85,000		kVA: 90,000
Maximum anticipated load (generation not	Maximum anticipated load (generation not operating): kW: 132,000 kVA: 142,000					kVA: 142,000
ESTIMATED START/COMPLETION DATES	;		•			
Construction start date: March 2017		Completion (op	eratio	onal) date:	Ма	y 2018
DESCRIPTION OF PROPOSED INSTALLATION AND OPERATION						
Attach a single line diagram showing the switchgear, transformers, and generation facilities. Give a general description of the manner of operation of the generation (cogeneration, closed-transition peak shaving, open-transition peak shaving, emergency power, etc.). Also, does the Applicant intend to sell power and energy or						
ancillary services and/or wheel power over Xcel Energy facilities? If there is an intent to sell power and energy, also						
define the target market.						
The applicant intends to operate a combined heat and power (CHP) system, for the sole purpose to supply Applicants on-site equipment with steam and power. The maximum combined power output from CHP system, which						
contains two generators, will be 49.9 MW. The generator(s) output will be interconnected to Applicants 13.8 kV internal distribution system, as shown on the attached one line diagram.						
All power generated by the CHP system will be used by the Applicant on-site. CHP system power will not be sold to other Parties, under any circumstances.						

APPENDIX B: Generation Interconnection Application Form (Continued)

GENERATOR						
Manufacturer: Brush				Model: LM6000		
Type (Synchronous Induction, Inverter, et	c): Sync	hronous			Pha	ses: 1 or 33 phase
Rated Output (Prime kW): 65400	(Stan	dby kW):			Free	luency: 60 Hz
Rated Power Factor (%): 90	Rate	d Voltage (Volts):	1420	0	Rate	d Current (Amperes):3219
Energy Source (gas, steam, hydro, wind, e	etc.) (Gas				
TYPE OF INTERCONNECTED OPERATION	1					
Interconnection / Transfer method:		Closed] Sof	ft Loading		Inverter
Proposed use of generation: (Check all th			ad	Duration I None Contin		Limited
Pre-Certified System Yes (No) (Circle one)				Exporting Energy Yes (No) (Circle one)		
ESTIMATED LOAD INFORMATION				•		
The following information will be used Information is not intended as a commitm			_		onne	ction. This
Minimum anticipated load (generation not	opera	ting):	kW	: 85,000		kVA: 90,000
Maximum anticipated load (generation no	t opera	nting):	kW	132,000		kVA: 142,000
ESTIMATED START/COMPLETION DATES	;	_	-			
Construction start date: March 2017		Completion (op	erati	ional) date:	Ma	y 2018
DESCRIPTION OF PROPOSED INSTALLATION AND OPERATION						
Attach a single line diagram showing the switchgear, transformers, and generation facilities. Give a general description of the manner of operation of the generation (cogeneration, closed-transition peak shaving, open-						
transition peak shaving, emergency power, etc.). Also, does the Applicant intend to sell power and energy or ancillary services and/or wheel power over Xcel Energy facilities? If there is an intent to sell power and energy, also						
define the target market.						
The applicant intends to operate a combined heat and power (CHP) system, for the sole purpose to supply Applicants on-site equipment with steam and power. The maximum combined power output from CHP system, which						
contains two generators, will be 49.9 MW. The generator(s) cutput will be interconnected to Applicants 13.8 kV internal distribution system, as shown on the attached one line degram.						
All power generated by the CHP system will be used by the Applicant on-site. CHP system power will not be sold to other Parties, under any circumstances.						

Exhibit D Operating Agreement

Developer/Customer: <u>Flint Hills Resources Pine Bend, LLC</u> Service Address: <u>Flint Hills Resources LP 12415 Courthouse Blvd. Rosemount, MN</u> <u>55068-2619</u>

Generator Operational Output: <u>49.9 MW</u>

This Exhibit D – Operating Agreement (Exhibit D), is an Exhibit to the Generation System Interconnection Agreement between the Parties and provides the specific operating information and requirements for, and facilitates the operation of, the Generation System. The Interconnection Customer must operate the Generation System in accordance with the Technical Requirements, this Exhibit D as well as all provisions of Section 10 of the Xcel Energy Minnesota tariff even though the Section 10 tariff does not otherwise apply to distributed generation systems above 10 MW. Unless otherwise defined in this Exhibit D, capitalized terms herein shall have the meaning provided such terms in the Generation System Interconnection Agreement.

Nothing in this Exhibit D is intended to or shall be construed as limiting Xcel Energy's rights under the Xcel Energy Minnesota tariff. In the event of a conflict between this Operating Agreement and any law, regulation and/or the Xcel Energy Minnesota tariff, the law regulation or Xcel Energy Minnesota tariff shall control, and the conflicting Operating Agreement provision shall have no effect, provided however that the provisions of the Xcel Energy Minnesota tariff shall apply even though the size of the Generation System exceeds 10 MW. In the event of such a conflict, the remaining terms of this Operating Agreement shall remain in effect.

The Parties may, upon written agreement of the Parties, amend this Exhibit D. In addition, upon written agreement of the Parties, this Operating Agreement may be reviewed and updated periodically, to allow the operation of the Generation System to change to meet the needs of both Xcel Energy and Interconnection Customer, provided that change does not negatively affect the other Party. In addition, the Parties may agree to amend this Operating Agreement to reflect operating changes required by regulatory authorities having jurisdiction over the matters governed by this Exhibit D, such as changes required by the Minnesota Public Utility Commission, the Federal Energy Regulatory Commission or the Midcontinent Independent System Operator. It is also specifically recognized by the Parties that during and after testing of the Generation System more information will be learned which may necessitate amending this current Exhibit D, and the Parties will work cooperatively in entering into any such amendment or replacement Exhibit D so as to address issues relating to safety, reliability, accuracy of information, and timely communication of information.

This Exhibit D sets forth the technical terms pursuant to which Interconnection Customer may operate its Generation System in parallel with the Xcel Energy system. This Exhibit D does not provide for the amount, billing and accounting for the export of energy from the Generation System, nor does it constitute Xcel Energy's agreement to purchase or pay for any such energy. Any such arrangements will be provided for in a separate written agreement, but there is an expectation between the Parties that there will be very little, if any, export of such energy. Accordingly, the Parties anticipate that any such export of energy to the Xcel Energy system will be freely given without charge or cost to Xcel Energy and that no such separate written agreement will be put in place.

Unless otherwise noted, capitalized terms shall have the meaning set forth in the Generating System Interconnection Agreement.

1.0 Definitions

- **1.1.** "Engineering Study" means the Engineering Study Xcel Energy performed as part of the Interconnection Process conducted pursuant to its Distributed Generation Standard Interconnection and Power Purchase Tariff, Minnesota Electric Rate Book MPUC No. 2, Section 10.
- **1.2.** "Xcel Energy Control Center Contact" is as defined in Section 8.2.
- **1.3.** "Interconnection Customer Control Center Contact" is as defined in Section 8.2.
- **1.4.** Unless specifically defined otherwise, all measurements and performance requirements will be measured at the point of common coupling.
- **2.0 Power Factor Requirements.** Interconnection Customer is a retail customer of Xcel Energy and as such the Interconnection Customer's power factor will be calculated by Xcel Energy each month through use of the applicable tariff and rider terms (for example, A-15 and Standby Rider), which are set forth in Xcel Energy's Minnesota Electric Rate Book (current and future).
 - **2.1.** Normal operation:
 - **2.1.1.** In the future, system reconfigurations, capacity constraints, or other external factors may require that the Generation System be served from another system and/or may also require that the Generation System change power factors, within the range described in Section 2.0, in order to prevent voltage rise. Xcel Energy shall provide reasonable advance notice to Interconnection Customer pursuant to Section XII (B) of the Generating System Interconnection Agreement in order to coordinate the implementation of such changes. Section 2.1.1 does not apply when the Generation System is separated from the Xcel Energy system for islanded operation.
 - **2.2.** Contingency operation:
 - **2.2.1.** Temporary system conditions, such as overvoltage, may require Xcel Energy's Control Center Contact, in accordance with good utility practice and avoiding, to the extent reasonably possible, a reduction in the Generation System output (in the sole discretion of Xcel Energy), to direct the Interconnection Customer's Control Center Contact to disconnect or partially curtail the output of the Generation System. In some cases, and in its sole discretion, Xcel Energy may permit Interconnection Customer to partially operate or fully restore operation by temporarily applying different power factor settings. Section

2.2.1 does not apply when the Generation System is separated from the Xcel Energy system for islanded operation.

3.0 Start-Up, Shut-Down, and Ramp Rates

3.1. Interconnection Customer shall have the ability to limit the up-ramp or skew rate of the Generation System. Xcel Energy reserves the right to specify a ramp rate after testing.

4.0 Local and Remote Control

- **4.1.** The Interconnection Customer shall ensure that at all times operators are available that could isolate the Generation System from Xcel Energy's systems if called upon by Xcel Energy Control Center in case of an emergency. If there is an emergency described in Section 4.1.1 or 4.1.2 below and Xcel Energy Control Center is unable to communicate with the Interconnection Customer's Control Center, Xcel Energy may open the upstream Xcel Energy supply breakers. Where reasonably possible Xcel Energy shall use commercially reasonable efforts to reconnect the Generation System in a timely manner.
 - **4.1.1.** Electric or Generator System emergency
 - **4.1.2.** Public emergency
 - **4.1.3.** Planned switching with prior coordination between Interconnection Customer and Xcel Energy.
 - **4.1.4.** Interconnection Customer's failure to promptly respond to and execute on Xcel Energy's request to curtail the output of, or disconnect, the Generation System.
- **4.2.** Local or Remote Close
 - **4.2.1.** If the Generation System has caused an outage on Xcel Energy's System, Interconnection Customer shall contact Xcel Energy's Control Center Contact and, consistent with Section 5 below, verify that the Xcel Energy System is in a normal operating configuration and Xcel Energy's Control Center Contact confirms that conditions exist such that Generator System can be paralleled with Xcel Energy's system prior to the Interconnection Customer synchronizing and connecting the Generator System with Xcel Energy's system.

5.0 Outages of Xcel Energy's Electric System

- **5.1.** Upon the occurrence of an emergency outage(s) to Xcel Energy's system, Interconnection Customer shall do the following:
 - **5.1.1.** Obtain permission from the Xcel Energy Control Center Contact to synchronize the Generation System with the Xcel Energy's system.

- **5.2.** Xcel Energy shall use commercially reasonable efforts to promptly restore the Generation System to service, consistent with good utility practice.
- **6.0 Interference.** If the Generation System causes radio, television or electrical service interference to other customers, via the electric power system or interference with the operation of Xcel Energy, the Interconnection Customer shall disconnect the Generation System. The Interconnection Customer shall either effect repairs to the Generation System or reimburse Xcel Energy for the cost of any required Xcel Energy modifications due to the interference.

7.0 Electric System Modification:

- **7.1.** At its sole discretion Xcel Energy may modify its electric system. Xcel Energy shall provide written notice to Interconnection Customer explaining the plans and schedule for any modifications to its electric system that may impact operation or protection of Generation System. Xcel Energy shall provide such notice as soon as reasonably practicable prior to the time Xcel Energy intends to begin to modify its electric distribution system. Xcel Energy shall utilize good utility practice to minimize any curtailment of energy for the Generation System. Interconnection Customer shall inform Xcel Energy of any planned Material Modifications to their generating system.
- **7.2.** Xcel Energy shall include the Generation System in its substation and feeder additions planning and system reconfigurations and make all necessary and required accommodations to Interconnection Customer to insure that the Generation System retains its capability to operate per the Engineering Study, subject to the provisions of paragraph 7.1 above. Interconnection Customer shall provide generator modeling information to Xcel Energy that meets the NERC MOD Standards upon request.
- **7.3.** The Generation System must be designed and interconnected such that the reliability and the service quality for all customers of the electrical power system are not compromised. The Interconnection Customer is responsible for all costs associated with the installation, operation, and maintenance of the Generation System. The Interconnection Customer shall be responsible for any expenses, which may be incurred by Xcel Energy as a result of any changes or modifications of the Interconnection Customer's Generation System.

8.0 Contingency Configurations

8.1. During contingency operations, if the Interconnection Customer is unable to use power factor control to mitigate voltage or power quality issues created by the Generation System, whether the voltage or power quality issues are due to steady state voltage rise or in the event of voltage regulation issues due to reverse power flow, at the direction of Xcel Energy's Control Center Contact the Interconnection Customer shall disconnect the Generation System if, in Xcel Energy's sole discretion, it believes disconnection would facilitate maintaining compliance with acceptable voltage limits.

- **8.2.** During contingency operations, if the Generation System creates loading, overloading or protection issues, at the direction of Xcel Energy's Control Center Contact the Interconnection Customer shall disconnect the Generation System if, in Xcel Energy's sole discretion, it believes disconnection is consistent with good utility practice.
- **8.3.** If the Generation System is taken offline during contingency operations, Xcel Energy's Control Center Contact may, in its sole discretion, direct the Interconnection Customer's Control Center Contact to keep the Generation System offline or operate it on a limited basis.
- **8.4.** If the Generation System ground referencing equipment is disconnected, when the Generation System is in parallel operation with Xcel Energy's system, the Generation System shall be automatically disconnected. Section 8.4 does not apply when the Generation System is separated from the Xcel Energy system for islanded operation.

9.0 Control Center Contacts

- **9.1.** Each Party shall contact each other's Control Center Contact for all operational issues related to the Generation System. In order to permit Xcel Energy and Interconnection Customer to take immediate action, Interconnection Customer and Xcel Energy shall at all times provide to each other the contact information of each other's Control Center Contact, who shall be available twenty-four (24) hours a day, seven (7) days a week and be able to take action with respect to the operation of the Generation System and the Electric System, respectively.
- **9.2.** The contact information for the Xcel Energy Control Center contact that is available to Interconnection Customer twenty (24) hours a day, seven (7) days a week is: <u>Transmission Control Center: (612) 321-7433</u>
- **9.3.** The contact information for Interconnection Customer's Control Center contact that is available to Xcel Energy twenty (24) hours a day, seven (7) days a week is:

FHR Communication Center: (651) 437-0676 FHR Refinery Shift Managers: (651) 437-0662

9.4. Each Party shall keep the other informed of their Control Center contact information. Notice of changes to Control Center contact information shall be provided immediately pursuant to Section XII B of the Generating System Interconnection Agreement.

10.0 Right of Access.

10.1. At all times, Xcel Energy shall have access to the Interconnection Customer's switchgear main breakers to verify that they are open during periods of maintenance, planned outage or emergency outage (recognizing that such breakers are located within an operational facility, the time and manners of entrances will be coordinated with the Interconnecting Customer).

10.2. At all times, the Interconnection Customer shall give Xcel Energy access to Xcel Energy's equipment and facilities located on the Interconnection Customer's premises when necessary for Xcel Energy to: perform its obligations under the Generating System Interconnection Agreement (including this Operating Agreement); meet its obligation to operate the Xcel Energy system safely and reliably; to comply with law or regulation; or, provide service to its customers (recognizing that such breakers are located within an operational facility, the time and manners of entrances will be coordinated with the Interconnecting Customer)..

11.0 Metering.

- **11.1.** Two (2) new Ion meters, located adjacent to Interconnection Customers generator plant, are required by Xcel Energy to meter generator net power output to the new Bus 13 and Bus 14. Interconnection Customer shall provide each individual Ion meter with a connection to collect output data from billing class CTs and PTs installed to collect net generator output to the Interconnection Customers Bus 13 and Bus 14. Interconnection Customers shall also provide a 120v power supply to each Xcel Energy Ion meter location for power during generator system outages.
- **11.2.** Xcel Energy shall install, own and maintain the new Ion meters which shall be paid for by the Interconnection Customer.
- **11.3.** Interconnection Customer shall install, own and maintain single-mode fiber optic cable from Xcel Energy's new Ion meters to Xcel Energy's Electric Equipment Enclosure ("EEE") which shall be paid for by the Interconnection Customer.
- **11.4.** The Interconnection Customer shall test the Bus 13 and Bus 14 net generator power production meter billing class CTs and PTs in accordance with best practices in the industry to maintain accurate CT and PT output data to the two (2) Xcel Energy Ion meters.

12.0 Control Cable

12.1 Xcel Energy will install new control cables between Xcel Energy's EEE and Interconnection Customers switchgear building. Cables will be used for control and relaying interfaces between Interconnection Customer and Xcel Energy. Interconnection Customer shall own, maintain and be responsible for all costs associated with new control cables.

13.0 Fault Current.

13.1 The addition of Interconnection Customer generation will increase the available fault current at the Koch Refinery substation. The most significant increases will be seen on 13.8kV Bus 13 and Bus 14. Interconnection Customer is installing Current Limiting Protectors (CLiPs) EE4766 and EE4767 to limit the fault current contributions from the generators. If the CLiPs are not functional due to loss of control power, failure, maintenance or any other reason, Interconnection Customer shall open the tie breaker (EE4762TBKR) associated with the CLiPs.

13.2 The fault currents seen on Xcel Energy's 13.8kV Buses 13 and 14 exceed the limits of Xcel Energy's protective grounds. Interconnection Customer will be required to rack out and hold their Bus 13 (EE4760MBKR) or Bus 14 (EE4761MBKR) switchgear main breaker and open the corresponding Generation System tie breaker (EE4762TBKR) to reduce the available fault current when either of these buses needs to be grounded.

SIGNATURES

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

Interconnection Customer

By:		
Name:		
Title:		
Date:		
Xcel Eı	nergy	
By:		_
		_

Date:

Exhibit E Maintenance Agreement

Developer/Customer: <u>Flint Hills Resources Pine Bend, LLC</u> Service Address: <u>Flint Hills Resources LP 12415 Courthouse Blvd. Rosemount, MN</u> <u>55068-2619</u>

Generator Operational Output: <u>49.9 MW</u>

Each Generation System interconnection will be unique and will require a unique Maintenance Agreement. It is intended that this Maintenance Agreement Exhibit will be reviewed and updated periodically, to allow the maintenance of the Generation System be allowed to change to meet the needs of both Xcel Energy and the Interconnection Customer, provided that change does not negatively affect the other Party. There may also be changes required by outside issues; such has changes in FERC and MISO requirements and/or policies that will require this agreement to be modified.

1.0 Routine Maintenance Requirements –

- **1.1.** Interconnection Customer shall maintain the system in good working order.
- **1.2.** Interconnection Customer shall perform maintenance in accordance with manufacturer recommendations and intervals.

2.0 Generation Metering, Monitoring, and Control; O&M Costs; Capital Costs

- **2.1.** The Interconnection customer is financially responsible for the communications channel to Xcel Energy's Control Center for metering and control requirements. The communication channel shall comply with Xcel Energy requirements and standards. For the remote terminal unit (RTU) and communication channel provided by Xcel Energy, the Interconnection Customer shall be responsible for operating and maintenance costs, and replacement of any failed parts or materials.
- **2.2.** Interconnection Customer shall be responsible for costs associated with emergency repairs, scheduled repairs, or replacement of parts for the telemetry system.
- **2.3.** Interconnection Customer shall be responsible for replacement costs for advanced metering equipment, such as the two new NSPM owned ION meters.

3.0 Modifications to the Generation System -

- **3.1.** The Interconnection Customer shall notify Xcel Energy, in writing of plans for any Material Modifications to the Generation System interconnection equipment, including all information needed by Xcel Energy as part of the review described in this section, at least ninety (90) business days prior to undertaking such modification.
- **3.2.** Material Modifications to the generator or any of the interconnection equipment, including all interconnection required protective systems, the generation control systems, the transfer switches/breakers, VT's & CT's, generating capacity and associated wiring shall be included in the notification to Xcel Energy.

- **3.3.** The Interconnection Customer agrees not to commence installation of any Material Modifications to the Generating System until Xcel Energy has approved the Material Modification, in writing, which approval shall not be unreasonably withheld.
- **3.4.** Xcel Energy shall have a maximum of ninety (90) business days, to review and respond to the Material Modification, after the receipt of the information required to review the modifications. Upon receipt of the information required to review the modification if Xcel Energy determines it will take longer than ninety (90) business days to respond, Xcel Energy shall promptly notify Interconnection Customer of the delay.

4.0 Special Facilities

- **4.1.** If the Interconnection Customer makes a request for any facilities not identified in the Xcel Energy annual reliability assessment Xcel Energy will study the request to ensure no adverse effect on the system reliability, operational integrity, or schedule of required work. The Interconnection Customer shall be responsible for the cost associated with the study which will be initiated upon execution of the study agreement.
- **4.2.** The Interconnection Customer shall be responsible for Installation, Operating, Maintenance and Replacement costs of any special facilities installed by Xcel Energy.

SIGNATURES

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

Interconnection Customer

I	Зу:
1	Name:
]	Fitle:
Ι	Date:
Xcel En	ergy
H	Зу:
1	Name:
]	Fitle:
	Date:

CERTIFICATE OF SERVICE

I, Carl Cronin, hereby certify that I have this day served copies of the foregoing document or a summary thereof on the attached lists of persons:

- <u>xx</u> by depositing a true and correct copy or summary thereof, properly enveloped with postage paid, in the United States Mail at Minneapolis, Minnesota; or
- \underline{xx} via electronic filing

DOCKET NO. XCEL ENERGY'S MISCELLANEOUS ELECTRIC SERVICE LIST

Dated this 30th day of October 2017

/s/

Carl Cronin Regulatory Administrator

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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