

414 Nicollet Mall Minneapolis, MN 55401

January 15, 2019

# PUBLIC DOCUMENTS NOT-PUBLIC OR PROTECTED DATA EXCISED

-Via Electronic Filing-

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

RE: PETITION – APPROVAL OF AMENDMENT TO POWER PURCHASE AGREEMENT WITH MORAINE WIND II, LLC DOCKET NO. E002/M-08-1487

Dear Mr. Wolf:

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission this Petition for approval of an amendment to a Power Purchase Agreement (PPA) between the Company and Moraine Wind II, LLC for wind energy generation from a 49.5 megawatt (MW) facility located in Pipestone and Murray counties, Minnesota.

Portions of the enclosed Petition and Attachments A and B are marked "NOT-PUBLIC" as they contain information the Company considers to be trade secret data as defined by Minn. Stat. §13.37(1)(b). This data includes confidential pricing and other contract terms. The information has independent economic value from not being generally known to, and not being readily ascertainable by, other parties who could obtain economic value from its disclosure or use. We have marked additional information as "NOT PUBLIC" because the knowledge of such information in conjunction with public information in our Petition could also adversely impact future contract negotiations, potentially increasing costs for these services for our customers. Thus, the Company maintains this information as a trade secret.

We have electronically filed this document with the Minnesota Public Utilities Commission, and copies have been served on the parties on the attached service lists. Please contact Bria Shea at <u>bria.e.shea@xcelenergy.com</u> or (612) 330-6064 if you have any questions regarding this filing.

Sincerely,

/s/

AAKASH H. CHANDARANA REGIONAL VICE PRESIDENT RATES AND REGULATORY AFFAIRS

Enclosures c: Service Lists

# STATE OF MINNESOTA BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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

IN THE MATTER OF THE PETITION OF NORTHERN STATES POWER COMPANY FOR APPROVAL OF A POWER PURCHASE AGREEMENT WITH MORAINE II, LLC DOCKET NO. E002/M-08-1487

PETITION

## INTRODUCTION

Northern States Power Company, doing business as Xcel Energy, submits this Petition to the Minnesota Public Utilities Commission (Commission) for approval of an amendment to a Power Purchase Agreement (PPA) with Moraine Wind II, LLC.

The Company recently submitted a Petition for approval to realign the Windsource Program and expand the Renewable\*Connect Program; this proposed PPA extension would support those programs.<sup>1</sup> The proposed Amendment extends the current PPA for an additional ten years (the current PPA expires on February 17, 2019) and lowers the price to a level comparable to other recent wind projects.

Approval of this PPA Amendment will help assure the continued operation of the Moraine II project at a competitive, cost-effective price and allow Xcel Energy to continue promoting wind energy development for the benefit of our customers and in furtherance of Minnesota's policy goals. Amendment approval will also support

<sup>&</sup>lt;sup>1</sup> In the Matter of the Petition of Northern States Power Company for Approval of a Renewable\*Connect Program – and – In the Matter of the Petition of Northern States Power Company for Approval of a Renewable Energy Rider, Docket No. E002/M-19-33, January 7, 2019.

increased participation in the Company's Windsource and Renewable\*Connect Programs.

In consideration of the above, we request that the Commission approve this PPA Amendment with Moraine II, LLC as reasonable and in the public interest.

# I. SUMMARY OF FILING

Pursuant to Minn. R. 7829.1300, subp. 1, a one-paragraph summary is attached to this filing.

# **II. SERVICE ON OTHER PARTIES**

Pursuant to Minn. R. 7829.1300, subp. 2, the Company has served a copy of this filing on the appropriate general service list, the Department of Commerce, and the Office of the Attorney General–Residential Utilities and Antitrust Division.

# III. GENERAL FILING INFORMATION

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

# A. 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

Matt B. Harris Principal Attorney Xcel Energy 414 Nicollet Mall (401-8<sup>th</sup> Floor) Minneapolis, MN 55401 (612) 330-7641 matt.b.harris@xcelenergy.com

# C. Date of Filing

The date of this filing is January 15, 2019.

# D. Statute Controlling Schedule for Processing the Filing

This filing is made under Minn. Stat. § 216B.1645 (Power Purchase Contracts), and costs incurred in connection with this Agreement are recoverable consistent with Minn. Stat. § 216B.1645. No specific statute imposes a schedule controlling the processing of the filing. However, the Commission has usually set a Comments schedule by Notice to interested parties for power purchase contracts, 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 (401-7<sup>th</sup> Floor) Minneapolis, MN 55401 (612) 330-6064 <u>bria.e.shea@xcelenergy.com</u>

# IV. MISCELLANEOUS INFORMATION

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:

Matt B. Harris Principal Attorney Xcel Energy 414 Nicollet Mall (401-8<sup>th</sup> Floor) Minneapolis, MN 55401 <u>matt.b.harris@xcelenergy.com</u> Lynnette Sweet Regulatory Administrator Xcel Energy 414 Nicollet Mall (401-7<sup>th</sup> Floor) Minneapolis, MN 55401 regulatory.records@xcelenergy.com

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

# V. EFFECT OF CHANGE UPON XCEL ENERGY REVENUE

There will be no net increase in Xcel Energy revenue, as payments to be made to Moraine Wind II, LLC will equal collections from Xcel Energy ratepayers through the Fuel Clause Adjustment or as allocated to the Windsource Program or Renewable\*Connect Program as allowed by the Commission.

# VI. DESCRIPTION AND PURPOSE OF FILING

Xcel Energy seeks approval of an amendment to the Moraine II PPA in order to extend its term for ten years and adjust the pricing for this extension period. We provide the original Agreement executed November 7, 2008 and Amendment No. 1 to the PPA executed November 16, 2018 between Northern States Power Company and Moraine Wind II, LLC as Attachments A and B to this Petition. Certain provisions in the Amendment are marked as Not-Public and have been redacted in the Public version of this filing.

In support of this filing, Xcel Energy provides:

- Background history,
- Project description,
- Pricing information under the modified terms of the PPA,
- Discussion of resource use,
- Economic analysis, and
- Discussion of the public interest.

# A. Background

In 2001, the Minnesota legislature passed a new law requiring that each utility providing electric service offer its customers an option to voluntarily purchase energy produced by renewable or high-efficiency, low emissions distributed generation (Minn. Stat. § 216B.169). On December 31, 2001, Xcel Energy petitioned the Commission to establish the Windsource Program and offer customers a voluntary option to purchase renewable energy in accordance with the 2001 legislation. The Commission approved the petition in its Order issued February 26, 2002 (Docket No. E002/M-01-1479).

On January 15, 2002, Xcel Energy filed with the Commission a petition for approval of a PPA with Navitas Energy LLC (now Moraine Wind LLC) in Docket No. E002/M-02-51. The PPA was for the purchase of 51 megawatts (MW) of wind generation in Murray and Pipestone counties, Minnesota. The Commission approved the PPA and issued its Order July 17, 2002. The Order also included approval for future expansion (49.5 MW) of the project subject to Xcel Energy seeking Commission approval to proceed with the expansion.

On December 19, 2008, the Company filed a petition with the Commission in the present docket to exercise the expansion option in the original PPA with the intent to utilize the 49.5 MW Moraine II project to meet future Windsource Program requirements. The Commission approved the petition in its Order issued April 24, 2009. The entire output of Moraine II was not required to fulfill the requirements of Windsource customers. The Company requested and the Commission approved a flexible allocation approach for Moraine II allowing adjustment of the percent of the cost through the Windsource Rider and any "excess energy" to non-Windsource Program customers, and the recovery of those energy costs through the Fuel Clause Rider.<sup>2</sup>

# B. Project Description

Moraine Wind II is a 49.5 MW project consisting of one Oregon limited liability company (LLC). The project uses 33 wind turbines (GE Model 1.5SLE) and associated equipment. Moraine II is expected to produce about *[Protected Data Begins Protected Data Ends]*. The project is located on a site in

Pipestone and Murray counties, Minnesota, and interconnects to the 34.5 kV bus at Xcel Energy's Chanarambie substation on the Buffalo Ridge in southwest Minnesota.

# C. Pricing and Terms of the Transaction

The current PPA with Moraine II expires on February 17, 2019. With the proposed Amendment, Xcel Energy would purchase the entire output of the 49.5 MW Project over the ten-year extension of the PPA. The price in this PPA Amendment for the ten-year extension is *[Protected Data Begins*]

Protected Data EndsJ. The Moraine II PPA is reflective of the

<sup>&</sup>lt;sup>2</sup> See, Docket No. E002/M-08-1487 In the Matter of Northern States Power Company d/b/a Xcel Energy's Petition for Approval of a Power Purchase Agreement with Moraine Wind II, LLC, Order, April 27, 2009.

current market and is priced at a level such that it compares favorably to other recent wind projects.

# D. Resource Use

The Company submitted a Petition on January 7, 2019 in Docket No. E002/M-19-33 for approval to realign the Windsource Program, transferring participating customers to a new offering of the Renewable\*Connect Program.<sup>3</sup> There, the Company is seeking regulatory approval for the establishment of two new subscription offerings to the Renewable\*Connect Program. Relevant aspects of that Petition include:

- The use of Moraine II to meet the future renewable energy requirements of Windsource Program customers and Renewable\*Connect Program customers;
- The continued use of the Moraine II project under the same cost allocation method currently approved by the Commission in conjunction with the Windsource Program; and
- The recovery of Moraine II energy costs through the appropriate Windsource Program rider, or its successor (the Renewable\*Connect Program Rider), and the Fuel Clause Rider based on the allocation of such energy to each rider, respectively.

Commission approval of the Moraine II PPA Amendment would provide transitional support for Windsource Program growth and its migration into the Renewable\*Connect Program.

# E. Economic Analysis

While the costs of the Moraine II PPA Amendment will be allocated through the Company's Windsource and Renewable\*Connect Programs (as opposed to allocated across all customer classes), we provide an analysis using the Strategist model to evaluate the overall system impact. The Strategist planning model simulates the operation of the NSP System and estimates the cost to serve load through the life of the projects. We use the model to test results under a range of input assumptions.

<sup>&</sup>lt;sup>3</sup> In the Matter of the Petition of Northern States Power Company for Approval of a Renewable\*Connect Program – and – In the Matter of the Petition of Northern States Power Company for Approval of a Renewable Energy Rider, Docket No. E002/M-19-33, January 7, 2019.

To assess impact on customer costs, we simulated the operation of the NSP System through 2057 and compared the extension of the Moraine II PPA to the existing term, which expires in February 2019. Our analysis assumes the addition of the 1,850 MWs of wind generation approved by the Commission in Docket Nos. E002/M-16-777 and E002/M-17-694, the Dakota Range III resource proposed in Docket No. E002/M-18-765, and the acquisition of the Jeffers and Community Wind North (CWN) projects proposed in Docket Nos. E002/M-06-1237 and E002/M-10-734.

As discussed in our recent wind acquisition petitions, we note that wind generation has no fuel costs, so the marginal cost to produce the next unit of energy is zero. In other words, after capital and ongoing O&M costs are accounted for, it costs a wind generator nothing to produce the next MWh of energy. As a result, MISO generally provides for wind production ahead of other, higher marginally-priced generation, such as gas- and coal-based generation. Consequently, as more wind generation is integrated into the system, coal- and gas-fired thermal generation is dispatched less often. This displacement of other generation or market purchases and increased market sales largely drives the benefits shown in our modeling results. Below we highlight some of the key assumptions included in the modeling. Further details on the Strategist assumptions are included in Attachment C.

# Key Assumptions:

- *Nuclear* The nuclear units are assumed to retire when the current operating licenses expire. The current license for Monticello expires in 2030. The licenses for Prairie Island I and II expire in 2033 and 2034, respectively.
- *Coal* As approved by the Commission in our last resource plan, Sherco Unit 2 is assumed to retire in 2023 and Sherco Unit 1 is assumed to retire in 2026. The A.S. King Plant and Sherco Unit 3 are assumed to run through their existing lives of 2037 and 2040, respectively.
- *Combined Cycle Plants* A combined cycle unit is assumed to be added at the Sherco site in 2027. MEC is assumed to be Company-owned.
- *PPAs* The Manitoba Hydro, Cottage Grove, and Cannon Falls PPAs are assumed to expire at the end of their current PPA terms.
- *Energy Efficiency* The load forecast includes an assumption of 1.5 percent annual energy savings.

- *Demand Response* In compliance with the Commission's Order in our last resource plan, 400 MWs of incremental demand response is added by 2023.
- *Distributed Solar* The modeling assumes distributed generation (DG) solar additions based on our most recent forecast of distributed solar, which includes 673 MWs of Community Solar Gardens by 2020.
- Universal Scale Solar In addition to the DG solar, an incremental 1400 MWs of universal scale solar is added by 2030.
- *Congestion* We updated our congestion assumption since our last wind acquisition filing by using the MISO MTEP 2018 models and comparing the average congestion costs between representative wind bus locations and NSP. We included a congestion cost of \$3.43 per MWh in 2020, escalating at two percent per year.
- *Curtailment* We have updated the market limit we have relied on in past filings. We believe our updated market limit better represents the potential for sales into the MISO market during period of excess generation. We discuss this updated assumption further below.

# 1. Strategist Modeling

As noted above, we evaluated the proposed wind projects assuming the addition of the 1,850 MWs of wind previously approved by the Commission, the proposed Dakota Range III resource, the acquisition of the Jeffers and CWN, DG solar additions based on our most recent forecast of distributed solar, and over 1,400 MWs of additional universal scale solar. Therefore, the results of the Strategist analysis provide the incremental effect of the extension of the Moraine II PPA. The results of the Strategist analysis show that the PPA extension will result in net savings for our customers under all sensitivity tests conducted. Table 1 below shows both the present value of societal costs (PVSC) and present value of revenue requirement (PVRR) savings. The base PVSC assumptions include the high regulated cost for each ton of  $CO_2$  emitted in 2024, escalating at two percent per year thereafter, as well as high externality costs for emissions of criteria pollutants and  $CO_2$  before 2024. The PVRR savings do not include  $CO_2$  costs or other externality costs and do not include Surplus Capacity Credit.

PVSC (High Ext Costs thru 2024, High Reg Costs)	(11)
PVSC + Low Gas	(9)
PVSC + High Gas	(13)
PVSC + Low Load	(14)
PVSC + High Load	(15)
PVSC + Mkts Off, No Dump Credit	(20)
PVSC + Mkts Off, Dump Credit	(24)
PVSC - Low Ext Costs All Years	(3)
PVSC - High Ext Costs All Years	(9)
PVSC - Low Ext Costs thru 2024, Low Reg Costs	(4)
PVRR (No CO <sub>2</sub> )	(1)

## Table 1: Moraine II PPA Extension Incremental PVSC and PVRR Savings (\$millions)

The proposed PPA extension provides benefits under all scenarios. As we continue to transition our fleet to include more renewables and less coal generation, there will be periods of time where the generation on our system exceeds our native load serving requirement. During these periods, we are likely to make energy sales into the MISO market. Revenues from those sales will be credited to customers through the monthly fuel clause adjustment. Assumptions regarding the likely value of these potential sales are an important factor in predicting the likely rate impact of the proposed wind portfolio. Therefore, we have analyzed the benefits of the Moraine II PPA extension under three different energy market assumptions. First, interactions with the MISO energy market are modeled under the base assumptions. Second, under the "markets off, no dump credit" sensitivity, market interactions are turned off and no value is given to any generation in excess of load serving requirements. Third, under the "markets off, dump energy credit sensitivity," energy in excess of load serving requirement is given half of the forecasted market energy price.

When modeling market interactions, we include a limit on the maximum sales that could be made into the MISO market during hours where production exceeds our load serving requirements. We have used a limit of approximately 1,350 MWs based on historical data of market transactions. In the Dakota Range III petition and the Jeffers and CWN petition, we noted that this assumption is likely overly conservative. There have been continued investments in the transmission system, including the newly energized Badger-Coulee line connecting La Crosse, WI and Madison, WI.

We also noted that we will continue to evaluate changes to the limit on market transactions in future filings.

In order to develop a better estimate of a market transaction limit, we conducted PROMOD modeling using data from the MISO Accelerated Fleet Change MTEP scenario. PROMOD is a nodal, dispatch model that can be used to simulate the dispatch of the resources in MISO. This analysis showed the NSP system making sales into the market of up to 2,300 MWs per hour in 2027. We have phased this limit in by increasing the limit to 1,800 MWs in 2019, after the Badger-Coulee line is in service, and up to 2,300 in 2023, when the Cardinal to Hickory Creek transmission line is expected to be come online. We believe this updated market limit better reflects the likely availability of market sales in the future.

Additional sensitivities for Gas Prices, Forecasted Load, and Carbon Costs included in Table 1 are discussed below:

• Gas Prices

Our gas price forecast is based on a blend of the latest market information and longterm fundamental-based forecasts acquired from third parties. We have included a low and high gas sensitivity to evaluate the impacts of variations in gas prices on the proposed transfer of ownership.

• Forecasted Load

The modeling includes the most recent load forecast, which was developed in the Fall of 2018. The high and low load sensitives were developed by increasing and decreasing forecasted load one standard deviation from the median forecast.

• Cost of Carbon

As noted above, the base PVSC assumptions include the high externality costs through 2024 and the high regulatory costs in 2025 and beyond, as approved by the Commission in its June 11, 2018, *Order.*<sup>4</sup> The Commission's *Order* also required that:

<sup>&</sup>lt;sup>4</sup> ORDER ESTABLISHING 2018 AND 2019 ESTIMATE OF FUTURE CARBON DIOXIDE REGULATION COSTS, Docket Nos. E999/CI-07-1199 and E999/DI-17-53.

In all electricity generation resource acquisition proceedings during 2018 and 2019, utilities shall analyze potential resources under a range of assumptions about environmental values, including scenarios that—

A. Incorporate, for all years, the low end of the range of environmental costs for carbon dioxide as approved by the Commission in its January 3, 2018 Order Updating Environmental Costs in Docket No. E999/CI-14-643, *In the Matter of the Further Investigation into Environmental and Socioeconomic Costs Under Minnesota Statutes Section 216B.2422, Subdivision 3.* 

B. Incorporate, for all years, the high end of the range of environmental costs for  $CO_2$  as approved by the Commission in its January 3, 2018 Order.

C. Incorporate the low end of the range of environmental costs for  $CO_2$  but substituting, for planning years after 2024, the low end of the range of regulatory costs for  $CO_2$  regulations, in lieu of environmental costs.

D. Incorporate the high end of the range of environmental costs for CO2 but substituting, for planning years after 2024, the high end of the range of regulatory costs for  $CO_2$  regulations, in lieu of environmental costs.

We have included sensitivities to comply with the Commission's Order.

## 2. Annual Impacts

To understand how the costs (savings) change over time, Figure 1 below visually portrays the annual costs (savings) impacts of the Moraine II PPA extension compared to the 2019 expiration of the PPA.

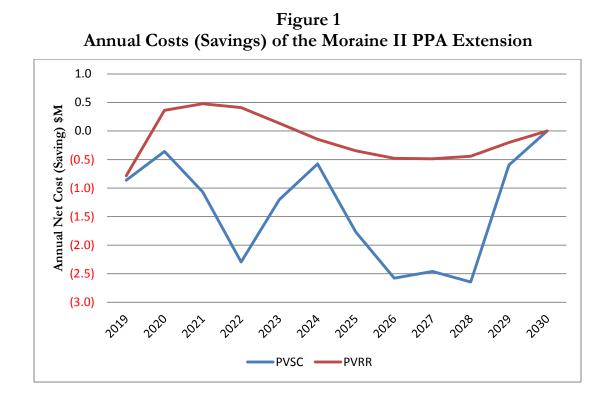


Figure 1 shows the annual cost impacts over the 10-year PPA extension. It is important to note that the PVSC assumptions savings in Figure 1 incorporate the high end of the range of the Commission-approved environmental costs for  $CO_2$  through 2024 and the high end of the range of regulatory costs for  $CO_2$  regulations, in lieu of environmental costs for  $CO_2$ , thereafter. PVRR savings shown in Figures 1 assume we are able to take advantage of the MISO energy market to make energy purchases and sales and includes our updated market limit assumption discussed above.

## F. Approval of the Amendment is in the Public Interest

Approval of this PPA Amendment will help assure the continued operation of the Moraine II project at a competitive, cost-effective price and allow Xcel Energy to continue promoting wind energy development for the benefit of our customers and in furtherance of Minnesota's policy goals. Amendment approval will also support increased participation in the Company's Windsource Program and Renewable\*Connect Program. Moraine II serves as a "swing" resource for the Windsource Program to provide for program growth and costs management by allocating more or less of the renewable energy resource to Windsource and the Fuel Clause Rider.

Customers are also benefitted by the project already having an interconnection agreement in place, thus avoiding the lengthy and potentially expensive interconnection process a new resource would require. In addition, the Amendment allows the Company to dispatch and curtail the Seller's facility through the use of Automated Generation Control (AGC) Set Point as described in Exhibit I to the Amendment, similar to curtailment provisions in other recent PPAs between Xcel Energy and other wind projects. This technology enables the monitoring and regulation of the facilities' output as well as forecasting data, which assist the Company in better integrating wind resources.

# CONCLUSION

As demonstrated above, this PPA Amendment with Moraine II, LLC is reasonable and in the public interest. Accordingly, Xcel Energy respectfully requests that the Commission approve:

- A ten-year extension of the PPA term and revised pricing,
- An allocation of Moraine II energy to the Windsource Program or its successor,
- An allocation of Moraine II energy to a future offerings of the Renewable\*Connect Program,
- The recovery of Moraine II energy costs through the Windsource Program rider and/or the Renewable\*Connect Program based on the Moraine II energy allocated to customers in either of those offerings; and
- An allocation of any remaining portion of Moraine II energy production to system load and the recovery of related energy costs through the Fuel Clause Rider.

Dated: January 15, 2019

Northern States Power Company

## STATE OF MINNESOTA BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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

IN THE MATTER OF THE PETITION OF NORTHERN STATES POWER COMPANY FOR APPROVAL OF A POWER PURCHASE AGREEMENT WITH MORAINE II, LLC DOCKET NO. E002/M-08-1487

### PETITION

## SUMMARY OF FILING

Please take notice that on January 15, 2019, Northern States Power Company, doing business as Xcel Energy, filed with the Minnesota Public Utilities Commission its Petition for approval of a Power Purchase Agreement Amendment between Xcel Energy and Moraine II, LLC for the 49.5 MW Moraine II wind project. The purpose of the proposed Amendment is to extend the current Agreement for an additional ten years and provide for a price adjustment.

#### PUBLIC DOCUMENT TRADE SECRET DATA HAS BEEN REMOVED

Moraine Wind PPA Final

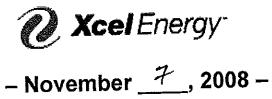
# WIND ENERGY PURCHASE AGREEMENT

# BETWEEN

# NORTHERN STATES POWER COMPANY, A MINNESOTA CORPORATION

# AND

# MORAINE WIND II, LLC



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- Exhibit L Committed Renewable Energy Example Calculation
- Exhibit M Interconnection Agreement
- Exhibit N Example Calculation of Tax Benefits
- Exhibit O Form of Progress Report

# WIND ENERGY PURCHASE AGREEMENT BETWEEN MORAINE WIND II, LLC

# NORTHERN STATES POWER COMPANY, A MINNESOTA CORPORATION

This Wind Energy Purchase Agreement (this "PPA") is made this <u>"</u>Day of November, 2008, (the "Effective Date") by and between (i) Moraine Wind II, LLC ("Seller"), an Oregon limited liability company with a principal place of business at 1125 NW Couch, Suite 700, Portland, Oregon 97209, and (ii) Northern States Power Company ("Company"), a Minnesota corporation with headquarters in Minneapolis, Minnesota. Seller and Company are hereinafter referred to individually as a "Party" and collectively as the "Parties."

WHEREAS Seller desires to develop, design, construct, own and operate a renewable wind-powered electric generating facility with an expected total nameplate capacity of approximately forty-nine point five (49.5) MW, and which is further defined below as the "Facility"; and

WHEREAS Seller intends to locate the Facility in Pipestone and Murray counties, Minnesota, and to interconnect the Facility with the Interconnection Provider's System at the high-side of the generator step-up transformer at the Chanarambie substation; and

WHEREAS Seller desires to sell and deliver to Company at the Point of Delivery the Renewable Energy produced by the Facility and associated Renewable Energy Credits, and Company desires to buy the same from Seller; and

WHEREAS Company intends to utilize the Renewable Energy purchased hereunder for its WindSource renewable energy green-pricing program and for other purposes.

NOW THEREFORE, in consideration of the mutual covenants herein contained, the sufficiency and adequacy of which are hereby acknowledged, the Parties agree to the following:

# Article 1 – Definitions and Rules of Interpretation

1.1 <u>Rules of Construction</u>. The capitalized terms listed in this Article 1 shall have the meanings set forth herein whenever the terms appear in this PPA, whether in the singular or the plural or in the present or past tense. Other terms used in this PPA but not listed in this Article 1 shall have meanings as commonly used in the English language and, where such words have a generally accepted meaning in Good Utility Practice, such meaning shall apply. Words not otherwise defined herein that have wellknown and generally accepted technical or trade meanings are used herein in accordance with such recognized meanings. In addition, the following rules of interpretation shall apply:

(A) The masculine shall include the feminine and neuter.

(B) References to "Articles," "Sections," or "Exhibits" shall be to articles, sections, or exhibits of this PPA.

(C) The Exhibits attached hereto are incorporated in and are intended to be a part of this PPA; *provided, however*, that in the event of a conflict between the terms of any Exhibit and the terms of this PPA, the terms of this PPA shall take precedence.

(D) This PPA was negotiated and prepared by both Parties with the advice and participation of counsel. The Parties have agreed to the wording of this PPA and none of the provisions hereof shall be construed against one Party on the ground that such Party is the author of this PPA or any part hereof.

(E) The Parties shall act reasonably and in accordance with the principles of good faith and fair dealing in the performance of this PPA. Unless expressly provided otherwise in this PPA, (a) where the PPA requires the consent, approval, or similar action by a Party, such consent or approval shall not be unreasonably withheld, conditioned or delayed, and (b) wherever the PPA gives a Party a right to determine, require, specify or take similar action with respect to a matter, such determination, requirement, specification or similar action shall be reasonable.

(F) Use of the words "include" or "Including" or similar words shall be interpreted as "including but not limited to" or "including, without limitation."

(G) Use of the words "tax" or "taxes" shall be interpreted to include taxes, fees, surcharges, and the like.

1.2 Interpretation with Interconnection Agreement. Each Party conducts its operations in a manner intended to comply with FERC Order No. 2004, Standards of Conduct for transmission providers, requiring the separation of its transmission and merchant functions. Moreover, the Parties acknowledge that Company's transmission function offers transmission service on its system in a manner intended to comply with FERC policies and requirements relating to the provision of open-access transmission service. The Parties recognize that Seller has entered into a separate Interconnection Agreement with the Interconnection Provider, a copy of which is attached as Exhibit M.

(A) The Parties acknowledge and agree that the Interconnection Agreement is a separate and free-standing contract and that the terms of this PPA are not binding upon the Interconnection Provider.

(B) Notwithstanding any other provision in this PPA, nothing in the Interconnection Agreement shall alter or modify Seller's or Company's rights, duties and obligations under this PPA. This PPA shall not be construed to create any rights between Seller and the Interconnection Provider.

(C) Seller expressly recognizes that, for purposes of this PPA, the Interconnection Provider shall be deemed to be a separate entity and separate

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contracting party whether or not the Interconnection Agreement is entered into with Company or an Affiliate of Company.

(D) Seller has executed the Notice of Customer Voluntary Consent attached hereto as Exhibit J.

1.3 <u>Interpretation of Arrangements for Electric Supply to the Facility</u>. This PPA does not provide for the supply of retail power to the Facility, for purposes of turbine unit start-up or shut-down, or for any other purpose ("House Power").

(A) Seller's arrangements for the supply of House Power to the Facility shall be separate and free-standing arrangements. The terms of this PPA are not binding upon the supplier of such House Power. For purposes of this PPA, the supplier of such House Power shall be deemed to be a separate entity and separate contracting party, whether or not the supplier of such House Power is Company or an Affiliate of Company.

(B) Notwithstanding any other provision in this PPA, nothing in Seller's arrangements for the supply of House Power to the Facility shall alter or modify Seller's or Company's rights, duties and obligations under this PPA. This PPA shall not be construed to create any rights between Seller and the supplier of House Power.

(C) Subject to Seller's right to self-generate and consume energy concurrently generated by the Facility, Seller shall obtain House Power exclusively from the local provider who is the retail electric service provider of House Power in whose service territory the Facility is located. Seller shall not obtain House Power back through the Interconnection Facilities, and waives any regulatory or other legal right to the contrary.

1.4 <u>Definitions</u>. The following terms shall have the meanings set forth herein:

"Abandonment" means (i) the relinquishment of all possession and control of the Facility by Seller, other than a transfer permitted under this PPA, or (ii) complete cessation of the design, development, construction, testing and inspection of the Facility for **[Begin Trade Secret End Trade Secret]** Days by Seller and/or Seller's contractors, unless, after requested by Company to do so, and subject to Seller's cure rights set forth in Article 12, Seller provides written information to Company, reasonably demonstrating any cessation of work in excess of **[Begin Trade Secret** 

**End Trade Secret]** Days is consistent with the overall schedule to achieve the Commercial Operation Milestone. Abandonment shall not include any relinquishment or cessation that is caused by or attributable to an Event of Default of, or request by, Company, or an event of Force Majeure or pursuant to Seller's rights under Section 4.10 herein.

"Accreditable Capacity" means the amount of net generating capability associated with the Facility for which capacity credit may be obtained under applicable MRO Generator Testing Guidelines as may be in effect at the time of Commercial Operation.

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[Begin Trade Secret

#### End Trade Secret]

"Affiliate" of any named person or entity means any other person or entity that controls, is under the control of, or is under common control with, the named entity. The term "control" (including the terms "controls", "under the control of" and "under common control with") as used with respect to any named entity, means (a) the right or power to direct or cause the direction of the management of the policies of a person or entity, or (b) the direct or indirect right to cast at least fifty percent (50%) of the votes if exercisable at an annual general meeting (or its equivalent) of such named entity or, there are no such rights, ownership of at east fifty percent (50%) of the equity or other ownership interest in such named entity.

"Applicable Law" means all applicable laws, statutes, treaties, codes, ordinances, regulations, certificates, orders, licenses and permits of any Governmental Authority, now in effect or hereafter enacted, amendments to any of the foregoing, interpretations of any of the foregoing by a Governmental Authority having jurisdiction, and all applicable judicial, administrative, arbitration and regulatory decrees, judgments, injunctions, writs, orders, awards or like actions (including those relating to human health, safety, the natural environment or otherwise).

"Back-Up Metering" shall have the meaning set forth in Section 5.3(D).

"Business Day" means any calendar Day that is not a Saturday, a Sunday, or a NERC recognized holiday.

"Change of Control" shall have the meaning set forth in Section 19.3(A).

"Code" means the U.S. Internal Revenue Code of 1986, including applicable rules and regulations promulgated thereunder, as amended from time to time.

"Commercial Operation" means the period beginning on the Commercial Operation Date and continuing through the Term of this PPA.

"Commercial Operation Date" or "COD" for the Facility means the date of Seller's Notice of Commercial Operation with respect thereto under Section 4.8, subject to confirmation by Company in accordance with Section 4.8.

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## [Begin Trade Secret

### End Trade Secret]

"Commercial Operation Year" means any consecutive twelve- (12-) month period during the Term of this PPA, commencing with the Commercial Operation Date or any of its anniversaries.

"Committed Renewable Energy" shall have the meaning set forth in

Section 7.2.

"Company" shall have the meaning set forth in the preamble of this PPA.

"Conditions" shall have the meaning set forth in Section 4.8.

### [Begin Trade Secret

#### End Trade Secret

"CPT" means Central Prevailing Time, meaning prevailing Standard Time or Daylight Savings Time in the Central Time Zone.

### [Begin Trade Secret End Trade Secret]

"Damage Limit" shall have the meaning set forth in Section 12.7.

"Day" means a calendar day.

"Delay Conditions" shall have the meaning set forth in Section 14.4(A).

### [Begin Trade Secret End Trade Secret]

"Early Termination Date" shall have the meaning set forth in Section 12.6.

"Effective Date" has the meaning set forth in the preamble of this PPA.

"Electric Interconnection Point" means the physical point at which electrical interconnection is made between the Facility and the Interconnection Provider's System, which shall be at the high-side of the generator step-up transformer at the Chanarambie substation.

"Electric Metering Device(s)" means all meters, metering equipment, and data processing equipment used to measure, record, or transmit data relating to the Renewable Energy output from the Facility. Electric Metering Devices include the metering current transformers ("CTs") and the metering voltage transformers ("VTs").

"Eligible Energy Resource" means any resource that qualifies as a renewable energy resource eligible to be certified to receive, claim, own or use

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Renewable Energy Credits (whether from the Facility or another renewable energy resource) pursuant to the protocols and procedures developed and approved by the MPUC in the M-RETS program, MPUC Docket No. E-999/CI-04-1616 and subsequent related proceedings, as such protocols and procedures are in effect as of the Effective Date of this PPA.

"Emergency" means any emergency condition under the Interconnection Agreement or the TEMT.

"Environmental Contamination" means the introduction or presence of Hazardous Materials at such levels, quantities or location, or of such form or character, as to constitute a violation of federal, state or local laws or regulations, and present a material risk under federal, state or local laws and regulations that the Site will not be available or usable for the purposes contemplated by this PPA.

"EPC" shall have the meaning set forth in Section 4.4.

[Begin Trade Secret

### End Trade Secret]

"Event of Default" shall have the meaning set forth in Article 12.

"Expected Facility Installed Capacity" means the expected minimum instantaneous generation (nameplate) capacity of the Project, which is, as of the Effective Date, forty-nine point five (49.5) MW.

"Facility" means Seller's electric generating facility and Seller's Interconnection Facilities, as identified and described in Article 3 and Exhibit B to this PPA, the purpose of which is to produce electricity and deliver such electricity to the Electric Interconnection Point including, but not limited to, all of the following: Seller's equipment, buildings, all of the generation facilities, including wind turbine generators, step-up transformers, output breakers, facilities necessary to connect to the Electric Interconnection Point, protective and associated equipment, improvements, and other tangible assets, contract rights, easements, rights of way, surface use agreements and other interests or rights in real estate reasonably necessary for the construction, operation, and maintenance of the electric generating facility that produces the Renewable Energy subject to this PPA.

"Facility Debt" means the obligations of Seller to any lender pursuant to the Financing Documents, including principal of, premium and interest on indebtedness, fees, expenses or penalties, amounts due upon acceleration, prepayment or

restructuring, swap or interest rate hedging breakage costs and any claims or interest due with respect to any of the foregoing.

"Facility Lender" means, collectively, any lender(s) or other parties providing any Facility Debt or other funding for the development, construction, or operation of the Facility, and any successor(s) or assigns thereto.

"FERC" means the Federal Energy Regulatory Commission or any successor agency.

"Financing Documents" means the loan and credit agreements, notes, bonds, indentures, security agreements, lease financing agreements, mortgages, deeds of trust, interest rate exchanges, swap agreements and other documents relating to the development, bridge, construction and/or permanent debt financing for the Facility, including any credit enhancement, credit support, working capital financing, or refinancing documents, and any and all amendments, modifications, or supplements to the foregoing that may be entered into from time to time at the discretion of the parties to such agreements.

"Force Majeure" shall have the meaning set forth in Article 14.

"Forced Outage" means any condition at the Facility, as declared by Seller to Company or by MISO, that requires immediate removal of the Facility, or some part thereof, from service, another outage state, or a reserve shutdown state. This type of outage results from immediate mechanical/electrical/hydraulic control system trips and operator-initiated trips in response to Facility conditions and/or alarms.

"Good Utility Practice(s)" means the practices, methods, and acts (including the practices, methods, and acts engaged in or approved by a significant portion of the independent wind energy generation industry, MRO and/or NERC) that, at a particular time, in the exercise of reasonable judgment in light of the facts known or that should reasonably have been known at the time a decision was made, would have been expected to accomplish the desired result at a reasonable cost in a manner consistent with law, regulation, permits, codes, standards, equipment manufacturer's recommendations, reliability, safety, environmental protection, economy, and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act, to the exclusion of all others, but rather is intended to include acceptable practices, methods, and acts generally accepted in the industry. With respect to the Facility, Good Utility Practice(s) includes taking reasonable steps to ensure that:

(A) equipment, materials, resources, and supplies, including spare parts inventories, are available to meet the Facility's needs;

(B) sufficient operating personnel are available at all times and are adequately experienced and trained and licensed as necessary to operate the Facility properly, efficiently, and in coordination with Company and are capable of responding to

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reasonably foreseeable Emergency conditions whether caused by events on or off the Site:

(C) preventive, routine, and non-routine maintenance and repairs are performed on a basis that ensures reliable, long-term and safe operation, and are performed by knowledgeable, trained, and experienced personnel utilizing proper equipment and tools;

(D) appropriate monitoring and testing are performed to ensure equipment is functioning as designed;

(E) equipment is not operated in a reckless manner, in violation of manufacturer's guidelines or in a manner unsafe to workers, the general public, or the interconnected system or contrary to environmental laws, permits or regulations or without regard to defined limitations such as, flood conditions, safety inspection requirements, operating voltage, current, volt-ampere reactive ("VAr") loading, frequency, rotational speed, polarity, synchronization, and/or control system limits; and

(F) equipment and components meet or exceed the standard of durability that is generally used for electric generation operations in the region and will function properly over the full range of ambient temperature and weather conditions reasonably expected to occur at the Site and under both normal and Emergency conditions.

"Governmental Authority" means any federal, state, local or municipal governmental body, any political subdivision thereof; any governmental, quasigovernmental, judicial, public, regulatory or administrative agency, commission, body or other authority exercising or entitled to exercise any administrative, executive, judicial, legislative, policy, regulatory or taxing authority or power; or any court or governmental tribunal with authority to bind a Party at law, including any transmission provider such as MISO; provided, however, that "Governmental Authority" shall not in any event include any Party.

"Hazardous Materials" means any substance, material, gas, or particulate matter that is regulated by any local Governmental Authority, any applicable state, or the United States of America, as an environmental pollutant or dangerous to public health, public welfare, or the natural environment including, without limitation, protection of non-human forms of life, land, water, groundwater, and air, including any material or substance that is (i) defined as "toxic," "polluting," "hazardous waste," "hazardous material," "hazardous substance," "extremely hazardous waste," "solid waste" or "restricted hazardous waste" under any provision of local, state, or federal law; derivative or additive; (ili) asbestos; any fraction, (ii) petroleum. includina (iv) polychlorinated biphenyls; (v) radioactive material; (vi) designated as a "hazardous substance" pursuant to the Clean Water Act, 33 U.S.C. §1251, et seq. (33 U.S.C. §1251); (vii) defined as a "hazardous waste" pursuant to the Resource Conservation and Recovery Act, 42 U.S.C. §6901, et seq. (42 U.S.C. §6901); (viii) defined as a "hazardous substance" pursuant to the Comprehensive Environmental Response,

Compensation, and Liability Act, 42 U.S.C. §9601, *et seq.* (42 U.S.C. §9601); (ix) defined as a "chemical substance" under the Toxic Substances Control Act, 15 U.S.C. §2601, *et seq.* (15 U.S.C. §2601); or (x) defined as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. §136, *et seq.* (7 U.S.C. §136).

"House Power" shall have the meaning set forth in Section 1.3.

"Institutional Investor" means, collectively, any Person or Persons who acquire a direct or indirect interest in Seller as part of a transaction to ensure that the Facility is owned at least partly by a Person able to use the PTCs and tax depreciation benefits associated with holding an ownership interest in the Facility (including any subsequent transferees of such Person or Persons).

"Institutional Investor Documents" means any document for the acquisition, of a direct or indirect interest in Seller by an Institutional Investor, and any and all amendments, modifications, or supplements to the foregoing that may be entered into from time to time at the discretion of the parties to such agreements.

"Interconnection Agreement" means the separate agreement(s) between Seller, its Affiliates and the Interconnection Provider for interconnection of the Facility to the Interconnection Provider's System, as such agreement may be amended from time to time. A copy of the executed Interconnection Agreement and all consents authorizing application of such agreement to the Facility is attached hereto as Exhibit M.

"Interconnection Facilities" means Interconnection Provider's Interconnection Facilities and Seller's Interconnection Facilities.

"Interconnection Provider" means the person or entity that owns the transmission lines, Interconnection Provider's Interconnection Facilities and other equipment and facilities with which the Facility interconnects at the Electric Interconnection Point. In this circumstance, the Interconnection Provider is the transmission function of Northern States Power Company, operating pursuant to applicable tariffs, including the TEMT.

"Interconnection Provider's Interconnection Facilities" means the facilities necessary to connect Interconnection Provider's existing electric system to the Electric Interconnection Point, including breakers, bus work, bus relays, and associated equipment installed by the Interconnection Provider for the direct purpose of interconnecting the Facility, along with any easements, rights of way, surface use agreements and other interests or rights in real estate reasonably necessary for the construction, operation and maintenance of such facilities. Arrangements for the installation and operation of the Interconnection Provider's Interconnection Facilities shall be governed by the Interconnection Agreement.

"Interconnection Provider's System" means the contiguously interconnected electric transmission and sub-transmission facilities, including

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Interconnection Provider's Interconnection Facilities, over which the Interconnection Provider has rights (by ownership or contract) to provide bulk transmission of capacity and energy from the Electric Interconnection Point.

"kW" means kilowatt.

"kWh" means kilowatt hour.

"Lender Consent" shall have the meaning set forth in Section 19.2.

"MISO" means the Midwest Independent Transmission System Operator, Inc., a non-profit Delaware corporation, or any successor organization.

"Moody's" means Moody's Investor Services, Inc. and any successor thereto.

"MPUC" means the Minnesota Public Utilities Commission or any successor agency.

"MRO" means the Midwest Reliability Organization, a NERC regional electric reliability council, or any successor organization.

"MW" means megawatt or one thousand (1000) kW.

"MWh" means megawatt hours.

"M-RETS" means the Midwest Renewable Energy Tracking System, established and approved by the MPUC in Docket No. E-999/CI-03-869.

"NERC" means the North American Electric Reliability Council or any successor organization.

"New Joint Transmission Authority" means any independent service organization or other Person that may be created or becomes operational subsequent to the date of this PPA and that is empowered or authorized to plan, coordinate, operate, regulate or otherwise manage any or all of the Interconnection Provider's System, whether in place of, or in addition to, MRO or MISO.

"Non-PTC Turbines" means the number of Wind Turbines resulting from the difference between (i) thirty-three (33) Wind Turbines and (ii) the number of PTC Eligible Turbines.

"Notice of Commercial Operation" shall have the meaning set forth in Section 4.8.

"On-Peak Months" means the months of January, February, June, July, August, September and December.

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"Operating Committee" means one representative each from Company and Seller pursuant to Section 10.5.

"Operating Procedures" means those procedures developed pursuant to Section 10.5, if any.

"Operating Records" means all agreements associated with the Facility, operating logs, blueprints for construction, operating manuals, all warranties on equipment, and all documents, whether in printed or electronic format, that Seller uses or maintains for the operation of the Facility, but not including any studies, analyses, or forecasts relating to the Facility that are deemed proprietary by Seller unless the same are expressly required hereunder (other than by virtue of any requirement relating to Operating Records) to be prepared by Seller and provided to Company for purposes of this PPA.

"Party" has the meaning set forth in the preamble of this PPA.

"Person" means an individual, partnership, corporation, limited liability company, joint venture, association, trust, unincorporated organization, Governmental Authority, or other form of entity.

"Point of Delivery" means the electric system point at which Seller makes available to Company and delivers to Company the Renewable Energy being provided by Seller to Company under this PPA. The Point of Delivery shall be at a location within MISO's operational control and specified in Exhibit B to this PPA and is the same as the Electric Interconnection Point.

"PPA" means this Wind Energy Purchase Agreement between Seller and Company, including the Exhibits attached hereto.

"Project Financing" means financing for the acquisition, construction, installation and/or operation of the Facility that is: (i) not obtained from any Affiliate of Seller, and (ii) the recourse on which is limited to the Facility (including all Facility contracts and agreements) and the revenues derived from the Facility.

### [Begin Trade Secret

### End Trade Secret]

"PTC Completion Notice" shall mean the notice provided pursuant to Section 4.10(B).

"PTC Deadline" means December 31,2008.

"PTC Eligible Turbines" means those Wind Turbines associated with the Facility that have achieved Wind Turbine PTC Completion on or before [Begin Trade Secret End Trade Secret]

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"PTCs" means Production Tax Credits under section 45 of the Code as in effect from time to time during the Term or any successor or other substantially equivalent provision providing for federal tax credit determined by reference to renewable electric energy produced from wind resources. For purposes of this definition, "substantially equivalent" means a federal income tax credit that, at a minimum, produces the same aggregate present value amount of tax credits (as determined by Seller in a commercially reasonable manner and expressed in dollars) over the same period of time (based on the reasonably expected Renewable Energy output of the Facility during such period) as is provided pursuant to 26 U.S.C. § 45 as in effect on the Effective Date of this PPA with respect to wind-powered electric generating facilities placed in service on or before December 31, 2008 and that includes an annual inflation adjustment factor at least equal to that currently provided pursuant to 26 U.S.C. §45 as in effect on the date of this PPA with respect to wind-powered electric generating facilities placed in service on or before December 31, 2008 and that includes an annual inflation adjustment factor at least equal to that currently provided pursuant to 26 U.S.C. §45 as in effect on the date of this PPA with respect to wind-powered electric generating facilities placed in service on or before December 31, 2008.

"Qualified Guarantor" means a Person who meets or exceeds the Ratings Limit and (1) publishes or provides to both Parties audited financial statements on an annual basis; (2) has substantial assets located in the United States; and (3) [*Begin Trade Secret* 

### End Trade Secret]

"Ratings Limit" means a long term credit rating (corporate or long-term senior unsecured debt (unenhanced by third party support, except third party support from any entity if it is a parent, or successor parent company of Iberdrola, S.A., or a direct or indirect majority-owned subsidiary of Iberdrola, S.A.)) of (a)(1) "Baa2" or higher by Moody's or (2) "BBB" or higher by S&P, or (b) if rated by Moody's and S&P, both (a)(1) and (a)(2).

"Renewable Energy" means all electric energy generated by the Facility, net of energy self-generated and concurrently consumed by the Facility, during the Term (which as of COD for the Facility is electric energy derived from an Eligible Energy Resource and at all times, is electdc energy derived from a technology that exclusively relies on a renewable energy source) including any and all associated Renewable Energy Credits and delivered to the Point of Delivery as measured by the Electric Metering Devices installed pursuant to Section 5.3. Renewable Energy shall be of a power quality of sixty (60) cycles, three-phase alternating current that is compliant with the Interconnection Agreement.

"Renewable Energy Credits" or "RECs" shall mean any contractual right to the full set of non-energy attributes, including any and all credits, benefits, emissions reductions, offsets, and allowances, howsoever entitled, directly attributable to a specific amount of capacity and/or Renewable Energy generated from the Facility (or, if expressly permitted by the terms of this Agreement, renewable energy generated from another Eligible Energy Resource) during the Term, including any and all environmental air quality credits, benefits, emissions reductions, off-sets, allowances, or other benefits as may be created or under any existing or future statutory or regulatory scheme (federal, state, or local) by virtue of or due to the Facility's actual energy production or the Facility's energy production capability because of the Facility's environmental or

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renewable characteristics or attributes, including any Renewable Energy Credits or similar rights arising out of or eligible for consideration in the M-RETS program. For the avoidance of doubt, "RECs" excludes (i) any local, state or federal PTCs, depreciation deductions or other tax credits providing a tax benefit to Seller based on ownership of, or energy production from, any portion of the Facility, including the investment tax credit that may be available to Seller with respect to the Facility under Minnesota law, and (ii) depreciation and other tax benefits arising from ownership or operation of the Facility unrelated to its status as a generator of renewable or environmentally clean energy.

[Begin Trade Secret

### End Trade Secret]

"ROFO" shall have the meaning set forth in Section 4.10(C)(3)(d).

"S&P" means Standard & Poor's Rating Group (a division of McGraw-Hill, Inc.) and any successor thereto.

"SCC" means the System Control Center, which is the Company's merchant representative(s) responsible for dispatch of generating units, including the Facility.

"Scheduled Maintenance" means a planned interruption/reduction of the Facility's generating capability for routine inspection, or preventive or corrective maintenance.

"Security Fund" means the letter of credit, guarantee and/or other collateral that Seller is required to establish and maintain, pursuant to Section 11.1, as security for Seller's performance under this PPA.

"Seller" has the meaning set forth in the preamble of this PPA.

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"Seller's Guarantor" means Seller's Initial Guarantor or any Qualified Guarantor providing a replacement Guarantee of Seller's obligations herein.

"Seller's Initial Guarantor" means IBERDROLA RENEWABLES Holdings,

Inc.

"Seller's Interconnection Facilities" means the equipment between the high side disconnect of the step-up transformer and the Electric Interconnection Point, including all related relaying protection and physical structures as well as all transmission facilities required to access the Interconnection Provider's System at the Electric Interconnection Point, along with any easements, rights of way, surface use agreements and other interests or rights in real estate reasonably necessary for the construction, operation and maintenance of such facilities. On the low side of the stepup transformer it includes Seller's metering, relays, and load control equipment as provided for in the Interconnection Agreement. This equipment is located within the Facility and is conceptually depicted in Exhibit B to this PPA.

"Site" means the parcel(s) of real property on which the Facility will be constructed and located, including any leaseholds, easements, rights of way, surface use agreements and other interests or rights in real estate reasonably necessary for the construction, operation and maintenance of the Facility. The Site is more specifically described in Section 3.2 and Exhibit B to this PPA.

[Begin Trade Secret

### End Trade Secret]

"TEMT" means the MISO Transmission Open Access and Energy Markets Tariff, as amended from time to time.

"Term" means the period of time during which this PPA shall remain in full force and effect, and which is further defined in Article 2.

"Test Energy" means that energy which is produced by the Facility and delivered to Company at the Point of Delivery which is necessary in order to perform testing of the Facility prior to Commercial Operation.

"Ultimate Parent Entity" of Seller shall have the meaning set forth under section 7A of the Clayton Act, 15 U.S.C. § 18a, aka the Hart-Scott-Rodino Antitrust Improvements Act of 1976.

"Wind Turbine PTC Completion" means with respect to any Wind Turbine and other portions of the Facility that it has been placed into service at its fully rated capacity and is fully operational to the full extent required to comply with section 45 of the Code and associated regulations for purposes of qualification for PTCs and in accordance with Good Utility Practice.

"Wind Turbine" means a single generating device powered by the wind that is included as part of the Facility (including its tower, pad transformer, and controller system).

## Article 2 - Term and Termination

This PPA shall become effective as of the Effective Date, and shall remain in full force and effect until midnight CPT on the tenth (10th) anniversary of the COD, subject to any early termination or extension provisions set forth herein (the "Term"). Applicable provisions of this PPA shall continue in effect after termination, including early termination, to the extent necessary to enforce or complete the duties, obligations or responsibilities of the Parties arising prior to termination and, as applicable, to provide for final billings and adjustments related to the period prior to termination, repayment of any money due and owing to either Party pursuant to this PPA, repayment of principal and interest associated with security funds, and the indemnifications specified in this PPA.

## Article 3 - Facility Description

3.1 <u>Summary Description</u>. Seller shall construct, own, operate, and maintain the Facility, which shall consist of thirty-three (33) Wind Turbines, GE Model 1.5SLE, and associated equipment having an Expected Facility Installed Capacity of approximately forty-nine point five (49.5) MW. Exhibit B to this PPA, provides a detailed description of the Facility, including identification of the equipment and components which make up the Facility.

3.2 Location. The Facility shall be located on the Site and shall be identified as Seller's "Moraine II" Facility. The address of the Facility is #4 151st Street, Woodstock, MN 56186. A scaled map that identifies the Site, the location of the Facility at the Site, the location of the Electric Interconnection Point, and the location of the important ancillary facilities and Interconnection Facilities is included in Exhibit B to this PPA.

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3.3 <u>General Design of the Facility</u>. Seller shall construct the Facility according to Good Utility Practice(s) and the Interconnection Agreement. During Commercial Operation, Seller shall maintain the Facility according to Good Utility Practice(s) and the Interconnection Agreement. In addition to the requirements of the Interconnection Agreement, the Facility shall at all times:

(A) have the required panel space and 125VDC battery supplied voltage to accommodate Company's metering, generator telemetering equipment and communications equipment; and

(B) use communication circuits from the Facility to Company's SCC for the purpose of telemetering, supervisory control/data acquisition, and voice communications as required by Company.

#### Article 4 - Commercial Operation

4.1 <u>Commercial Operation</u>. Subject to extension as specifically provided for herein and to Seller's rights to declare Commercial Operation with respect to less than the Expected Facility Installed Capacity pursuant to Section4.10, the Facility shall achieve the Commercial Operation Date, and shall be fully capable of reliably producing the Renewable Energy to be provided under this PPA and delivering such Renewable Energy to Company at the Point of Delivery, no later than the Commercial Operation Milestone; *provided, however,* that Seller shall not be obligated to establish a commercial Operation Date pursuant to Section 4.8 that is earlier than the Commercial Operation Milestone and Company shall not be obligated to establish a Commercial Operation Date pursuant to Section 4.8 that is earlier than October 1,2008.

#### [Begin Trade Secret

#### End Trade Secret]

4.3 <u>Site Report</u>. Seller shall conduct a Phase I environmental investigation of the Site and shall provide Company, on or before sixty (60) Days after the execution of this PPA, with a copy of the report summarizing such investigation, (and any other such data or information relating thereto that Company may reasonably request) and a reliance letter from the individual or entity preparing such Phase I environmental report addressed to Company. Seller shall provide to Company, with such report, confirmation from Seller that, based upon such investigation and to the best of Seller's knowledge, no conditions involving Environmental Contamination exist at or under the Site.

4.4 <u>Facility Contracts</u>. Seller shall provide to Company, within the time frames specified by the Construction Milestones, copies of the following major contracts which govern the design and construction of the Facility, and the ability of Seller to deliver Renewable Energy to Company at the Point(s) of Delivery: contracts for the manufacture, delivery and installation of the generating and step-up transformation equipment; engineering, procurement and construction ("EPC"), or other general contractor, agreements; applicable operating agreements; applicable electric

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transmission agreement and/or interconnection agreements. Upon reasonable notice and request by Company, Seller shall provide Company with other Facility construction contracts and major engineering drawings. Seller shall also provide Company with reasonable evidence that it has the capability to finance construction of the Facility. Information that is commercially sensitive, confidential or proprietary may be redacted from the documents provided to Company pursuant to this Section 4.4. Seller shall provide sufficient information for Company to be reasonably assured that Seller has contracted with financially responsible vendors as part of the Facility construction Notwithstanding the foregoing, in the event that Seller is prohibited from process. providing Company with copies of a contract as required by this Section 4.4 due to confidentiality agreements with third parties, Seller may alternatively provide Company with a Memorandum of Agreement substantially in the form attached hereto as Exhibit G executed by the Seller and the contractor party to such agreement, which Memorandum of Agreement shall set forth the basic terms of such contract, including without limitation the names of the parties thereto, the date of such contract, the services contracted, a detailed descriptions of any products to be provided (including but not limited to the make and model of any Wind Turbines), information sufficient for Company to determine that the EPC contract provides obligations necessary to meet the Construction Milestones, the identity of all subcontractors, and acknowledgement that the contractor is liable for liquidated damages in the event the service or delivery is not completed pursuant to the terms of the relevant contract.

4.5 <u>Progress Reports</u>. Commencing upon the execution of this PPA, Seller shall submit to Company, on the first Day of each calendar month until the Commercial Operation Date is achieved, progress reports in a form reasonably satisfactory to Company. These progress reports shall notify Company of the current status of each Construction Milestone and progress toward Wind Turbine PTC Completion and any installed capacity associated with the Facility. Progress reports will be similar in form and content to the form of progress report attached hereto as Exhibit O.

4.6 <u>Company's Rights During Construction</u>. Company shall have the right to monitor the construction, start-up and testing of the Facility, and Seller shall comply with all reasonable requests of Company with respect to the monitoring of these events. Seller shall cooperate in such physical inspections of the Facility as may be reasonably requested by Company during and after completion of construction prior to the Commercial Operation Date. All persons visiting the Facility on behalf of Company shall comply with all of Seller's applicable safety and health rules and requirements. Company's technical review and inspection of the Facility shall not be construed as endorsing the design thereof nor as any warranty of safety, durability, or reliability of the Facility.

4.7 <u>Permits</u>. Seller shall use commercially reasonable efforts to obtain, and shall pay for, all applicable environmental and other permits, licenses and approvals from any Governmental Authority required under Applicable Law for construction, ownership, operation and maintenance of the Facility ("Applicable Permits"). Company shall have the right to inspect and obtain copies of all Applicable Permits held by Seller. Seller will

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notify Company of any known inspections by any Governmental Authority relating to any Applicable Permit.

Conditions to Commercial Operation. Seller shall issue a notice when 4.8 Seller believes that all of the Conditions set forth in this Section 4.8 have been satisfied (the "Notice of Commercial Operation"). In so doing, Seller shall provide evidence reasonably acceptable to Company of the satisfaction or occurrence of all of the Conditions. The Company shall respond in writing within five (5) Business Days of receipt of Seller's Notice of Commercial Operation either (i) confirming to Seller that all of the Conditions have been satisfied or have occurred or (ii) stating with specificity those Conditions that it believes, in good faith, have not been satisfied or have not occurred. If Company advises Seller that it believes any Condition has not been satisfied or occurred, the Parties shall meet and confer in order to resolve all issues and reach mutual agreement in good faith on the steps that are reasonably required to demonstrate that the Conditions have been satisfied or occurred. The Company's confirmation shall not be unreasonably withheld or delayed and the Company's failure to respond within five (5) Business Days after receipt of Seller's Notice of Commercial Operation shall be deemed to constitute Company's confirmation to Seller of the satisfaction or occurrence of all Conditions. The Parties agree that review and approval of the evidence of achievement of the Conditions may occur on an ongoing and incremental basis, prior to the issuance of Seller's Notice of Commercial Operation, or pending resolution of any dispute, as such Conditions are satisfied. In the event Company reasonably determines the existence of deficiencies in Seller satisfying all Conditions, Company shall notify Seller of any deficiencies and, upon resolution of all deficiencies, Seller shall reissue its Notice of Commercial Operation. Upon Company's confirmation, or, if applicable, Company's deemed confirmation that all of the Conditions have been satisfied or have occurred, the Commercial Operation Date shall be established as the date on which Seller delivered the Notice of Commercial Operation establishing satisfaction of all Conditions. As used herein, the term "Conditions" means the following:

(A) Seller has successfully completed any testing of the Facility which is required by the Financing Documents, the Institutional Investor Documents, the Facility's governmental permits, Seller's operating agreements, Seller's EPC agreement, and manufacturers' warranties as required by such documents and agreements for the commencement of commercial operations at the Facility;

(B) an officer of Seller, familiar with the Facility, has provided a list of the Wind Turbines at the Facility, showing the make, model, serial number and designed nameplate capacity of each Wind Turbine and has certified the designed maximum output of the entire Facility, which shall not exceed forty-nine point five (49.5) MW.

(C) the Facility has achieved initial synchronization with the Interconnection Provider's System, and has demonstrated the reliability of its communications systems and communications with Company's SCC;

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(D) an independent professional engineer's certification has been obtained by Seller stating that the Facility has been completed in all material respects (excepting punch list items that do not materially and adversely affect the ability of the Facility to operate as intended hereunder) in accordance with this PPA;

(E) Seller has completed the following: (i) Seller has received written confirmation from the Interconnection Provider that Seller is both obligated under and in compliance with the Interconnection Agreement; (ii) Seller has received written confirmation from the interconnection Provider that the interconnection of the Facility to the Interconnection Agreement; (iii) Seller has been completed in accordance with the Interconnection Agreement; (iii) Seller has provided to Company a complete copy of the Interconnection Agreement, including all appendices attached thereto; (iv) Seller has undertaken to ensure that the Facility has been registered in the MISO network model; (v) the Facility has operated at a generation level acceptable to the Interconnection Provider, without experiencing any abnormal or unsafe operating conditions on any interconnected system, and (vi) any other testing of the Facility and/or Seller's Interconnection Facilities required by the Interconnection Agreement has been completed to the satisfaction of the Interconnection Facilities required by the Interconnection Agreement has been completed to the satisfaction of the Interconnection Provider;

(F) Seller has made all arrangements and executed all agreements required to deliver the Renewable Energy from the Facility to the Point of Delivery in accordance with the provisions of this PPA;

(G) all arrangements for the supply of required electric services to the Facility, including the supply of turbine unit start-up and shutdown power, House Power and maintenance power have been completed by Seller separate from this PPA, are in effect, and are available for the supply of such electric services to the Facility;

(H) the security arrangements meeting the requirements of Article 11 have been established;

(I) certificates of insurance evidencing the coverages required by Article 16 have been obtained and submitted to Company;

(J) Seller has submitted to Company a certificate of an officer of Seller familiar with the Facility after due inquiry stating that all permits, consents, licenses, approvals, and authorizations required to be obtained by Seller from any Governmental Authority to construct and/or operate the Facility in compliance with Applicable Law and this PPA have been obtained and are in full force and effect, and that Seller is in compliance with the terms and conditions of this PPA in all material respects; and

(K) To the extent required by an Governmental Authority, Seller has made all necessary governmental filings and/or applications for Renewable Energy Credit accreditation,

[Begin Trade Secret

#### End Trade Secret]

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[Begin Trade Secret

#### End Trade Secret]

(A) Seller shall diligently pursue the development and construction of the Facility using commercially reasonable efforts consistent with Good Utility Practice consistent with construction of a wind-energy conversion system in Minnesota during the last quarter of the year to achieve Wind Turbine PTC Completion for all Wind Turbines on or before the PTC Deadline. The Parties recognize that events of Force Majeure may cause Seller to not be able to place into service some or all of the Wind Turbines on or before *End Trade Secret* 

(B) All PTC Eligible Turbines shall be made available to Company to deliver Renewable Energy and Renewable Energy Credits and Company shall purchase the Renewable Energy and the Renewable Energy Credits on the terms and at the rates set forth in this PPA.

(1) All Non-PTC Turbines placed into service after **[Begin Trade End Trade Secret]** shall be treated in accordance with the applicable scenario described in Section 4.10(C).

(2) Within five (5) Business Days after [Begin Trade Secret End Trade Secret] Seller shall provide the PTC Completion Notice to Company, stating (i) the MW of installed capacity which satisfy the requirements of Wind Turbine PTC Completion, (ii) a plan and schedule for achieving Commercial Operation for such PTC Eligible Turbines as are covered by the PTC Completion Notice, and (iii) Seller's good faith estimate with backup calculations of the Adjusted Renewable Energy Payment Rate to be applicable to any Non-PTC Turbines. Seller and Company shall cooperate reasonably to verify the Adjusted Renewable Energy Payment Rate calculation; provided that if Seller and Company are unable to reach agreement regarding the Tax Benefits within [Begin Trade Secret End Trade Secret] Days after Company exercises its right of first offer pursuant to Section 4.10(C)(3)(d), Seller shall have no obligation to continue construction, or sell to Company the output, of the Non-PTC Turbines.

(C) The applicable scenario for the treatment of PTCs shall be implemented in accordance with the following terms:

(1) If PTCs are extended or an Equivalent PTC Benefit is in place on or before *[Begin Trade Secret End Trade Secret]* Seller shall make available the entire Facility

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(PTC Eligible Turbines plus Non-PTC Turbines) to deliver Renewable Energy and Renewable Energy Credits to Company, and Company shall purchase such Renewable Energy and Renewable Energy Credits, on the terms and at the rates set forth in this PPA. The Commercial Operation Milestone shall remain **[Begin Trade Secret End Trade Secret]** for all purposes.

(2) If PTCs are extended or an Equivalent PTC Benefit is in place after *End Trade Secret End Trade Secret End Trade Secret Seller shall make available the entire Facility (PTC Eligible Turbines plus Non-PTC Turbines) to deliver Renewable Energy and Renewable Energy Credits to Company and Company shall purchase the Renewable Energy and the Renewable Energy Credits on the terms and at the rates set forth in this PPA. The Commercial Operation Milestone shall remain April 1,2009 for all purposes.* 

(3) If PTCs are not extended or an Equivalent PTC Benefit is not in place as of **[Begin Trade Secret End Trade Secret]** and have not been extended or put in place by April 1, 2009:

(a) Seller shall be compensated under this PPA at the **[Begin Trade Secret End Trade Secret]** for all PTC Eligible Turbines until such time that Commercial Operation for the PTC Eligible Turbines is achieved pursuant to the PPA. The PPA shall automatically adjust the MW size of the Facility to equal the MW associated with the PTC Eligible Turbines for all purposes in this PPA related to the capacity of the Facility unless and until such time as the Company exercises its ROFO for all Non-PTC Turbines and the adjustment pursuant to Section 4.10(C)(3)(d)(iv) is made. **[Begin Trade Secret** 

End

Trade Secret]

(b) The Commercial Operation Milestone will remain **[Begin Trade Secret End Trade Secret]** but only for PTC Eligible Turbines. Seller shall be entitled to issue a Notice of Commercial Operation pursuant to Section 4.8 for the PTC Eligible Turbines and Company may not use the MW associated with the Non-PTC Eligible Turbines as a reason to reject a claim that such PTC Eligible Turbines have achieved Commercial Operation. Upon achieving Commercial Operation for the PTC Eligible Turbines, the Renewable Energy Payment Rate shall apply for the PTC Eligible Turbines.

#### [Begin Trade Secret

### .End Trade Secret]

(d) Company has a Right of First Offer ("ROFO") (but not an obligation) to purchase the output associated with the Non-PTC Turbines. The

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Company's ROFO must be exercised, if at all, by July 31, 2009, exercisable by Company sending written Notice to Seller (the "ROFO Notice"). In the ROFO Notice, Company has the following two options:

(i) If PTCs are extended or if an Equivalent PTC Benefit becomes effective prior to the timely exercise of the ROFO, the ROFO will apply to the Non-PTC Turbines in this PPA for all purposes including application of the Renewable Energy Payment Rate; or

(ii) If PTCs are not extended or if an Equivalent PTC Benefit is not in place prior to exercise of the ROFO, the ROFO will be for inclusion of the Non-PTC Turbines in this PPA for all purposes except that the Adjusted Renewable Energy Payment Rate shall apply to any Renewable Energy delivered to the Point of Delivery from the Non-PTC Turbines. Notwithstanding the foregoing, if PTCs are subsequently extended or an Equivalent PTC Benefit is put into place for the remainder of Term of the PPA which is applicable to the Non-PTC Turbines, **[Begin Trade Secret** 

#### End Trade Secret]

(iii) If Company exercises the ROFO, the Commercial Operation Milestone for the Non-PTC Turbines will be *[Begin Trade Secret* 

*End Trade Secret]* unless construction of the Facility is already complete, in which case the Commercial Operation Milestone for the Non-PTC Turbines shall be *[Begin Trade Secret] End Trade Secret]* after Seller's receipt of the ROFO Notice. The Non-PTC Turbines will be subject to satisfying all of the requirements of this PPA, including the Conditions set forth in Section 4.8. Delay Damages will apply to the non-operational Non- PTC Turbines if the applicable Commercial Operation Milestone is not achieved, subject to the Delay Damages cap.

(iv) If Company exercises its ROFO, then this PPA shall automatically adjust the MW size of the Facility to equal the MW associated with the PTC Eligible Turbines and Non-PTC Turbines for all purposes in this PPA related to the capacity of the Facility except as provided in this Section 4.10 [Begin Trade Secret

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[Begin Trade Secret

### End Trade Secret]

(5) If Company elects to purchase Renewable Energy and Renewable Energy Credits delivered from the Non-PTC Turbines to the Point of Delivery at the Adjusted Renewable Energy Payment Rate, Seller shall install or cause to be installed separate metering devices prior to the Point of Delivery which shall separately measure output for each of the separate applicable payment rates. Seller shall ensure that such meters operate and are adjusted on the same basis and to the same extent as the Electric Metering Devices as set forth in Section 5.3.

#### Article 5 - Delivery and Metering

#### 5.1 Delivery Arrangements.

(A) Seller shall be responsible for all interconnection, electric losses, transmission and ancillary service arrangements and costs required to deliver, on a firm transmission service basis, the Renewable Energy and Test Energy from the Facility to Company at the Point of Delivery.

Company shall be responsible for all electric losses, transmission (B) and ancillary service arrangements and costs required to receive the Renewable Energy and Test Energy from the Point of Delivery and deliver such energy to points beyond the Point of Delivery. If at any time during the Term, either Company or the entity owning the transmission facilities at the Point of Delivery ceases to be a member of MISO or the facilities at the Point of Delivery cease to be subject to the TEMT, then the Parties shall cooperate in good faith to amend this PPA in a manner to facilitate the delivery of Renewable Energy from the Point of Delivery to Company's customers at the least possible cost to Company; provided, however, that Company will remain responsible for all such costs and Seller shall have no liability for such costs. Subject to Section 8.2, Company may elect, at Company's sole option, whether to obtain and utilize firm transmission service or non-firm transmission service for the delivery of Renewable Energy from the Point of Delivery. In the event Company elects to utilize non-firm transmission service for the delivery of Renewable Energy from the Point of Delivery, any curtailment of Seller's generation which occurs, as a result of the curtailment of such non-firm transmission service by the applicable transmission service provider, shall be compensated as provided for in Section 8.2.

(C) Seller shall coordinate with Company and MISO to register the Facility in the MISO energy market for purposes of delivering in MISO in a manner that reflects the output of the Facility. Company shall be designated as the "Market

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Participant" as defined in the TEMT with respect to the Facility. Seller shall cooperate with and provide information to Company to the extent necessary for Company to submit schedules to the MISO for the output of the Facility in accordance with the TEMT. Company will act as Market Participant on Seller's behalf and pursuant to Seller's instructions during periods (if any) in which Seller is authorized to sell Renewable Energy from the Facility to third parties pursuant to Section 7.5. In the event of a Company Event of Default and upon receiving notice from Seller, Company shall take all such actions as may be required to cease to be the Market Participant with respect to the output of the Facility no later than the Early Termination Date.

5.2 <u>Availability Reporting</u>. Seller shall be responsible for providing accurate and timely updates on the current availability of the Facility to Company's SCC.

### 5.3 <u>Electric Metering Devices</u>.

(A) Seller shall ensure that the Renewable Energy sold and delivered pursuant to this PPA shall be metered and accounted for separately from any electric generation facility that utilizes the same Electric Interconnection Point. Seller shall ensure that Electric Metering Devices are installed at or near the Electric Interconnection Point that measures the output of the Facility before such energy is commingled with the energy from any other project.

(B) The following provisions of this Section 5.3 shall govern Electric Metering Devices except to the extent the Interconnection Agreement modifies or otherwise conflicts with these provisions, in which case, the Interconnection Agreement shall govern.

(C) All Electric Metering Devices used to measure the Renewable Energy made available to Company by Seller under this PPA and to monitor and coordinate operation of the Facility shall be owned, installed, and maintained in accordance with the Interconnection Agreement at no cost to Company under this PPA. If Electric Metering Devices are not installed at the Point of Delivery, meters or meter readings will be adjusted to reflect losses from the Electric Metering Devices to the Point of Delivery based initially on the amount specified by the manufacturer for expected losses; provided, however, that the Operating Committee may revise this loss adjustment based on actual experience. Seller shall provide or arrange with the Interconnection Provider to provide Company reasonable access to all Electric Metering Devices for all purposes necessary to perform under this PPA and shall provide Company the reasonable opportunity to be present at any time when such Electric Metering Devices are to be inspected and tested or adjusted. Seller shall provide Company with all authorizations necessary to have access to the Electric Metering Devices, including obtaining any consent or other agreement from the Interconnection Provider necessary to allow Company such access.

(D) Either Company or Seller may elect to install and maintain, at its own expense, backup metering devices ("Back-Up Metering") in addition to the Electric Metering Devices, which installation and maintenance shall be performed in a manner

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acceptable to Company. The installing Party, at its own expense, shall inspect and test Back-Up Metering upon installation and at least annually thereafter. The installing Party shall provide the other Party with reasonable advance notice of, and permit a representative of the other Party to witness and verify, such inspections and tests; provided, however, that such Party shall not unreasonably interfere with or disrupt the activities of the installing Party and shall comply with all applicable safety standards. Upon written request, the installing Party shall perform additional inspections or tests of Back-Up Metering and shall permit a qualified representative of the requesting Party to inspect or witness the testing of Back-Up Metering; provided, however, that the requesting Party shall not unreasonably interfere with or disrupt the activities of the installing Party and shall comply with all applicable safety standards. The actual expense of any such requested additional inspection or testing shall be borne by the Party requesting the test, unless, upon such inspection or testing, Back-Up Metering is found to register inaccurately by more than the allowable limits established in this Article 5, in which event the expense of the requested additional inspection or testing shall be borne by the installing Party. If requested in writing, the installing Party shall provide copies of any inspection or testing reports to the requesting Party.

(E) If any Electric Metering Devices, or Back-Up Metering, are found to be defective or inaccurate outside the bounds of the selected device's manufacturer's performance standards, they shall be adjusted, repaired, replaced, and/or recalibrated as near as practicable to a condition of zero error by the Party owning such defective or inaccurate device and at that Party's expense.

5.4 <u>Adjustment for Inaccurate Meters</u>. If an Electric Metering Device, or Back-Up Metering, fails to register, or if the measurement made by an Electric Metering Device, or Back-Up Metering, is found upon testing to be inaccurate by more than one percent (1.0%), an adjustment shall be made correcting all measurements by the inaccurate or defective Electric Metering Device, or Back-Up Metering, for both the amount of the inaccuracy and the period of the inaccuracy, in the following manner:

In the event that the Electric Metering Device is found to be (A) defective or inaccurate, the Parties shall use Back-up Metering, if installed, to determine the amount of such inaccuracy; provided, however, that Back-Up Metering has been tested and maintained in accordance with the provisions of this Article 5. If Back-Up Metering is installed on the low side of Seller's step-up transformer, the Back-Up Metering data shall be adjusted for losses in the same manner as for the Electric Metering Devices. In the event that Back-Up Metering is not installed, or Back-Up Metering is also found to be inaccurate by more than one percent (1.0%), the Parties shall use the SCADA data collected at each Wind Turbine in the Facility for the period of inaccuracy, adjusted as agreed by the Parties for losses occurring between the Facility and the Point of Delivery. If such SCADA data is incomplete or unavailable, the Parties shall estimate the amount of the necessary adjustment on the basis of deliveries of Renewable Energy from the Facility and to the Point of Delivery during periods of similar operating conditions when the Electric Metering Device was registering accurately. The adjustment shall be made for the period during which inaccurate measurements were made.

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(B) In the event that the Parties cannot agree on the actual period during which the inaccurate measurements were made, the period during which the measurements are to be adjusted shall be the shorter of *[Begin Trade Secret*]

### . End Trade Secret]

(C) To the extent that the adjustment period covers a period of deliveries for which payment has already been made by Company, Company shall use the corrected measurements as determined in accordance with this Article 5 to recompute *[Begin Trade Secret*]

, *End Trade Secret]* if the difference is a positive number, the difference shall be paid by Company to Seller; if the difference is a negative number, that difference shall be paid by Seller to Company, or at the discretion of Company, may take the form of an offset to payments due Seller by Company. Payment of such difference by the owing Party shall be made not later than *[Begin Trade Secret End Trade Secret]* Days after the owing Party receives notice of the amount due if Seller is the owing Party, and not later than *[Begin Trade Secret End Trade Secret]* Days after Company calculates the recomputed amount if Company is the owing Party, unless Company elects payment via an offset.

### Article 6 Conditions Precedent

6.1 <u>Company Conditions Precedent</u>. The obligation of Company under this PPA to purchase Renewable Energy shall be subject to the satisfaction or waiver by Company, in its sole discretion, of each of the following conditions precedent; *provided, however,* that Company shall make a good faith effort to satisfy the conditions precedent set forth in this Section 6.1:

(A) MPUC Approval.

(1) No later than forty-five (45) Days after the Effective Date of this PPA, Company may request an affirmative determination from the MPUC that Company's execution of this PPA is approved, that this PPA as reasonable, in the public interest, and costs incurred hereunder are recoverable from the retail customers pursuant to Minn. Stat. §216B.1645, and that the Company's purchase under this PPA must be found (i) to be exempt from all bidding or competitive procurement programs applicable to Company's purchase of Renewable Energy, and (ii) eligible for use in Company's WindSource renewable energy green pricing program; *provided, however,* that the MPUC approval shall not be deemed to fail to satisfy the requirement of this paragraph (1) merely because it provides that the MPUC Approval"). Company shall use commercially reasonable efforts to obtain MPUC Approval, and Seller shall cooperate reasonably with Company's efforts to seek MPUC Approval, if Company seeks MPUC Approval. If Company fails to apply for MPUC Approval within forty five

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(45) Days following the Effective Date of this PPA, Company shall be deemed to have waived its rights under this Section 6.1(A).

(2) In the event that Company applies for MPUC Approval timely under Section 6.1(A)(1), Company shall have the right to terminate this PPA, without any further financial or other obligation to Seller as a result of such termination, by notice to Seller at any time within six (6) months following the Effective Date of this PPA, as a consequence of the failure of Company, despite Company's commercially reasonable efforts, to obtain MPUC Approval without conditions unsatisfactory to Company. Absent such notice of termination by Company on or before the referenced date, Company shall be deemed to have waived its rights under this Section 6.1(A), and this PPA shall remain in full force and effect thereafter.

(B) <u>Accounting Matters</u>. Company must confirm (in consultation with its auditors) that this PPA will not be considered a capital lease under Statement of Financial Accounting Standards No. 13, or require consolidation of Seller's financial information with Company's financial statements pursuant to FASB Interpretation FIN-46. Company shall have the right to terminate this PPA, without any further financial or other obligation to Seller as a result of such termination, by notice to Seller at any time within ninety (90) Days following the Effective Date of this PPA, based upon failure by Company to have the foregoing matters confirmed to its satisfaction.

(C) <u>Board Approval</u>. This PPA is subject to review and approval by Company's Board of Directors. Promptly after the date of this PPA, Company shall submit this PPA to its Board of Directors for consideration at its next regularly scheduled board meeting. In the event that the Company Board of Directors fails to affirmatively approve this PPA at such meeting and Company has not otherwise waived this condition in writing, Company shall have the right to terminate this PPA, without any further financial or other obligation to Seller as a result of such termination, by notice to Seller at any time within ten (10) Days following such board meeting; *provided, however*, that Company's right to terminate pursuant to this Section 6.1(C) must be exercised, if at all, no later than sixty (60) Days after the Effective Date.

6.2 <u>Seller Conditions Precedent</u>. The obligation of Seller under this PPA to make available Renewable Energy shall be subject to the satisfaction or waiver by Seller, in its sole discretion, of the following conditions precedent:

(A) Seller obtaining all company, partnership and corporate approvals required by Affiliates of Seller in connection with this PPA, including the approval of the board of directors of IBERDROLA RENEWABLES, Inc. In the event that the approvals contemplated under this Section 6.2(A) have not been obtained within **[Begin Trade Secret End Trade Secret]** Days after the Effective Date and Seller has not otherwise waived this condition in writing, Seller shall have the right to terminate this PPA, without any further financial or other obligation to Company as a result of such termination, by notice to Seller no later than **[Begin Trade Secret]** Days after the Effective Date;

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(B) Seller's Interconnection Agreement and associated consents are accepted for filing by FERC on or before *[Begin Trade Secret End Trade Secret]* Absent such notice of termination or waiver of the condition by Seller on or before the referenced date, Seller shall be deemed to have waived its rights under this Section 6.2(B), and this PPA shall remain in full force and effect thereafter; *provided, however,* that Seller shall make a good-faith effort to satisfy the conditions precedent set forth in this Section 6.2. This PPA may be terminated according to the timelines set forth herein prior to the expiration of the Term, upon thirty (30) Days notice of termination, by Seller for failure to satisfy or waive, in its sole discretion, the conditions precedent set forth in this Section 6.2.

6.3 <u>Effect of Termination</u>. Upon the giving of a notice of termination pursuant to and in accordance with either Section 6.1 or 6.2, this PPA shall terminate and neither Seller nor Company shall have any further financial or other obligations under this PPA, and Company shall release to Seller the then-current Security Fund, if any (including any accumulated interest, if applicable, and without deduction for damages of any kind). If either Party is entitled to terminate this PPA pursuant to Section 6.1 or 6.2 but fails to do so by giving written notice to the other on the timelines set forth above, then such termination right shall lapse and be of no further force or effect.

### Article 7 - Sale and Purchase of Renewable Energy

7.1 <u>Sale and Purchase</u>. Beginning on the Commercial Operation Date, Seller shall generate from the Facility, deliver to the Point of Delivery, and sell to Company, at the applicable price set forth in Article 8, all Renewable Energy generated by the Facility. Beginning on the Commercial Operation Date, Company shall purchase from Seller, at the applicable price set forth in Article 8, all Renewable Energy generated by the Facility and delivered to the Point of Delivery. *[Begin Trade Secret*]

### End Trade

#### Secret]

7.2 <u>Committed Renewable Energy</u>. Committed Renewable Energy is one hundred-seventy-three thousand eight hundred eighty two (173,882) MWh of Renewable Energy delivered to Company in any Commercial Operation Year, unless adjusted pursuant to Section 4.10(B).

7.3 <u>Title and Risk of Loss</u>. As between the Parties, Seller shall be deemed to be in control of the Renewable Energy and Test Energy output from the Facility up to and until delivery and receipt at the Point of Delivery and Company shall be deemed to be in control of such Renewable Energy and Test Energy from and after delivery and receipt at the Point of Delivery. Title and risk of loss related to the Renewable Energy and Test Energy shall transfer from Seller to Company at the Point of Delivery.

7.4 <u>Company's Right to Curtail Energy</u>. Company shall have the right to notify Seller, by telephonic communication from the SCC, to curtail the delivery of Renewable Energy to Company from the Facility and to the Point of Delivery, and Seller shall as soon as practicable comply with such notification. Company may provide such

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notification for any reason and in its sole discretion. Seller shall install, or arrange for the Interconnection Provider to install pursuant to the Interconnection Agreement, equipment necessary to disconnect the Facility. Seller and Company shall each use commercially reasonable efforts to develop a mutually acceptable procedure for Company to notify Seller of curtailments.

#### [Begin Trade Secret

### . End Trade Secret]

7.7 <u>Reductions in Delivery</u>. The obligation of Seller to make available to Company the Renewable Energy pursuant to this PPA is on an as-generated, instantaneous basis and is contingent on the availability of each Wind Turbine. For the avoidance of doubt, and in no way limiting the foregoing:

(A) [Begin Trade Secret

End Trade Secret] Seller shall provide

Company with

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notice and expected duration (if known) of any **[Begin Trade Secret End Trade Secret]** pursuant to the provisions of Section 10.4.

#### [Begin Trade Secret

### End Trade Secret]

Provided that, notwithstanding Seller's right to reduce deliveries as set forth in this Section 7.7, any such reduced deliveries shall be accounted for in the calculation of Seller's obligations under Section 12.1(C)(5) as provided for therein. For the avoidance of doubt, nothing in this Section 7.7 alters or amends the obligations and calculations as set forth in Section 12.1(C)(5).

#### Article 8 - Payment Calculations

8.1 <u>Energy Payment Rate</u>. Except as modified pursuant to Section 4.10, commencing on the Commercial Operation Date of the Facility, Company shall pay Seller for all Renewable Energy delivered to Company by Seller to the Point of Delivery in a Commercial Operation Year, and net of losses prior to the Point of Delivery, *[Begin Trade Secret*]

#### End Trade Secret] For

avoidance of doubt, and except as specifically provided for under Section 8.2, Company shall not be obligated to make any payment to Seller under this Article 8 for any energy which, regardless of reason or event of Force Majeure affecting either Party,

(A) does not qualify as Renewable Energy,

(B) is not measured by the Electric Metering Device(s) installed pursuant to Section 5.3, as such measurement may be adjusted pursuant to Section 5.4, or

- (C) is not delivered to Company at the Point of Delivery.
- 8.2 <u>Curtailment Energy Payment Rate</u>.

(A) If (i) delivery of Renewable Energy is curtailed by Company pursuant to Section 7.4, or (ii) Company elects to utilize non-firm transmission service(s) to deliver Renewable Energy from the Point of Delivery to Company load and deliveries

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of Renewable Energy to Company are curtailed as a result of the curtailment of such non-firm transmission service(s) by the applicable transmission service provider, then

(1) Seller shall determine the Renewable Energy that would have been produced by the Facility and delivered to the Point of Delivery had its generation not been so curtailed ("Curtailment Energy"); and

## [Begin Trade Secret

End Trade Secret]

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#### Article 9 - Billing and Payment

9.1 <u>Billing Invoices</u>. The billing period under this PPA shall be the calendar month. No later than **[Begin Trade Secret End Trade Secret]** Business Days after the end of each month, Seller shall provide to Company, by first-class mail, an invoice for the amount due Seller by Company, under this PPA, for the services provided by Seller and purchased by Company, under this PPA, during the billing period covered by the statement. Seller's invoice will show all billing parameters, rates and factors, and any other data reasonably pertinent to the calculation of monthly payments due to Seller. Seller's invoice shall be in such form as Company may reasonably request from time to time. Billing disputes shall be resolved in accordance with Section 9.5.

9.2 <u>Metered Billing Data.</u> All billing data based on metered deliveries to Company shall be collected by the Electric Metering Device(s) in accordance with Article 5.

### [Begin Trade Secret

### End Trade Secret]

9.4 <u>Payments</u>. Unless otherwise specified herein, payments due under this PPA shall be due and payable by electronic funds transfer, to such account as the payee designates in writing to the payor, on or before the *[Begin Trade Secret End Trade Secret]* Business Day following receipt of the billing invoice. If the amount due is not paid on or before the due date, a late payment charge shall be applied to the unpaid balance and shall be added to the next billing statement. Such late payment charge shall be calculated based on an annual interest rate equal to *[Begin Trade Secret* 

### . End

*Trade Secret]* If the due date occurs on a Day that is not a Business Day, the late payment charge shall begin to accrue on the next succeeding Business Day.

9.5 <u>Billing Disputes</u>. Either Party may dispute invoiced amounts, but shall pay to the other Party at least the undisputed portion of invoiced amounts on or before the invoice due date. Neither Party shall have the right to dispute any invoiced amounts unless the disputing Party notifies the other Party in writing of such dispute within *[Begin Trade Secret End Trade Secret]* years of the date of the related invoice. To resolve any billing dispute, the Parties shall use the procedures set forth in Section 13.10. The Parties shall first attempt to resolve billing disputes informally. When the billing dispute is resolved, the Party owing shall pay the amount owed within *[Begin Trade Secret End Trade Secret]* Business Days of the date of such resolution, with late payment interest charges calculated on the amount owed in accordance with the provisions of Section 9.4.

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9.6 <u>Netting</u>. Seller and Company shall net their obligations to each other under this PPA, then such amounts will be aggregated and Seller and Company will discharge their obligations to pay through netting of payments. If the amounts owed by Company or Seller to the other are equal, neither shall be required to make payment under this PPA. Undisputed and non-offset portions of amounts invoiced under this PPA shall be paid on or before the due date or shall be subject to the late payment interest charges set forth in Section 9.4.

### Article 10 - Operations and Maintenance

10.1 <u>Maintenance Schedule</u>. Maintenance schedule requirements for the Facility shall be communicated to Company in advance.

10.2 <u>Facility Operation</u>. Seller shall comply with all requirements of law and Good Utility Practice in the operation of the Facility as well as the requirements of MISO, MRO and any New Joint Transmission Authority. Seller shall staff, control, and operate the Facility consistent at all times with Good Utility Practice(s) and any Operating Procedures developed pursuant to Section 10.5. Personnel capable of starting, operating, and stopping the Facility shall be continuously available, either at the Facility, or capable of remotely starting, operating, and stopping the Facility within *[Begin Trade Secret End Trade Secret]* minutes and capable of being at the Facility with no more than *[Begin Trade Secret]* minutes and capable of being the Facility shall be continuously reachable of starting, operating and stopping the Facility shall be continuously reachable by phone or pager.

10.3 <u>Capacity Accreditation</u>. Company has certain planning, operating and reporting requirements for compliance with applicable generation testing requirements for accreditation of the Facility. Company desires that any capacity provided to Company in connection with the Facility be Accreditable Capacity, and without assuming responsibility therefor, Seller shall cooperate with Company to that end by assisting Company and providing to Company, upon request, any relevant available data that is maintained and compiled by Seller in the ordinary course of operating the Facility; *provided, however,* that Seller shall not be required to incur any incremental costs in doing so and that Seller shall provide such data pursuant to Section 20.16 to the extent that such information is proprietary or confidential. Seller makes no warranty or representation regarding the existence of, or Company's possible ability to be credited with any current or future capacity attributes or other capacity characteristics.

#### 10.4 Outage and Performance Reporting.

(A) Seller shall comply with all current NERC, MRO, and MISO generating unit outage reporting requirements and reliability standards, as they may be revised from time to time, and as they apply to the Facility.

(B) When Forced Outages occur that reduce the generating capability of the Facility by more than *[Begin Trade Secret End Trade Secret]* or more, Seller shall notify Company's SCC of the existence, nature, and expected duration of the Forced Outage as soon as practical, but in no event later than *[Begin Trade Secret End Trade Secret]* after the Forced Outage

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occurs. Seller shall promptly inform Company's SCC of changes in the expected duration of the Forced Outage unless relieved of this obligation by Company's SCC for the duration of each Forced Outage.

(C) Commencing upon COD and continuing through the Term, Seller shall electronically provide the energy production data from the Facility [Begin Trade Secret End Trade Secret] intervals, [Begin Trade Secret End Trade Secret] (Production Data) to Company and allow Company to disclose such Production Data publicly on an aggregated or annual basis without attribution to the specific Facility location or to Seller and the provision of such data will be pursuant to the terms of Section 20.16 herein. Nothing in this paragraph shall restrict Company's right to disclose Production Data to contractors and consultants of Company in accordance with the terms of Section 20.16.

10.5 Operating Committee and Operating Procedures.

[Begin Trade Secret

## End Trade Secret]

10.6 <u>Access to Facility</u>. Appropriate representatives of Company shall at all reasonable times, including weekends and nights, and with reasonable prior notice, have access to the Facility to read meters and to perform all inspections, maintenance, service, and operational reviews as may be appropriate to facilitate the performance of this PPA. While at the Facility, such representatives shall observe such reasonable safety precautions as may be required by Seller and shall conduct themselves in a manner that will not interfere with the operation of the Facility.

10.7 <u>Reliability Standards</u>. Seller shall operate the Facility in a manner that complies with all national and regional reliability standards, including standards set by NERC, the FERC, MRO and the MPUC, or any successor agencies setting reliability standards for the operation of generation facilities. To the extent that Seller or the Facility fails to comply with reliability standards applicable to Seller or the Facility for which Seller is the entity responsible for ensuring compliance and such failure contributes in whole or in part to actions that result in monetary penalties being assessed to Company by MRO,

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NERC, or any successor agency, for lack of compliance with reliability standards, Seller shall reimburse Company for its proportionate share of such monetary penalties.

10.8 <u>Environmental Credits</u>. The Parties acknowledge that existing legislation creates and future legislation or regulation may create value in the ownership, use or allocation of RECs. To the full extent allowed by such law or regulation, Company shall own or be entitled to claim all RECs to the extent such credits may exist during the Term (including RECs generated in connection with Test Energy) associated with Renewable Energy purchased by Company hereunder. To the extent necessary, Seller shall assign to Company all rights, title and authority for Company to own, hold and manage such credits in Company's own name and to Company's account. *[Begin Trade Secret*]

#### End Trade

**Secret***J* For each month during the Term, all Renewable Energy Credits associated with Renewable Energy made available by Seller during such month shall be transferred in accordance with M-RETS, and Seller and Company shall take all action necessary to ensure the proper transfer of the Renewable Energy Credits from Seller to Company. In the event that Renewable Energy Credits are not fully accounted for by M-RETS or its successor, Company and Seller shall take all necessary action to ensure the proper transfer of such Renewable Energy Credits from Seller to Company shall be transfer of such Renewable Energy Credits from Seller to Company shall be ar the costs associated with all such transfers.

10.9 <u>Peak Production Availability</u>. During any Business Day of an On-Peak Month, Seller shall use commercially reasonable efforts to (i) minimize the amount of Scheduled Maintenance on Wind Turbines as compared to such Scheduled Maintenance during non-peak months, and (ii) minimize the extent and duration of Forced Outages.

#### Article 11 - Security for Performance

#### 11.1 SecuriNFund.

(A) Seller agrees to establish, fund, and maintain a Security Fund, pursuant to the provisions of this Article 11, which shall be available to pay any amount due Company pursuant to this PPA, and to provide Company security that Seller will construct the Facility to meet the Construction Milestones. **[Begin Trade Secret** 

Trade Secret]

End

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[Begin Trade Secret

#### End Trade Secret]

(C) The Security Fund shall be maintained at Seller's expense. If Seller provides the Security Fund using one or more instrument(s) of the types set forth in Sections 11.1(C)(1) or (C)(2), such Security Fund shall be originated by or deposited in a financial institution or company that is a major United States commercial bank or foreign bank with a United States branch office, with an unsecured, senior long-term debt obligations rating, unenhanced by third party support, equivalent to A-/A.3 or better as determined by at least two (2) rating agencies, one of which must be either Standard and Poors or Moodys (or if either one or both are not available, equivalent ratings from alternate rating sources reasonably acceptable to Company) ("Issuer"). In addition, if such unsecured, senior long-term debt obligations rating of the Issuer is exactly equivalent to A-/A.3 the Issuer must not be on credit watch or negative outlook by a rating agency. The Security Fund shall be comprised of instruments complying with Sections 11.1(C)(1), (2), or (3), or any combination thereof. Seller may change the form of the Security Fund from time to time in accordance with this Section 11.1 upon reasonable prior notice to Company, but the Security Fund must at all times be comprised of one or any combination of the following:

(1)An irrevocable standby letter of credit or a performance bond, substantially in the form and substance of Exhibit F and acceptable to Company, from an Issuer. Security provided in this form shall be consistent with this PPA and include a provision for at least [Begin Trade Secret End Trade Secreti Davs' advance notice to Company of any expiration or earlier termination of the security so as to allow Company sufficient time to exercise its rights under said security if Seller fails to extend or replace the security. If the security is not renewed or extended as required herein. Company shall have the right to draw immediately upon the security and to place the amounts so drawn, at Seller's cost and with Seller's funds, in an interest-bearing escrow account in accordance with subparagraph (2), until and unless Seller provides a substitute form of such security meeting the requirements of this Article 11. Security in the form of an irrevocable standby letter of credit shall be governed by the Uniform Customs and Practice for Documentary Credits (2007 Revision), International Chamber of Commerce Brochure No. 600.

(2) U.S. currency, deposited with an Issuer, in which Company holds a first and exclusive perfected security interest pursuant to an account control or similar agreement, either (i) in an account under which Company is designated as

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beneficiary with sole authority to draft from the account or otherwise access the security or (ii) held by Issuer as escrow agent with instructions to pay claims made by Company pursuant to this PPA, such instructions to be in a form satisfactory to Company. Security provided in this form shall include a requirement for immediate notice to Company from Issuer and Seller in the event that the sums held as security in the account or trust do not at any time meet the required level for the Security Fund as set forth in this Section 11.1. Funds held in the account may be deposited in a moneymarket fund, short-term treasury obligations, investment-grade commercial paper and other liquid investmentgrade investments with maturities of three (3) months or less as may be specified by Seller, with all investment income thereon to be taxable to, and to accrue for the benefit of, Seller. After the Commercial Operation Date is achieved, quarterly account sweeps for recovery of interest earned by the Security Fund shall be allowed by Seller. At such times as the balance in the escrow account exceeds the amount of Seller's obligation to provide security hereunder, Company shall remit to Seller on demand any excess in the escrow account above Seller's obligations.

(3) A guarantee which is commercially reasonably acceptable to Company and substantially in the form attached hereto as Exhibit H, from Seller's Guarantor which satisfies the Ratings Limit.

Company may reevaluate from time to time the value of any (D) guarantee posted by Seller to determine, in a commercially reasonable manner, whether (i) Seller's Guarantor continues to satisfy the requirements of a "Seller's Guarantor" in this PPA or (ii) there has been a material adverse change in the creditworthiness of Seller's Guarantor, such that with the passage of time, Seller's Guarantor will no longer satisfy the requirements of a Seller's Guarantor in this PPA. If Company determines, in a commercially reasonable manner, that there has been an event pursuant to Section 11 .I(D)(i) or 11 .I(D)(ii) with respect to Seller's Guarantor that has caused, or will cause, with the passage of time, Seller's Guarantor to no longer satisfy the requirements of a Seller's Guarantor under this PPA, then Company shall provide prompt written notice to Seller of such event and after receipt of such notice, Seller shall be required to convert the guarantee provided by Seller's Guarantor to a Security Fund instrument meeting the criteria set forth in either Section 11.1(C)(1) or 11.1(C)(2) or to a guarantee from a Qualified Guarantor no later than thirty (30) Days after receiving notice from Company that such conversion is required pursuant to this paragraph (D).

(E) Promptly (i) following the end of the Term and the completion of all of Seller's obligations under this PPA, or (ii) upon Company's or Seller's exercise of its right to terminate this PPA pursuant to Article 6, Company shall release the balance of the Security Fund (including any accumulated interest, if applicable) to Seller.

(F) [Begin Trade Secret

End Trade Secret]

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### [Begin Trade Secret

#### .End Trade Secret]

11.2 <u>Additional Security</u>. Seller is required to provide the additional security described in this Section 11.2 only during those periods of time (if any) in which the *[Begin Trade Secret* 

#### End Trade Secret]

#### (A) [Begin Trade Secret

#### End Trade Secret]

(B) Seller agrees, and shall cause the Facility Lender to agree and the Financing Documents to provide, *[Begin Trade Secret* 

End Trade Secret] and (ii)

that, as long as Company is not in material default of its obligations under this PPA, the Facility and any party taking possession of the Facility through the exercise of the Facility Lender's rights and remedies shall remain subject to the terms of this PPA (including the obligation to reinstate the *[Begin Trade Secret End Trade Secret]* subject to the terms of this Section 11.2, following any foreclosure by the Facility Lender) and shall assume all of Seller's obligations hereunder, both prospective and accrued, including the obligation to cure any then-existing defaults capable of cure by performance or the payment of money damages. The collateral secured by the *[Begin Trade Secret]* 

**End Trade Secret]** shall not include the pledge, assignment, or other interest in any stock or ownership interest in Seller; *provided, however*, that Seller shall not pledge or assign, or cause or permit to be pledged or assigned, any stock or ownership interest in Seller as collateral to any party other than the Facility Lender without the prior consent of Company.

(C) Company agrees to cooperate with Seller and diligently negotiate in good faith, at Seller's request, to establish the form of these agreements and to execute and deliver such agreements as reasonably necessary to enable Seller to meet the Construction Milestones. *[Begin Trade Secret* 

*End Trade Secret]* In addition, Seller agrees to execute and file such Uniform Commercial Code financing statements and to take such further action and execute such further instruments as shall reasonably be required by Company to confirm and continue the *[Begin Trade Secret*]

#### End Trade Secret]

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Begin Trade Secret

End Trade Secret]

#### Article 12 - Default and Remedies

#### 12.1 Events of Default of Seller.

(A) Any of the following shall constitute an Event of Default of Seller [Begin Trade Secret End Trade Secret]

## (1) Seller's dissolution or liquidation;

(2) Seller's assignment of this PPA or any of its rights hereunder for the benefit of creditors (except for an assignment to the Facility Lender as security under the Financing Documents or to the Institutional Investor under the Institutional Investor Documents as permitted by this PPA);

(3) Seller's filing of a petition in voluntary bankruptcy or insolvency or for reorganization or arrangement under the bankruptcy laws of the United States or under any insolvency act of any state, or Seller voluntarily taking advantage of any such law or act by answer or otherwise;

(4) The sale by Seller of Renewable Energy to a third party, or diversion by Seller of Renewable Energy for any use, other than in mitigation of damages for any breach by Company of this PPA, as provided in Section 7.5 or as otherwise expressly provided herein; and/or

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(5) Seller's actual fraud, waste, tampering with Company-owned facilities or other material intentional misrepresentation or misconduct in connection with this PPA or the operation of the Facility.

(B) Any of the following shall constitute an Event of Default of Seller upon its occurrence but shall be subject to cure within **[Begin Trade Secret End Trade Secret]** Days after the date of written notice from Company to Seller and the Facility Lender and Institutional Investor listed on Exhibit C as provided for in Section 13.1:

(1) Seller's failure to establish and maintain the funding of the Security Fund in accordance with Article 11;

(2) Seller's Abandonment of construction or operation of the Facility;

(3) Seller's failure to maintain in effect any agreements required to deliver Renewable Energy to the Point of Delivery pursuant to Section 5.1, including the Interconnection Agreement; *provided, however,* that if any such agreement is the subject of a good-faith dispute between Seller and the counterparty, no Event of Default shall exist in respect of such agreement so long as Seller continues to diligently pursue resolution of such dispute;

(4) Seller's failure to comply with the requirements of Section 11.2;

(5) Seller's failure to make any payment due to Company under or in connection with this PPA (subject to Seller's rights with respect to disputed payments under Section 9.5 and net of outstanding damages and any other rights of offset that Seller may have pursuant to this PPA); and/or

(6) Seller's failure to comply with any other material obligation not enumerated in this Section 12.1 under this PPA, which would result in a material adverse impact on Company.

(C) Any of the following shall constitute an Event of Default of Seller upon its occurrence but shall be subject to cure within *[Begin Trade Secret] End Trade Secret]* Days after the date of written notice from Company to Seller and the Facility Lender or Institutional Investor as provided for in Section 13.1:

(1) Seller's failure to meet the peak production availability requirements of Section 10.9; *provided, however*, that Company's sole and exclusive remedy for such failure shall be to recover **[Begin Trade Secret** 

## End Trade Secret]

(2) Seller's assignment of this PPA, or any Change of Control of Seller, or Seller's sale or transfer of its interest, or any part thereof, in the Facility, except as permitted in accordance with Article 19;

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(3) Any representation or warranty made by Seller in this PPA shall prove to have been false or misleading in any material respect when made or ceases to remain true during the Term if such cessation would reasonably be expected to result in a material adverse impact on Company;

(4) The filing of a case in bankruptcy or any proceeding under any other insolvency law against Seller as debtor or Seller's Guarantor; *provided, however*, that Seller does not obtain a stay or dismissal of the filing within the cure period and further *provided, however*, that in the case of Seller's Guarantor, if Seller replaces the guarantee within **[Begin Trade Secret End Trade Secret]** Days of the filing of a case in bankruptcy or any proceeding under any other insolvency law against Seller's Guarantor with instruments complying with Section 11.1(C)(1) or 11.1(C)(2) then the Event of Default shall be deemed cured and for the avoidance of doubt, Company shall not be entitled to any remedy under this PPA as the result of such event; and

(5) Seller's failure after the [Begin Trade Secret

*End Trade Secret]* full month following the Commercial Operation Date to deliver at least *[Begin Trade Secret] End Trade Secret]* of the Committed Renewable Energy from the Facility in any *[Begin Trade Secret]* 

*End Trade Secret]* period (for purposes of this subparagraph, "Period") shall constitute an Event of Default upon its occurrences; *provided, however,* that

(a) to the extent such failure is attributable to the lack of wind resource, curtailment by Company under Section 7.4 or an event of Force Majeure, the contribution of such lack of wind resource, curtailment or event of Force Majeure shall be imputed into the calculation of Committed Renewable Energy in a manner consistent with the examples set forth in Exhibit L for the purposes of, and only for the purposes of, establishing an Event of Default of Seller, and further *provided*, *however*, that the event of Force Majeure contributing, in whole or in part, to such failure of performance is subject to the provisions of Section 14.3.

(b) This Event of Default shall be deemed cured if before the expiration of the cure period, Seller accomplishes any of the following: *[Begin Trade Secret*]

End Trade Secret]

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#### [Begin Trade Secret

. End Trade Secret]

(c) Seller shall be permitted to add and/or replace Wind Turbines on the Site if and to the extent reasonably required to cure Seller's default under this Section 12.1(C)(5). Seller shall keep Company apprised at least monthly of Seller's cure efforts under this Section 12.1(C)(5), if any.

Company's remedies under this Section 12.1(C)(5), shall (d) be Company's sole and exclusive remedies for failure by Seller to generate and make available to Company Renewable Energy in the amounts specified in this Section 12.1(C)(5). Seller agrees that it will not assert that the remedy stated in this subparagraph (d) precludes Company from seeking all legal and equitable remedies available to it arising from default under other material obligations of this PPA. For the avoidance of doubt, with respect to any and all other operational or performance defaults affecting Seller or the Facility specified in this PPA, including, for example (such examples themselves not creating separate obligations on the part of Seller under this PPA) maintenance of the Security Fund or maintenance or operation of the Facility consistent with the obligations set forth in this PPA, Company shall have the right to declare an Event of Default (as applicable pursuant to the other express provisions of this PPA), to terminate and to make a claim for damages associated with such Event of Default and termination under this PPA and Seller shall not assert that the remedy set forth in this subparagraph (d) is the exclusive remedy for any such claim under this PPA.

12.2 Institutional Investor and Facility Lender's Ri.qht to Cure Default of Seller. Seller shall provide Company with a notice identifying the Facility Lender or Institutional Investor and providing appropriate contact information for the Facility Lender and Institutional Investor as of financial closing. Following receipt of such notice, Company shall provide notice of any Event of Default of Seller to the Facility Lender or Institutional Investor, and Company will accept a cure to an Event of Default of Seller performed by the Facility Lender or Institutional Investor and will negotiate in good faith with any Facility Lender or Institutional Investor as to the cure period(s) that will be allowed for any Facility Lender or Institutional Investor to cure any Seller Event of Default hereunder. Company will accept any cure performed by any Facility Lender or Institutional Investor, so long as the cure is accomplished within the cure period so agreed to between the Company and any Facility Lender or Institutional Investor.

### 12.3 Events of Default of Company.

(A) Any of the following shall constitute an Event of Default of Company [Begin Trade Secret End Trade Secret]

(1) Company's dissolution or liquidation *provided, however,* that division of Company into multiple entities shall not constitute dissolution or liquidation;

Moraine Wind PPA Final (2) Company's assignment of this PPA or any of its rights hereunder for the benefit of creditors;

(3) Company's filing of a voluntary petition in bankruptcy or insolvency or for reorganization or arrangement under the bankruptcy laws of the United States or under any insolvency act of any State, or Company voluntarily taking advantage of any such law or act by answer or otherwise; and/or

(4) Company's unexcused failure to purchase that Renewable Energy which it is obligated to purchase under this PPA;

(B) Any of the following shall constitute an Event of Default of Company upon its occurrence but shall be subject to cure within [Begin Trade Secret End Trade Secret] Days after the date of written notice from Seller to Company:

(a) Company's failure to make any payment due hereunder (subject to Company's rights with respect to disputed payments under Section 9.3 and net of outstanding damages and any other rights of offset that Company may have pursuant to this PPA); and/or

(b) Company's failure to comply with any other material obligation under this PPA, which would result in a material adverse impact on Seller.

(C) Any of the following shall constitute an Event of Default of Company upon its occurrence but shall be subject to cure within [*Begin Trade Secret*] *End Trade Secret*] Days after the date of written notice from Seller to Company:

(1) The filing of an involuntary case in bankruptcy or any proceeding under any other insolvency law against Company that could materially impact Company's ability to perform its obligations hereunder; *provided, however,* that Company does not obtain a stay or dismissal of the filing within the cure period;

(2) Company's assignment of this PPA, except as permitted in accordance with Article 19; and/or

(3) Any representation or warranty made by Company in this PPA shall prove to have been false or misleading in any material respect when made or ceases to remain true during the Term if such cessation would reasonably be expected to result in a material adverse impact on Seller.

12.4 <u>Remedies for an Event of Default</u>. Upon the occurrence of an Event of Default and notice to the other Party of an Event of Default, and subject in each case to the limitations on damages set forth in Sections 12.7 and 12.10, the non-defaulting Party shall have the right (but not the obligation) to:

(A) Suspend performance of its obligations under this PPA;

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(B) [Begin Trade Secret

#### End Trade Secret]

(D) Receive from the defaulting Party direct damages incurred and accruing prior to the Early Termination Date from the defaulting Party, and the payment of any such damages accruing prior to the cure of an Event of Default shall constitute a part of the cure. For all Events of Default (other than Seller's failure to achieve the Commercial Operation Milestone, for which Company shall be entitled to collect Delay Damages pursuant to Section 12.5, subject to Section 14.4), the non-defaulting Party shall be entitled to receive from the defaulting Party all of the damages incurred by the non-defaulting Party in connection with such Event of Default subject to the limitations on damages provided in Sections 12.7 and 12.10 (except to the extent, if any, such damages are excluded from the Damage Limit as provided in Section 12.7(A)-(F)); provided, however, that if an Event of Default has occurred and has continued uncured for a period of *[Begin Trade Secret* End Trade Secret Days, the non-defaulting Party shall be required to either waive its right to collect further damages on account of such Event of Default or elect to terminate this PPA as provided for in Section 12.5. The Parties agree that the damages recoverable hereunder on account of an Event of Default include, (i) where Company is the defaulting Party, the positive difference (if any) between the amount that Company would have paid hereunder during the Event of Default and the market price for such Renewable Energy, and (ii) where Seller is the defaulting Party, Replacement Energy Costs. [Begin Trade Secret

End Trade Secret]

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## TRADE SECRET DATA HAS BEEN REMOVED

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(B)

[Begin Trade Secret

### End Trade Secret]

(D) The Parties specifically recognize that Company's damages associated with any delays in achieving Construction Milestones will be significant but that it will be difficult to quantify those damages. Delay Damages shall be deemed to constitute liquidated damages and do not constitute a penalty.

Seller's failure to meet any Construction Milestone, including, the (E) Commercial Operation Milestone shall not constitute an Event of Default of Seller. Notwithstanding the foregoing, Company shall have the right to terminate this PPA if Seller has failed to meet the Commercial Operation Milestone, such termination to be effective End Trade Secret] Days after the date of written notice [Begin Trade Secret from Company to Seller and the Facility Lender and Institutional Investor as provided in Section 13.1; provided, however, that Seller's failure to meet the Commercial Operation Milestone shall be subject to cure within forty-five (45) Days after the date of written notice from Company to Seller and the Facility Lender and Institutional Investor as provided for in Section 13.1; and further provided, however, that Seller shall have an additional [Begin End Trade Secret] Day period to achieve the Commercial Trade Secret Operation Date: provided, however, that, on or before the expiration of the initial **[Begin**] Trade Secret End Trade Secret]Day period, an independent engineer, mutually agreed to by the Parties, retained by Company and paid for by Seller, provides a written opinion to Company stating that Seller's plan for achieving the Commercial Operation Date is reasonably achievable within such additional [Begin Trade Secret

*End Trade Secret]* Day cure period. This provision would allow for a total cure period of *[Begin Trade Secret]* Days if all conditions of this paragraph (E) are met. Subject to the limitation on damages set forth in Section 12.7, Delay Damages under Section 12.5(A) shall continue accruing until the occurrence of one (1) of the following events: (i) Commercial Operation Date is achieved, or (ii) this PPA is terminated.

(F) Company's sole remedy and Seller's sole liability for the failure of Seller to meet any or all Construction Milestone(s), including the Commercial Operation Milestone shall be the payment by Seller of Delay Damages, as specified in this

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Section 12.5. For avoidance of doubt, any such failure to meet a Construction Milestone, including the Commercial Operation Milestone, shall not be a Seller Event of Default under Article 12 unless Seller fails to make a payment of Delay Damages when such payment is due as provided in Section 12.1(B)(5); *provided, however*, that the remedy for failure to provide such payment shall be subject to the limitation on liability provided in Section 12.7(i) and shall not include Replacement Energy Costs.

12.6 <u>Termination</u>. Upon the occurrence of an Event of Default which has not been cured within the applicable cure period, the non-defaulting Party shall have the right to declare a date, which shall be between *[Begin Trade Secret*]

**End Trade Secret]** Days after the notice thereof, upon which this PPA shall terminate ("Early Termination Date"). Neither Party shall have the right to terminate this PPA except as provided for upon the occurrence of an Event of Default as described above or as otherwise may be explicitly provided for in this PPA. Upon the termination of this PPA under this Section 12.6, the non-defaulting Party shall be entitled to receive from the defaulting Party, subject to the limitation on damages set forth in Sections 12.7 and 12.10, all of the damages incurred by the nondefaulting Party in connection with such termination including:

### (A) [Begin Trade Secret

### End Trade Secret]

(1) if at the time of the occurrence of the Event of Default that resulted in the termination of this PPA, there exists at least *[Begin Trade Secret* 

**End Trade Secret***j* years of historical Facility operating data, then the amount of Renewable Energy that would have been delivered hereunder during the remainder of the Term in the absence of such termination shall be determined by extrapolating from all such historical data that is available; and

(2) if at the time of the occurrence of the Event of Default that resulted in the termination of this PPA, there does not exist at least *[Begin Trade Secret End Trade Secret]* years of historical Facility operating data, then the amount of Renewable Energy that would have been delivered hereunder during the remainder of the Term in the absence of such termination shall be determined in a commercially reasonable manner based on a meteorological estimate of the wind conditions likely to attain at the Site.

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12.7 Limitation on Damages. [Begin Trade Secret

### ).End

*Trade Secret]* If at any time during the Term, Company incurs damages in excess of the limitations set forth above which Seller does not agree to pay when billed by Company in accordance with Section 12.12, Company shall have the right to declare a termination of this PPA under Section 12.6, unless such damages are disputed in good faith; *provided, however,* that any such termination shall be without further liability to either Party. *[Begin Trade Secret*]

End Trade Secret]

12.8 Operation by Company Following Event of Default of Seller.

(A) Prior to any termination of this PPA due to an Event of Default of Seller, Company shall have the right, but not the obligation, to possess, assume control

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of, and operate the Facility as agent for Seller (in accordance with Seller's rights, obligations, and interest under this PPA) during the period provided for herein. Seller shall not grant any person, other than the Facility Lender or Institutional Investor, a right to possess, assume control of, and operate the Facility that is equal to or superior to Company's right under this Section 12.8.

(B) Company shall give Seller and the Facility Lender or Institutional Investor [Begin Trade Secret End Trade Secret] Days notice in advance of the contemplated exercise of Company's rights under this Section 12.8, specifying the date on which Company will assume operation of the Facility. Upon such notice, Seller shall collect and have available at a convenient, central location at the Facility all documents, contracts, books, manuals, reports, and records required to construct, operate, and maintain the Facility in accordance with Good Utility Practice. Beginning on the date specified in such notice, Company, its employees, contractors, or designated third parties shall have the unrestricted right to enter the Site and the Facility for the purpose of constructing and/or operating the Facility. Seller hereby irrevocably appoints Company as Seller's attorney-in- fact for the exclusive purpose of executing such documents and taking such other actions as Company may reasonably deem necessary or appropriate to exercise Company's step-in rights under this Section 12.8.

(C) Company shall be entitled to immediately draw upon the Security Fund to cover any expenses incurred by Company in exercising its rights under this Section 12.8.

(D) During any period that Company is in possession of and constructing and/or operating the Facility pursuant to this Section 12.8, Company shall perform and comply with all of the obligations of Seller under this PPA and, except to the extent the same would result in a violation of the applicable provisions of the Financing Documents or Institutional Investor Documents (such exception to apply only if Seller has provided copies of such Financing Documents or Institutional Investor Documents or Institutional Investor Documents to Company) shall use the proceeds from the sale of electricity generated by the Facility to, first, reimburse Company for any and all expenses reasonably incurred by Company (including a return on capital at Company's authorized return on equity most recently determined by the MPUC, unless prohibited by Financing Documents or Institutional Investor Documents that have been delivered to Company) in taking possession of and operating the Facility, and to, second, remit any remaining proceeds to Seller.

(E) During any period that Company is in possession of and operating the Facility, Seller shall retain legal title to and ownership of the Facility and Company shall assume possession, operation, and control solely as agent for Seller.

(1) In the event that Company is in possession and control of the Facility for an interim period, Seller may resume operation and Company shall relinquish its right to operate when Seller demonstrates to Company's reasonable satisfaction that it will remove those grounds that originally gave rise to Company's right to operate the Facility, as provided above, in that Seller (i) will resume operation of the

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Facility in accordance with the provisions of this PPA, and (ii) has cured any Events of Default of Seller which allowed Company to exercise its rights under this Section 12.8 (or, if the Event of Default is of such a nature that it cannot be cured by Seller absent possession of the Facility, reasonable assurance that Seller will cure such Event of Default promptly following resumption of possession).

(2) In the event that Company is in possession and control of the Facility for an interim period, the Facility Lender or Institutional Investor, or any nominee or transferee thereof, may foreclose and take possession of and operate the Facility and Company shall relinquish its right to operate when the Facility Lender or Institutional Investor, or any nominee or transferee thereof, requests such relinquishment.

(F) Company's exercise of its rights hereunder to possess and operate the Facility shall not be deemed an assumption by Company of any liability attributable to Seller. If at any time after exercising its rights to take possession of and operate the Facility Company elects to return such possession and operation to Seller, Company shall provide Seller with at least fifteen (15) Days advance notice of the date Company intends to return such possession and operation, and upon receipt of such notice Seller shall take all measures necessary to resume possession and operation of the Facility on such date.

(G) In the event Company assumes operation of the Facility under this Section 12.8, Company shall operate the Facility in conformance with Good Utility Practice.

12.9 <u>Specific Performance</u>. In addition to the other remedies specified in this Article 12, in the event that any Event of Default of Seller is not cured within the applicable cure period set forth herein, Company may elect to treat this PPA as being in full force and effect and Company shall have the right to specific performance. If the breach by Seller arises from a failure by a third party operating the Facility pursuant to an operating agreement entered into with Seller, and Seller fails or refuses to enforce its rights under the operating agreement which would result in the cure, or partial cure, of the Event of Default, Company's right to specific performance shall include the right to obtain an order compelling Seller to enforce its rights under the operating agreement. Likewise, for any breach of this PPA by Company, other than payment obligations, Seller shall have the right to specific performance.

12.10 <u>Remedies Cumulative</u>. Subject to the exclusivity of Delay Damages provided in Section 12.5 and the limitations on damages set forth in Section 12.7, each right or remedy of the Parties provided for in this PPA shall be cumulative of and shall be in addition to every other right or remedy provided for in this PPA, and the exercise, or the beginning of the exercise, by a Party of any one or more or the rights or remedies provided for herein shall not preclude the simultaneous or later exercise by such Party of any or all other rights or remedies provided for herein.

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12.11 [Begin Trade Secret

### End Trade Secret]

12.12 Payment of Amounts Due to Company. Without limiting any other provisions of this Article 12 and at any time before or after termination of this PPA, Company may send Seller an invoice for such damages (including Delay Damages) or other amounts as are due to Company at such time from Seller under this PPA and such invoice shall be payable in the manner, and in accordance with the applicable provisions, set forth in Article 9, including the provision for late payment charges. Company may withdraw funds from the Security Fund as needed to provide payment for such invoice if the invoice is not paid by Seller on or before the **[Begin Trade Secret**] Business Day following the invoice due date.

12.13 <u>Duty to Mitigate</u>. Each Party agrees that it has a duty to mitigate damages and covenants that it will use commercially reasonable efforts to minimize any damages it may incur as a result of the other Party's performance or non-performance of the PPA.

#### Article 13 - Contract Administration and Notices

13.1 <u>Notices in Writing</u>. Notices required by this PPA shall be addressed to the other Party, including the other Party's representative on the Operating Committee, at the addresses noted in Exhibit C as either Party updates them from time to time by written notice to the other Party. Seller will inform Company in writing by sending a revised Exhibit C of any Facility Lender or Institutional Investor who is to receive notice under Section 12.2. Any notice, request, consent, or other communication required or authorized under this PPA to be given by one Party to the other Party shall be in writing. It shall either be hand-delivered or mailed, postage prepaid, to the representative of said other Party. If mailed, the notice, request, consent or other communication shall be simultaneously sent by facsimile or other electronic means. Any such notice, request, consent, or other communication shall be deemed to have been received by the close of

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the Business Day on which it was hand-delivered or transmitted electronically (unless hand delivered or transmitted after such close, in which case it shall be deemed received at the close of the next Business Day). Real-time or routine communications concerning Facility operations shall be exempt from this Section 13.1.

13.2 <u>Representative for Notices</u>. Each Party shall maintain a designated representative to receive notices. Such representative may, at the option of each Party, be the same person as that Party's representative or alternate representative on the Operating Committee, or a different person. Either Party may, by written notice to the other Party, change the representative or the address to which such notices and communications are to be sent.

13.3 <u>Authority of Representatives</u>. The Parties' representatives designated above shall have authority to act for its respective principals in all technical matters relating to performance of this PPA and to attempt to resolve disputes or potential disputes. However, they, in their capacity as representatives, shall not have the authority to amend or modify any provision of this PPA.

13.4 <u>Operating Records</u>. Seller and Company shall each keep complete and accurate records and all other data required by each of them for the purposes of proper administration of this PPA, including such records as may be required by state or federal regulatory authorities and MRO in the prescribed format.

13.5 <u>Operating Log</u>. Seller shall maintain an accurate and up-to-date operating log, in electronic format, at the Facility with records of production for each clock hour, changes in operating status, Scheduled Maintenance and Forced Outages for the purposes of proper administration of this PPA, including such records as may be required by state or federal regulatory authorities and MRO in the prescribed format.

13.6 <u>Provision of Real-Time Data</u>. Upon request from Company, Seller shall provide real-time electronic access to Company of meteorological data collected at the Facility and corresponding unit availability data as well.

13.7 <u>Billing and Payment Records</u>. To facilitate payment and verification, Seller and Company shall keep all books and records necessary for billing and payments in accordance with the provisions of Article 9 and grant the other Party reasonable access to those records. All records of Seller pertaining to the operation of a Facility shall be maintained on the premises of the Facility.

13.8 Examination of Records. Seller and Company may audit and examine the financial and Operating Records and data kept by the other Party relating to transactions under and administration of this PPA, at any time during the period the records are required to be maintained, upon request and during normal business hours. With respect to any financial records, Operating Records, data, documents or agreements that Seller or Company is required to provide to the other Party hereunder or that the other Party has a right to inspect hereunder, the Party providing the same or permitting the same to be inspected may redact information therefrom that such Party reasonably deems to be

# TRADE SECRET DATA HAS BEEN REMOVED

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proprietary or that is subject to a confidentiality agreement with a third party prior to any provision or examination by the other Party. Seller acknowledges that information provided by Seller under this Section 13.8 may be subject to disclosure to regulatory bodies with jurisdiction over Company; *provided, however*, that before providing such information to such regulatory bodies, Company shall first inform Seller of the request for such information, and Seller may, at its expense, seek to limit Company's disclosure of such information or confidential treatment of any such information that Company is required to disclose. Alternatively, Seller may interact directly with such regulatory body to satisfy its request for information.

13.9 <u>Exhibits</u>. Either Party may change the information for its notice addresses in Exhibit C at any time without the approval of the other Party. Exhibit A, Exhibit B, Exhibit E, Exhibit F, Exhibit H, and Exhibit J may be changed at any time with the mutual consent of both Parties. Exhibit G may be changed as provided therein. Exhibit D may be changed in accordance with Section 16.2(B).

### 13.10 Dispute Resolution.

(A) In the event of any dispute arising under this PPA (for purposes of this Section 13.10, a "Dispute"), within *[Begin Trade Secret End Trade Secret]* Days following the delivered date of a written request by either Party (a "Dispute Notice"), (i) each Party shall appoint a representative (individually, a "Party Representative," and together, the "Parties' Representatives"), and (ii) the Parties' Representatives shall meet, negotiate and attempt in good faith to resolve the Dispute quickly, informally and inexpensively. In the event the Parties' Representatives cannot resolve the Dispute within *[Begin Trade Secret]* Days after commencement of negotiations, within *[Begin Trade Secret]* 

End Trade Secret] Days following any request by either Party at any time thereafter, each Party Representative (I) shall independently prepare a written summary of the Dispute describing the issues and claims, (11) shall exchange its summary with the summary of the Dispute prepared by the other Party Representative, and (111) shall submit a copy of both summaries to a senior officer of the Party Representative's Party with authority to irrevocably bind the Party to a resolution of the Dispute. Within [Begin Trade Secret] Business Days after receipt of the Dispute summaries, the senior officers for both Parties shall negotiate in good faith to resolve the Dispute. If the Parties are unable to resolve the Dispute summaries by the senior officers, either Party may seek available legal remedies.

(B) Notwithstanding any provision in this PPA to the contrary, if no Dispute Notice has been issued within **[Begin Trade Secret End Trade Secret]** months following the occurrence of all events and the existence of all circumstances giving rise to the Dispute (regardless of the knowledge or potential knowledge of either Party of such events and circumstances), the Dispute and all claims related thereto shall be deemed waived and the aggrieved Party shall thereafter be barred from proceeding thereon.

(C) Seller and Company each hereby knowingly, voluntarily and intentionally waive any rights they may have to a trial by jury in respect of any litigation based hereon, or arising out of, under, or in connection with, this PPA or any course of

conduct, course of dealing, statements (whether oral or written) or actions of Seller and Company related hereto and expressly agree to have any Disputes arising under or in connection with this PPA be adjudicated by a judge of the court having jurisdiction without a jury.

### Article 14 - Force Majeure

### 14.1 Definition of Force Majeure.

The term "Force Majeure," as used in this PPA, means causes or (A) events beyond the reasonable control of, and without the fault or negligence of the Party claiming Force Majeure, including without limitation, acts of God, sudden actions of the elements such as floods, earthquakes, hurricanes, or tornadoes; high winds of sufficient strength or duration to materially damage a facility or significantly impair its operation for a period of time longer than normally encountered in similar businesses under comparable circumstances; long-term material changes in renewable energy flows across the Facility caused by climactic change; lightning; fire; ice storms; sabotage; vandalism beyond that which could reasonably be prevented by Seller; terrorism; war; riots; fire; explosion; blockades; insurrection; strike; slow down or labor disruptions (even if such difficulties could be resolved by conceding to the demands of a labor group); actions or inactions by any Governmental Authority taken after the date hereof (including the adoption or change in any rule or regulation or environmental constraints lawfully imposed by such Governmental Authority) but only if such requirements, actions, or failures to act prevent or delay performance; and inability, despite due diligence, to obtain any licenses, permits, or approvals required by any Governmental Authority; and the issuance of any order, injunction, or other legal or equitable decree interfering with the performance of a Party's obligations hereunder or the commencement or pendency of any legal action in any court seeking to enjoin or materially limit the construction or operation of the Facility.

(B) The term Force Majeure does not include (i) any acts or omissions of any third party, including without limitation any vendor, materialman, customer, or supplier of Seller, unless such acts or omissions are themselves excused by reason of Force Majeure; (ii) any full or partial curtailment in the electric output of the Facility that is caused by or arises from a mechanical or equipment breakdown or other mishaps, events or conditions attributable to normal wear and tear or flaws, unless such mishap is caused by one of the following: catastrophic equipment failure; acts of God; sudden actions of the elements, including, but not limited to, floods, hurricanes, or tornadoes; sabotage; terrorism; war; riots; and emergency orders issued by a Governmental Authority, or (iii) changes in market conditions that affect the cost of Seller's supplies, or that affect demand or price for any of Company's or Seller's products.

# 14.2 Applicability of Force Majeure.

(A) Neither Party shall be responsible or liable for any delay or failure in its performance under this PPA, nor shall any delay, failure, or other occurrence or

Moraine Wind PPA Final event become an Event of Default, to the extent such delay, failure, occurrence or event is substantially caused by Force Majeure; *provided, however,* that:

(1) the non-performing Party gives the other Party prompt written notice describing the particulars of the occurrence of the Force Majeure;

2) the suspension of performance is of no greater scope and of no longer duration than is required by the Force Majeure;

(3) the non-performing Party proceeds with reasonable diligence to remedy its inability to perform and provides weekly progress reports to the other Party describing actions taken to end the Force Majeure; and

(4) when the non-performing Party is able to resume performance of its obligations under this PPA, that Party shall give the other Party written notice to that effect.

(B) Except as otherwise expressly provided for in this PPA, the existence of a condition or event of Force Majeure shall not relieve the Parties of their obligations under this PPA (including payment obligations) to the extent that performance of such obligations is not precluded by the condition or event of Force Majeure.

14.3 <u>Limitations on Effect of Force Majeure</u>. In no event will any delay or failure of performance caused by any conditions or events of Force Majeure extend this PPA beyond its stated Term.

(A) In the event that any conditions or events of Force Majeure prevent Seller from delivering or Company from purchasing Renewable Energy and such Force Majeure continues for an uninterrupted period of *[Begin Trade Secret End Trade Secret]* Days occurring prior to COD or *[Begin Trade Secret]* 

End Trade Secret] Days occurring after COD, then (i) if such Force Majeure adversely affects less than [Begin Trade Secret End Trade Secret] percent of the Facility or its output then the non-claiming Party may terminate this PPA upon written notice to the other Party, and (ii) if such Force Majeure affects [Begin Trade Secret End Trade Secret] percent or more of the Facility or its output, then either Party may terminate this PPA upon written notice to the other Party. Any termination under this paragraph (A) shall be without further obligation by either Party except as to costs and balances incurred prior to the effective date of such termination.

(B) Notwithstanding the foregoing, if the Force Majeure (i) is one that has materially and adversely affected the construction of the Facility or the production and sale of Renewable Energy as contemplated by this PPA and (ii) is such that the adverse effect can be corrected through repair or restoration work to the Facility or other actions by Seller, Seller may furnish to Company as soon as practicable after such Force Majeure event, but in no event later than *[Begin Trade Secret]* Days after the occurrence of such Force Majeure event if before COD, the plans and, if applicable, the construction contract, for the restoration or repair of the Facility, together with evidence reasonably

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satisfactory to Company of the total cost of restoration or repair of the Facility and of Seller's ability to finance such total cost. Company shall have the reasonable opportunity to review and comment on such plans and financing. Company shall not have the right to terminate this PPA during any suspension (up to the maximum period of *[Begin Trade Secret End Trade Secret]* Days) so long as Seller is using Good Utility Practice to complete such repair work, restoration or such other actions. Notwithstanding the foregoing, the Party not claiming Force Majeure may, but shall not be obligated to, extend the maximum period of *[Begin Trade Secret]* Days at its sole discretion; *provided, however*, that the affected Party is exercising due diligence in its efforts to cure the conditions or events of Force Majeure.

### 14.4 Delays Attributable to Company.

(A) Seller shall be excused from a failure to meet any specified Construction Milestone when Seller can establish that such a failure is principally attributable to any delay or failure by Company in obtaining any consents or approvals from Governmental Authorities or third parties required for Company to perform its obligations under this PPA, whether or not caused by any conditions or events of Force Majeure ("Delay Conditions"). In the event of such a failure, the Construction Milestone that is not met due to the Delay Condition(s), and any affected Construction Milestones that follow, shall be extended for a period of time equal to the period of time between (i) the Construction Milestone that is not met due to the Delay Condition(s) and (ii) the Day that Company has corrected the Delay Condition(s).

(B) Seller's failure to meet the Commercial Operation Milestone for any reason, including, without limitation, Delay Condition(s), Force Majeure, the acts or inaction of the Interconnection Provider or of any third party, or any Event of Default, except as expressly provided in paragraph (C), shall not give rise to any damages payable by Company (or an increase in the price for Renewable Energy, except as specifically provided in Section 4.10) associated with or arising from such failure resulting in the Facility not qualifying for PTCs.

## (C) [Begin Trade Secret

# . End Trade Secret]

## Article 15 - Representations, Warranties and Covenants

15.1 <u>Seller's Representations, Warranties and Covenants</u>. Seller hereby represents and warrants as follows:

(A) Seller is a limited liability company duly organized, validly existing and in good standing under the laws of the state of Oregon. Seller is qualified to do business in each other jurisdiction where the failure to so qualify would have a material adverse effect on the business or financial condition of Seller; and Seller has all

requisite power and authority to conduct its business, to own its properties, and to execute, deliver, and perform its obligations under this PPA.

(B) The execution, delivery, and performance of its obligations under this PPA by Seller have been duly authorized by all necessary corporate action, and do not and will not:

(1) require any consent or approval by any governing body of Seller, other than that which has been obtained and is in full force and effect (evidence of which shall be delivered to Company upon its request);

(2) violate any Applicable Law, or violate any provision in any formation documents of Seller, the violation of which could have a material adverse effect on the ability of Seller to perform its obligations under this PPA;

(3) result in a breach or constitute a default under Seller's formation documents or bylaws, or under any agreement relating to the management or affairs of Seller or any indenture or loan or credit agreement, or any other agreement, lease, or instrument to which Seller is a party or by which Seller or its properties or assets may be bound or affected, the breach or default of which could reasonably be expected to have a material adverse effect on the ability of Seller to perform its obligations under this PPA; or

(4) result in, or require the creation or imposition of, any mortgage, deed of trust, pledge, lien, security interest, or other charge or encumbrance of any nature (other than as may be contemplated by this PPA) upon or with respect to any of the assets or properties of Seller now owned or hereafter acquired, the creation or imposition of which could reasonably be expected to have a material adverse effect on the ability of Seller to perform its obligations under this PPA.

(C) This PPA is a valid and binding obligation of Seller.

(D) The execution and performance of this PPA will not conflict with or constitute a breach or default under any contract or agreement of any kind to which Seller is a party or any judgment, order, statute, or regulation that is applicable to Seller or the Facility.

(E) To the best knowledge of Seller, and except for those permits, consents, approvals, licenses and authorizations identified in Exhibit E, which Seller anticipates will be obtained by Seller in the ordinary course of business, all permits, consents, approvals, licenses, authorizations, or other action required by any Governmental Authority to authorize Seller's execution, delivery and performance of this PPA have been duly obtained and are in full force and effect.

(F) Seller shall comply with all Applicable Laws in effect or that may be enacted during the Term.

(G) Seller shall disclose to Company, the extent of, and as soon as it is known to Seller, any violation of any environmental law arising out of the construction or operation of the Facility, or the presence of Environmental Contamination at the Facility or on the Site, alleged to exist by any Governmental Authority having jurisdiction over the Site, or the existence of any past or present enforcement, legal, or regulatory action or proceeding relating to such alleged violation or alleged presence of Environmental Contamination.

(H) To the full extent authorized by FERC regulations and the FERC standards of conduct, Seller hereby authorizes Company to contact and obtain information concerning the Facility and Interconnection Facilities directly from the Interconnection Provider and to the extent necessary Seller shall provide written notice to the Interconnection Provider confirming such authorization.

As of the COD for the Facility, the Facility shall constitute an (I)Eligible Energy Resource, as such term is defined by Applicable Law on the Effective OTHERWISE EXPRESSLY THIS SET FORTH IN EXCEPT AS Date. REPRESENTATION, SELLER MAKES NO WRITTEN OR ORAL REPRESENTATION, WARRANTY, OR COVENANT, EITHER EXPRESS OR IMPLIED, REGARDING THE CURRENT OR FUTURE EXISTENCE OF ANY RENEWABLE ENERGY CREDITS OR CAPACITY ATTRIBUTES OR ANY LAW GOVERNING THE EXISTENCE OF ANY RENEWABLE ENERGY CREDITS OR CAPACITY ATTRIBUTES UNDER THIS PPA OR OTHERWISE OR THEIR CHARACTERIZATION OR TREATMENT UNDER APPLICABLE LAW OR OTHERWISE.

(J) OTHER THAN THOSE WARRANTIES AND GUARANTIES EXPRESSLY SET FORTH IN THE TERMS OF THIS PPA, SELLER MAKES NO WARRANTIES AND GUARANTIES OF ANY KIND WHATSOEVER, EXPRESS, IMPLIED, ORAL, WRITTEN OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTIES ARISING BY CUSTOM, TRADE USAGE, PROMISE, EXAMPLE OR DESCRIPTION, ALL OF WHICH WARRANTIES AND GUARANTIES ARE EXPRESSLY DISCLAIMED BY SELLER AND WAIVED BY COMPANY.

15.2 <u>Company's Representations, Warranties and Covenants</u>. Company hereby represents and warrants as follows:

(A) Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Minnesota and is qualified in each other jurisdiction where the failure to so qualify would have a material adverse effect upon the business or financial condition of Company. Company has all requisite power and authority to conduct its business, to own its properties, and to execute, deliver, and perform its obligations under this PPA.

(B) The execution, delivery, and performance of its obligations under this PPA by Company have been duly authorized by all necessary corporate action, and do not and will not:

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(1) require any consent or approval of Company's Board of Directors or shareholders, other than that which has been obtained and is in full force and effect (evidence of which shall be delivered to Seller upon its request);

(2) violate any Applicable Law, or violate any provision in any corporate documents of Company, the violation of which could have a material adverse effect on the ability of Company to perform its obligations under this PPA;

(3) result in a breach or constitute a default under Company's corporate charter or bylaws, or under any agreement relating to the management or affairs of Company, or any indenture or loan or credit agreement, or any other agreement, lease, or instrument to which Company is a party or by which Company or its properties or assets may be bound or affected, the breach or default of which could reasonably be expected to have a material adverse effect on the ability of Company to perform its obligations under this PPA; or

(4) result in, or require the creation or imposition of, any mortgage, deed of trust, pledge, lien, security interest, or other charge or encumbrance of any nature (other than as may be contemplated by this PPA) upon or with respect to any of the assets or properties of Company now owned or hereafter acquired, the creation or imposition of which could reasonably be expected to have a material adverse effect on the ability of Company to perform its obligations under this PPA.

(C) This PPA is a valid and binding obligation of Company, subject to the contingencies identified in Article 6.

(D) The execution and performance of this PPA will not conflict with or constitute a breach or default under any contract or agreement of any kind to which Company is a party or any judgment, order, statute, or regulation that is applicable to Company.

(E) To the best knowledge of Company, and except for the MPUC approval(s) identified in Section 6.1(A), approvals, authorizations, consents, or other action required by any Governmental Authority to authorize Company's execution, delivery and performance of this PPA have been duly obtained and are in full force and effect.

(F) Company shall comply with all applicable local, state, and federal laws, regulations, and ordinances, including but not limited to equal opportunity and affirmative action requirements and all applicable federal, state, and local environmental laws and regulations presently in effect or which may be enacted during the Term of this PPA.

## Article 16 – Insurance

16.1 <u>Evidence of Insurance</u>. Seller shall, on or before June 1 of each Commercial Operation Year and pursuant to the corresponding Construction Milestone,

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provide Company with two (2) copies of insurance certificates acceptable to Company evidencing that insurance coverages for the Facility are in compliance with the specifications for insurance coverage set forth in Exhibit D. Such certificates shall (a) name Company as an additional insured (except workers' compensation); (b) provide that Company shall receive **[Begin Trade Secret End Trade Secret]** Days prior written notice of non-renewal, cancellation of, or significant modification to any of the corresponding policies (except that such notice shall be **[Begin Trade Secret** 

End Trade Secret] Days for non-payment of premiums); (c) provide a waiver of any rights of subrogation against Company, its Affiliates and their officers, directors, agents, subcontractors, and employees; and (d) indicate that the Commercial General Liability policy has been endorsed as described above. All policies shall be written with insurers that Company, in its reasonable discretion, deems acceptable (such acceptance will not be unreasonably withheld, conditioned or delayed). All policies shall be written on an occurrence basis, except as provided in Section 16.2. All policies shall contain an endorsement that Seller's policy shall be primary in all instances regardless of like coverages, if any, carried by Company. Seller's liability under this PPA is not limited to the amount of insurance coverage required herein.

#### 16.2 Term and Modification of Insurance.

(A) All insurance required under this PPA shall cover occurrences during the Term. In the event that any insurance as required herein is commercially available only on a "claims-made" basis, such insurance shall provide for a retroactive date not later than the date of this PPA and such insurance shall be maintained by Seller, with a retroactive date not later than the retroactive date required above, for a minimum of five (5) years after the Term.

(B) Company shall have the right, at times deemed appropriate to Company during the Term, to request Seller to modify the insurance minimum limits specified in Exhibit D in order to maintain reasonable coverage amounts. Seller shall make all commercially reasonable efforts to comply with any such request.

(C) If any insurance required to be maintained by Seller hereunder ceases to be reasonably available and commercially feasible in the commercial insurance market, Seller shall provide written notice to Company, accompanied by a certificate from an independent insurance advisor of recognized national standing, certifying that such insurance is not reasonably available and commercially feasible in the commercial insurance market for electric generating plants of similar type, geographic location and capacity. Upon receipt of such notice, Seller shall use commercially reasonable efforts to obtain other insurance that would provide comparable protection against the risk to be insured. Company shall not unreasonably withhold its consent to modify or waive such requirement.

16.3 <u>Application of Proceeds</u>. Seller shall apply any insurance proceeds to reconstruction of the Facility following a casualty.

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#### Article 17 – Indemnity

17.1 [Begin Trade Secret

## . End Trade Secret]

17.2 <u>Defense</u>. Promptly after receipt by a Party of any claim or notice of the commencement of any action, administrative, or legal proceeding, or investigation as to which the indemnity provided for in this Article 17 may apply, the Indemnified Party shall notify the Indemnifying Party in writing of such fact. The Indemnifying Party shall assume the defense thereof with counsel designated by such Party and satisfactory to the Indemnified Party; *provided, however*, that if the defendants in any such action include both the Indemnified Party and the Indemnifying Party and the Indemnified Party shall have reasonably concluded that there may be legal defenses available to it which are different from or additional to, or inconsistent with, those available to the Indemnifying Party, the Indemnified Party shall have the right to select and be represented by separate counsel, at the Indemnifying Party's expense, unless a liability insurer is willing to pay such costs.

17.3 <u>Settlement</u>. If the Indemnifying Party fails to assume the defense of a claim meriting indemnification, the Indemnified Party may at the expense of the Indemnifying Party contest, settle, or pay such claim; *provided, however*, that settlement or full payment of any such claim may be made only following consent of the Indemnifying Party or, absent such consent, written opinion of the Indemnified Party's counsel that such claim is meritorious or warrants settlement.

#### 17.4 [Begin Trade Secret

### End Trade Secret

Moraine Wind PPA Final

### [Begin Trade Secret

### End Trade Secret]

17.5 Decommissioning. Seller acknowledges that Company has no responsibility for the Facility or the Site and that Seller shall be solely and exclusively responsible for decommissioning the Facility, removing the Facility and remediating the Site, if and when required by Applicable Law.

### Article 18 - Legal and Regulatory Compliance

18.1 <u>Applicable Laws</u>. Each Party shall at all times comply with all Applicable Laws, ordinances, rules, and regulations applicable to it, except for any non-compliance which, individually or in the aggregate, could not reasonably be expected to have a material effect on the business or financial condition of the Party or its ability to fulfill its commitments hereunder. As applicable, each Party shall give all required notices, shall procure and maintain all necessary governmental permits, licenses, and inspections necessary for performance of this PPA, and shall pay its respective charges and fees in connection therewith.

18.2 <u>Certificates</u>. Each Party shall deliver or cause to be delivered to the other Party certificates of its officers, accountants, engineers or agents as to matters as may be reasonably requested, and shall make available personnel and records relating to the Facility to the extent that the requesting Party requires the same in order to fulfill any regulatory reporting requirements, or to assist the requesting Party in litigation, including administrative proceedings before utility regulatory commissions.

## Article 19 - Assignment and Other Transfer Restrictions

19.1 <u>No Assignment Without Consent</u>. Except as permitted in this Article 19, neither Party shall assign this PPA or any portion thereof, without the prior written consent of the other Party, which consent shall not be unreasonably withheld or delayed; *provided, however,* that (i) at least **[Begin Trade Secret End Trade Secret Days'** prior notice of any such assignment shall be given to the other Party; (ii) any assignee shall expressly assume the assignor's obligations hereunder unless otherwise agreed to by the other Party, and no assignment, whether or not consented to, shall relieve the assignor of its obligations hereunder in the event the assignee fails to perform unless the other Party agrees in writing in advance to waive the assignor's continuing obligations pursuant to this PPA; (iii) no such assignment shall impair any security given by Seller hereunder; and (iv) before the PPA is assigned by Seller, the assignee must first obtain such approvals as may be required by all applicable regulatory bodies.

(A) Seller's consent shall not be required for Company to assign this PPA to an Affiliate of Company *provided, however,* that Company provides assurances and executes documents reasonably required by Seller and the Facility Lender or Institutional Investor regarding Company's continued liability for all of Company's obligations under this PPA in the event of any nonperformance on the part of such assignee.

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(B) In the event that a permitted assignee of Company has or attains a long-term senior unsecured bond rating equivalent to or better than the unsecured bond rating of Company (but in no event worse than the equivalent of S&P BBB- or Moody's Baa3), then Seller agrees to relieve Company from its obligations under this PPA if Company requests to be so released in a written notice provided to Seller.

(C) Company's consent shall not be required for Seller to assign this PPA (i) for collateral purposes to a Facility Lender or (ii) to an Institutional Investor or (iii) to any Affiliate of Seller; *provided, however,* that, in the case of an assignment to an Affiliate of Seller, the conditions in Section 19.1(i) through (iv) in the main paragraph of this Section are satisfied. *[Begin Trade Secret* 

## . End Trade Secret]

Accommodation of Facility Lender or Institutional Investor. To facilitate 19.2 Seller's obtaining of financing to construct and operate the Facility or Seller's arrangement with an Institutional Investor to take advantage of PTCs and depreciation benefits, Company shall provide such consents to collateral assignment, certifications, representations, information or other documents as may be reasonably requested by Seller or the Facility Lender or Institutional Investor in connection with the financing or refinancing of the Facility (generally, a "Lender Consent"). The Lender Consent shall include the provisions set forth on Exhibit J and such other terms as the Facility Lender or the Institutional Investor may reasonably request that do not materially adversely affect any of Company's rights, benefits, risks and/or obligations under this PPA. Seller shall reimburse, or shall cause the Facility Lender or Institutional Investor to reimburse, Company for the incremental direct expenses (including the reasonable fees and expenses of counsel) incurred by Company in the preparation, negotiation, execution and/or delivery of any documents requested by Seller, the Facility Lender or Institutional Investor, and provided by Company, pursuant to this Section 19.2.

19.3 Change of Control.

(A) Except as set forth in Section 19.3(B) below, any direct or indirect Change of Control of Seller, whether voluntary or by operation of law, shall require the prior written consent of Company, which shall not be unreasonably withheld. For purposes of each subsection of this Section 19.3, "Change of Control" means any change in the direct or indirect control of Seller following which IBERDROLA RENEWABLES, Inc. shall no longer be the direct or indirect controlling shareholder or member of Seller; it being expressly understood and agreed that any direct or indirect change in the control of IBERDROLA RENEWABLES, Inc. or any of IBERDROLA RENEWABLES, Inc.'s parent entities, or any Affiliate thereof which owns one hundred percent (100%) interest in Seller, shall not constitute a "Change of Control." No consent of Company shall be required, however, to any Change of Control resulting from (i) transactions among Affiliates of Seller, or (ii) any exercise by the Institutional Investor or Facility Lender of its rights and remedies under the Financing Documents.

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(B) "Change of Control" does not include (i) the sale, charge, or other encumbrance of Seller's interest under this PPA to an Institutional Investor as security for any financing or equity investment made in respect to Seller; or (ii) the sale of a direct or indirect ownership interest in Seller to an Institutional Investor.

(C) For purposes of this PPA, a "Pending Facility Transaction" means (i) any Change of Control of Seller, (ii) the issuance by Seller or any of its Affiliates of a request for proposals or the response by Seller or any of its Affiliates to a request for proposal or similar process (e.g., auction) for the purchase or sale of the Facility or any group(s) of assets or equity interests which includes the Facility, (iii) the commencement by Seller or any of its Affiliates of substantive negotiations with respect to the sale of the Facility; and/or (iv) the execution by Seller or any of its Affiliates of any letter of intent, memorandum of understanding or similar document, whether or not legally binding, which contemplates the sale of the Facility or any group(s) of assets or equity interests which includes the Facility. A "Pending Facility Transaction" does not include, however, a Change of Control involving the Ultimate Parent Entity of Seller.

Seller shall give to Company at least [Begin Trade Secret (1)End Trade Secret] Days' notice of any Pending Facility Transaction (a "PFT Notice") prior to any binding agreement for the sale of the Facility or any group(s) of assets or equity interests which includes the Facility in order to provide Company (if Company so elects) with a reasonable opportunity to discuss and negotiate with Seller the possible sale of the Facility to Company. Any PFT Notice shall include a fair summary of Seller's plans with respect to the Facility in connection with the proposed Pending Facility Transaction, to the extent then known by Seller. Seller shall have no obligation to sell nor shall Company have any obligation to purchase the Facility, following any PFT Notice. Company will have [Begin Trade Secret End Trade Secret] Days after receipt of the PFT Notice to conduct reasonable due diligence regarding the Facility and to provide a notice of intent to purchase to Seller, which such notice shall specify in reasonable detail the material terms and conditions of such purchase ("Purchase Notice"). If Seller and Company do not reach written agreement with respect to the sale and purchase of the Facility within [Begin Trade End Trade Secret] Days following receipt of the Purchase Notice, Seller Secret and its Affiliates shall be free for a period of [Begin Trade Secret End Trade Secret] thereafter to sell the Facility and/or any group(s) of assets or equity interests which includes the Facility, to any third party on any terms and conditions selected by Seller or its Affiliates in its sole discretion. If Seller and its Affiliates have not closed the proposed Pending Facility Transaction within such [Begin Trade Secret End Trade Secret] month period, this Section 19.3(C) shall again apply to any new proposed Pending Facility Transaction.

(2) Seller acknowledges that the damages potentially sustainable by Company for any breach of this Section 19.3(C) would be substantial but difficult to calculate with certainty. Accordingly, in the event of any breach by Seller of this Section 19.3(C), in lieu of actual damages, Seller shall pay to Company within thirty (30) Days following invoice liquidated damages in the amount of ten dollars (\$10) per kW of aggregate nameplate capacity of the Facility.

19.4 <u>Notice of Facility Lender or Institutional Investor Action</u>. Within ten (10) Days following Seller's receipt of each written notice from the Facility Lender or

Institutional Investor of default, or Facility Lender's or Institutional Investor's intent to exercise any remedies, under the Financing Documents or Institutional Investor Documents, Seller shall deliver a copy of such notice to Company.

19.5 <u>Transfer Without Consent is Null and Void</u>. Any Change of Control or sale, transfer, or assignment of any interest in the Facility or in this PPA made without fulfilling the requirements of this PPA shall be null and void and shall constitute an Event of Default pursuant to Article 12.

19.6 <u>Subcontracting</u>. Seller may subcontract its duties or obligations under this PPA without the prior written consent of Company; *provided, however*, that no such subcontract shall relieve Seller of any of its duties or obligations hereunder.

#### Article 20 - Miscellaneous

20.1 <u>Waiver</u>. Subject to the provisions of Section 13.10(B), the failure of either Party to enforce or insist upon compliance with or strict performance of any of the terms or conditions of this PPA, or to take advantage of any of its rights thereunder, shall not constitute a waiver or relinquishment of any such terms, conditions, or rights, but the same shall be and remain at all times in full force and effect.

#### 20.2 <u>Taxes</u>.

(A) Seller shall be solely responsible for (i) any and all present or future taxes and other impositions of Governmental Authorities relating to the construction, ownership or leasing, operation or maintenance of the Facility, or any components or appurtenances thereof, and (ii) all *ad valorem* taxes relating to the Facility. Seller's prices under Article 8 are inclusive of such taxes and impositions during the Term.

(B) The Parties shall cooperate to minimize tax exposure; however, neither Party shall be obligated to incur any financial burden to reduce taxes for which the other Party is responsible hereunder. All electric energy delivered by Seller to Company hereunder shall be sales for resale, with Company reselling such electric energy. Company shall obtain and provide Seller with any certificates required by any Governmental Authority, or otherwise reasonably requested by Seller to evidence that the deliveries of electric energy hereunder are sales for resale.

#### 20.3 Fines and Penalties.

(A) Seller shall pay when due all fees, fines, penalties or costs incurred by Seller or its agents, employees or contractors for noncompliance by Seller, its employees, or subcontractors with any provision of this PPA, or any contractual obligation, permit or requirements of law except for such fines, penalties and costs that are being actively contested in good faith and with due diligence by Seller and for which adequate financial reserves have been set aside to pay such fines, penalties or costs in the event of an adverse determination.

(B) If fees, fines, penalties, or costs are claimed or assessed against Company by any Governmental Authority due to noncompliance by Seller with this PPA, any requirements of law, any permit or contractual obligation, or, if the work of Seller or any of its contractors or subcontractors is delayed or stopped by order of any Governmental Authority due to Seller's noncompliance with any requirements of law, permit, or contractual obligation, Seller shall indemnify and hold Company harmless against any and all losses, liabilities, damages, and claims suffered or incurred by Company, including claims for indemnity or contribution made by third parties against Company, except to the extent Company recovers any such losses, liabilities or damages through other provisions of this PPA.

## 20.4 Rate Changes.

(A) The terms and conditions and the rates for service specified in this PPA shall remain in effect for the Term of the transaction described herein. Absent the Parties' written agreement, this PPA shall not be subject to change by application of either Party pursuant to Section 205 or 206 of the Federal Power Act.

(B) Absent the agreement of all Parties to the proposed change, the standard of review for changes to this PPA whether proposed by a Party, a non-party, or FERC acting *sua sponte* shall be the "public interest" standard of review set forth in Morgan Stanley Capital Group, Inc. v. Public Utility District No. 1 of Snohomish County, Washington, Sup. Ct. No. 06-1457 (issued June 26, 2008); United Gas Pipe Line v. Mobile Gas Service Corp., 350 U.S. 332 (1956) and Federal Power Commission v. Sierra Pacific Power Co., 350 U.S. 348 (1956) (aka the "Mobile-Sierra doctrine").

20.5 <u>Disclaimer of Third-Party Beneficiary Rights</u>. In executing this PPA, Company does not, nor should it be construed to, extend its credit or financial support for the benefit of any third parties lending money to or having other transactions with Seller. Nothing in this PPA shall be construed to create any duty to, or standard of care with reference to, or any liability to, any person not a party to this PPA.

20.6 Relationship of the Parties.

(A) This PPA shall not be interpreted to create an association, joint venture, or partnership between the Parties nor to impose any partnership obligation or liability upon either Party. Except as specifically provided for in Section 12.8, 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 an agent or representative of, the other Party.

(B) Seller shall be solely liable for the payment of all wages, taxes, and other costs related to the employment of persons to perform such services, including all federal, state, and local income, social security, payroll, and employment taxes and statutorily mandated workers' compensation coverage. None of the persons employed by Seller shall be considered employees of Company for any purpose; nor shall Seller represent to any person that he or she is or shall become a Company employee.

20.7 Equal Employment Opportunity Compliance Certification. Seller acknowledges that as a government contractor Company is subject to various federal laws, executive orders, and regulations regarding equal employment opportunity and affirmative action. These laws may also be applicable to Seller as a subcontractor to Company. All applicable equal opportunity and affirmative action clauses shall be deemed to be incorporated herein as required by federal laws, executive orders, and regulations, including 41 C.F.R. § 60-1.4(a)(1)-(7).

20.8 <u>Survival of Obligations</u>. Cancellation, expiration, or earlier termination of this PPA shall not relieve the Parties of obligations, including warranties, remedies, or indemnities, that by their nature should survive such cancellation, expiration, or termination, which obligations shall survive for the period of the applicable statute(s) of limitation.

20.9 <u>Severability</u>. In the event any of the terms, covenants, or conditions of this PPA, its Exhibits, or the application of any such terms, covenants, or conditions, shall be held invalid, illegal, or unenforceable by any court or administrative body having jurisdiction, all other terms, covenants, and conditions of the PPA and their application not adversely affected thereby shall remain in force and effect; *provided, however*, that Company and Seller shall negotiate in good faith to attempt to implement an equitable adjustment in the provisions of this PPA with a view toward effecting the purposes of this PPA by replacing the provision that is held invalid, illegal, or unenforceable with a valid provision the economic effect of which comes as close as possible to that of the provision that has been found to be invalid, illegal or unenforceable.

20.10 <u>Complete Agreement; Amendments</u>. The terms and provisions contained in this PPA constitute the entire agreement between Company and Seller with respect to the Facility and shall supersede all previous communications, representations, or agreements, either verbal or written, between Company and Seller with respect to the sale of Renewable Energy from the Facility. This PPA may be amended, changed, modified, or altered; *provided, however*, that such amendment, change, modification, or alteration shall be in writing and signed by both Parties hereto, and further *provided, however*, that the Exhibits attached hereto may be changed according to the provisions of Section 13.9.

20.11 <u>Binding Effect</u>. This PPA, as it may be amended from time to time pursuant to this Article 20, shall be binding upon and inure to the benefit of the Parties hereto and their respective successors-in-interest, legal representatives, and assigns permitted hereunder.

20.12 <u>Headings</u>. Captions and headings used in this PPA are for ease of reference only and do not constitute a part of this PPA.

20.13 <u>Counterparts</u>. This PPA may be executed in any number of counterparts, and each executed counterpart shall have the same force and effect as an original instrument.

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20.14 <u>Governing Law</u>. The interpretation and performance of this PPA and each of its provisions shall be governed and construed in accordance with the laws of the State of Minnesota. The Parties hereby submit to the exclusive jurisdiction of the courts of the State of Minnesota, and venue is hereby stipulated as Minneapolis, Minnesota.

20.15 <u>Press Releases and Media Contact</u>. Upon the request of either Party, the Parties shall develop a mutually agreed joint press release to be issued describing the location, size, type and timing of the Facility, the long-term nature of this PPA, and other relevant factual information about the relationship. In the event during the Term, either Party is contacted by the media concerning this PPA or the Facility, the contacted Party shall inform the other Party of the existence of the inquiry, any questions asked, and the substance of any information provided to the media.

20.16 [Begin Trade Secret

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> Moraine Wind PPA Final

IN WITNESS WHEREOF, the Parties have executed this PPA.

Seller: Moraine Wind II, LLC By: mART GILA CHIEF SNP, RETURNABLES F OFFICER Seller: Moraine Wind II, LLC By: \_\_\_\_\_ Company:

Northern States Power Company, a Minnesota Corporation

By: Karen T. Hyde

Vice President, Resource Planning and Acquisition of Xcel Energy Services Inc., as agent for Northern States Power Company

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# EXHIBIT A (TO PPA)

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# EXHIBIT B (TO PPA)

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FACILITY DESCRIPTION AND SITE MAPS

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# EXHIBIT C (TO PPA)

# NOTICE ADDRESSES

Company	Seller
Notices:Karen T. Hyde, Vice	Notices:
President	Kevin Devlin, Vice President
Resource Planning and Acquisition	Commercial Operations
Public Service Company of Colorado	IBERDROLA RENEWABLES, Inc.
550 15 <sup>th</sup> Street, Suite 1000	1125 NW Couch, Suite 700
Denver, CO 80202	Portland, OR 97209
Phone: (303) 571-6513	Phone: (503) 796-6914
Fax: (303) 571-6273	Fax: (503) 796-6909
Dana Echter	Donna Foy
Manager, Renewable Purchases	Director, Contracts
Public Service Company of Colorado	IBERDROLA RENEWABLES, Inc.
550 15 <sup>th</sup> Street, Suite 1000	1125 NW Couch, Suite 400
Denver, CO 80202	Portland, OR 97209
Phone: (303) 571-7714	Phone: (503) 796-7034
Fax: (303) 571-7441	Fax: (503) 478-6394
Operating Committee	Operating Committee
Representative:	Representative:
Dana Echter	Kevin Devlin, Vice President
Manager, Renewable Purchases	Commercial Operations
Public Service Company of Colorado	IBERDROLA RENEWABLES, Inc.
550 15 <sup>th</sup> Street, Suite 1000	1125 NW Couch, Suite 700
Denver, CO 80202	Portland, OR 97209
Phone: (303) 571-7714	Phone: (503) 796-6914
Fax: (303) 571-7441	Fax: (503) 796-6909
Alternate:	Alternate:
John W. Ault	Gerald Froese, Managing Director
Renewable Purchased Power	Wind Asset Management
Public Service Company of Colorado	IBERDROLA RENEWABLES, Inc.
550 15 <sup>th</sup> Street, Suite 1000	1125 NW Couch, Suite 700
Denver, CO 80202	Portland, OR 97209
Phone: (303) 571-2746	Phone: (503) 796-7036
Fax: (303) 571-7441	Fax: (503) 796-6903

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# EXHIBIT D (TO PPA)

# **INSURANCE COVERAGE**

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# EXHIBIT E (TO PPA)

# SELLER'S REQUIRED GOVERNMENTAL AUTHORITY PERMITS, CONSENTS, APPROVALS, LICENSES AND AUTHORIZATIONS TO BE OBTAINED

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# EXHIBIT F (TO PPA)

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FORM OF LETTER OF CREDIT

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#### ATTACHMENT B (TO LETTER OF CREDIT)

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TRANSFER FORM

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# **EXHIBIT G** (TO PPA)

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FORM OF MEMORANDUM OF AGREEMENT

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# Exhibit A to Memorandum of Agreement

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List of Subcontractors

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## EXHIBIT H (TO PPA)

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FORM OF GUARANTEE OF SELLER'S GUARANTOR

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## EXHIBIT I (TO PPA)

## [RESERVED]

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#### EXHIBIT J

#### NORTHERN STATES POWER COMPANY D/B/A XCEL ENERGY SERVICES, INC.

#### NOTICE OF CUSTOMER VOLUNTARY WRITTEN CONSENT

The FERC Standards of Conduct Regulations, 18 C.F.R. Part 358.5(b)(4), states that a non-affiliated transmission customer may voluntarily consent, in writing, to allow the Interconnection Provider to share the non-affiliated customer's information with Marketing or Energy Affiliate. The Interconnection Provider must post notice on the OASIS or Internet website of that consent along with a statement that it did not provide any preferences, either operational or rate-related, in exchange for that voluntary consent.

Signature of this form by the *Customer* serves as notice of voluntary written consent allowing the Xcel Energy Services, Inc. Wholesale Merchant Function to engage in nonpublic transmission/interconnection related discussions associated with the existing and a possible future power purchase agreement between Xcel Energy Services, Inc. and *Customer*. Xcel Energy Services, Inc. will maintain and protect the confidentiality of all information received from Northern States Power Company ("Interconnection Provider") pertaining to the *Customer's* transmission/interconnection facilities.

**Customer:** 

Signed:

Print Name:

Title:

Date:

Contract or Project Name:

Please send a signed written consent letter to the [\_\_\_\_] and a copy to the Xcel Energy Wholesale Merchant Function below:

Interconnection Provider

Mark Moeller

Transmission Account Representative Xcel Energy Services, Inc. 250 Marquette Avenue Wholesale Merchant Function

Tom McDonough Manager, Transmission Access Xcel Energy Services, Inc. 250 Marquette Avenue

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Suite 800 Minneapolis, Minnesota 55401 Suite 720 Minneapolis, Minnesota 55401

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#### **EXHIBIT L**

#### COMMITTED RENEWABLE ENERGY EXAMPLE CALCULATION

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### EXHIBIT M

## INTERCONNECTION AGREEMENT

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#### **EXHIBIT N**

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#### **EXAMPLE CALCULATION OF TAX BENEFITS**

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#### **EXHIBIT O**

#### FORM OF PROGRESS REPORT

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#### AMENDMENT NO. 1 TO WIND ENERGY PURCHASE AGREEMENT BETWEEN NORTHERN STATES POWER COMPANY AND MORAINE WIND II, LLC

This AMENDMENT NO. 1 TO THE WIND ENERGY PURCHASE AGREEMENT, ("Amendment No. 1") is entered into as of November 16, 2018 by and between Northern States Power Company, a Minnesota corporation ("Company"), and Moraine Wind II, LLC, a limited liability company of the State of Oregon ("Seller").

#### RECITALS

WHEREAS, Company and Seller (referred to herein collectively as "Parties" and individually as "Party") have entered into a Wind Energy Purchase Agreement (the "PPA"), dated November 7, 2008, pursuant to which Company purchases Wind Energy and other products from Seller's Facility;

WHEREAS, the Initial Term of the PPA expires on February 17, 2019; and

WHEREAS, the Parties mutually agree to amend the PPA to remove the option to extend provisions of the PPA and to establish a New Term of the PPA of ten (10) years commencing immediately upon expiration of the Initial Term, under the terms and conditions originally agreed to in the PPA, and as modified herein.

WHEREAS, reference to the "PPA" in the PPA and in this Amendment No. 1 shall hereafter be deemed to refer to the PPA, as amended by this Amendment No. 1.

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the Parties hereby agree as follows:

#### AMENDMENT

1. <u>Company Conditions Precedent to this Amendment No. 1</u>.

(A) In the event that one or more of the conditions precedent set forth in this section have not been satisfied or waived in the corresponding time period specified, Company shall have the right to terminate this Amendment No. 1 without any further financial or other obligation by or to any Party as a result of such termination, by written notice to Seller.

(B) If Company is eligible but fails to terminate this Amendment No. 1 by the applicable date, Company shall be deemed to have waived its right to terminate this Amendment No. 1 for that reason, and this Amendment No. 1 shall remain in full force and effect thereafter subject to all remaining terms and conditions herein.

(C) <u>MPUC Approval</u>.

(1) No later than sixty (60) Days after the date of this Amendment No. 1, Company may apply for MPUC Approval. If Company fails to timely apply for MPUC Approval, Company shall be deemed to have waived its right to obtain MPUC Approval and to

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terminate this Amendment No. 1, and this Amendment No. 1 shall remain in full force and effect thereafter. If Company applies for MPUC Approval, Company shall use Commercially Reasonable Efforts to obtain MPUC Approval as soon as reasonably practicable. Seller shall use its Commercially Reasonable Efforts to cooperate with Company's efforts to obtain MPUC Approval.

(2) If Company timely applies for MPUC Approval, Company shall have the right to terminate this Amendment No. 1, without any further financial or other obligation by or to any Party as a result of such termination, by written notice to Seller:

(a) at any time within thirty (30) Days following issuance of a written order by the MPUC denying MPUC Approval, or granting MPUC Approval with conditions unacceptable to Company in its sole discretion;

(b) at any time between the one-hundred eightieth (180th) and two-hundred fifteenth (215th) Day following Company's application for MPUC Approval, if prior to the date of such termination the MPUC has not issued a written order granting or denying MPUC Approval;

(c) at any time within thirty (30) Days following timely request for reconsideration (in whole or in any material part) by any third party with standing, of a written MPUC order granting MPUC Approval; and/or

(d) at any time within thirty (30) Days following timely appeal by any party with standing of a written MPUC Order granting MPUC Approval.

(3) For purposes of this Amendment No. 1, "<u>MPUC Approval</u>" means a written order of the MPUC which alone or in combination make an affirmative determination that all costs incurred under this Amendment No. 1 are recoverable from Company's Minnesota jurisdictional retail customers pursuant to Applicable Law, subject only to the requirement that the MPUC retain ongoing prudency review of Company's performance and administration of this Amendment No. 1.

#### (D) <u>Non-Jurisdictional Regulatory Treatment</u>.

(1) In addition to MPUC Approval, no later than sixty (60) Days after the date of this Amendment No. 1, Company may apply for one or more Non-Jurisdictional Regulatory Treatment(s) (defined below). If Company fails to timely apply for any Non-Jurisdictional Regulatory Treatment, Company shall be deemed to have waived its right to terminate this Amendment No. 1 for failure to obtain such Non-Jurisdictional Regulatory Treatment, and this Amendment No. 1 shall remain in full force and effect thereafter, subject to satisfaction or waiver of other conditions set forth in this section. If Company applies for any or all of the Non-Jurisdictional Regulatory Treatment(s), Company shall use Commercially Reasonable Efforts to obtain all such Non-Jurisdictional Regulatory Treatment(s) as soon as reasonably practicable. Seller shall use its Commercially Reasonable Efforts to cooperate with Company's efforts to obtain Non-Jurisdictional Regulatory Treatment(s). For purposes of this Amendment No. 1, each of the following is a "<u>Non-Jurisdictional Regulatory Treatment</u>":

(a) Acceptance by the North Dakota Public Service Commission that the Nameplate Capacity and Renewable Energy from this Facility may or may not be utilized, in whole or in part, to serve the Company's North Dakota retail electric

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customers and appropriate rate making treatment to effectuate the same, including, without limitation, waivers or other authorization recognizing that the Nameplate Capacity and Renewable Energy from this Facility is not serving nor is charged to or reimbursed from North Dakota retail customers;

(b) Acceptance by the South Dakota Public Utilities Commission that the Nameplate Capacity and Renewable Energy from this Facility may or may not be utilized, in whole or in part, to serve the Company's South Dakota retail electric customers and appropriate rate making treatment to effectuate the same, including, without limitation, waivers or other authorization recognizing that the Nameplate Capacity and Renewable Energy from this Facility is not serving nor is charged to or reimbursed from South Dakota retail customers; and

(c) Approval by the Federal Energy Regulatory Commission to amend the interchange agreement between Northern States Power Company, a Minnesota corporation, and Northern States Power Company, a Wisconsin corporation, sufficient to ensure that the Nameplate Capacity and Renewable Energy from this Facility may or may not be utilized, in whole or in part, to serve the retail electric customers of Company's affiliate (as that term is defined in Minn. Stat. § 216B.48) in Wisconsin and Michigan and appropriate rate making treatment to effectuate the same.

(2) If Company applies for Non-Jurisdictional Regulatory Treatment, Company shall have the right to terminate this Amendment No. 1, without any further financial or other obligation by or to any Party as a result of such termination, by notice to Seller:

(a) at any time within thirty (30) Days following issuance of a written order by any of the NDPSC, the SDPUC, or FERC denying the applicable Non-Jurisdictional Regulatory Treatment, or granting the same with conditions unacceptable to Company in its sole discretion;

(b) at any time between the one-hundred eightieth (180th) and two-hundred fifteenth (215th) Day following Company's application for any Non-Jurisdictional Regulatory Treatment, if prior to the date of such termination the NDPSC, SDPUC, and/or FERC has not issued a written order granting or denying the applicable Non-Jurisdictional Regulatory Treatment;

(c) at any time within thirty (30) Days following timely request for reconsideration (in whole or in any material part) by any third party with standing, of a written order granting any portion of the Non-Jurisdictional Regulatory Treatment; and/or

(d) at any time within thirty (30) Days following timely appeal by any party with standing of a written order granting Non-Jurisdictional Regulatory Treatment.

#### 2. Amendments to Section 1.4 of the PPA "Definitions".

a. The following definitions in Section 1.4 are amended by deleting them in their entirety and replacing them with the following:

"Governmental Authority" means any federal, state, local, or municipal governmental body; any governmental, quasi-governmental, regulatory or administrative agency, commission, body, or other authority exercising or entitled to exercise any administrative, executive, judicial, legislative, policy, regulatory, or taxing authority or power; and/or any court or governmental tribunal. By way of example only, "Governmental Authorities" include NERC, the ERO, the Market Operator (if any), an applicable PUC, the Transmission Authority and FERC, and successor organizations. For avoidance of doubt, Company and its Affiliates are not Governmental Authorities for purposes of this PPA.



"Term" means the period of time during which this PPA shall remain in full force and effect, such time period to include both the Initial Term and the New Term.

b. Section 1.4 is amended to add the following definitions:

"AGC" or "Automatic Generation Control" means the equipment and capability of an electric generation facility automatically to adjust the generation quantity within the applicable Balancing Authority with the purpose of interchange balancing and specifically, the Facility's capability of accepting an AGC Set-Point electronically, and the automatic adjustment and regulation of the Facility's energy production via the SCADA System.

"AGC Protocols" means the protocols for AGC included in Exhibit I - AGC Protocols; Data Collection; Technical Specifications, as such protocols may be modified from time to time in accordance with Section 10.5.

"AGC Remote/Local" means a handshake electronic signal sent from the Facility to the EMCC AGC system, and from the EMCC AGC system to the Facility, indicating the Facility is receiving AGC Set-Point locally (from the Facility) or remotely (EMCC AGC system) and is following that AGC Set-Point.

"AGC Set-Point" means the Company-generated analog or digital signal sent by the SCADA System to the Facility, representing the quantity of Renewable Energy to be generated by the Facility. The AGC Set-Point is calculated by the EMCC AGC system and communicated electronically to the Facility via the SCADA System.

"Commercially Reasonable" or "Commercially Reasonable Efforts" means, with respect to any action to be taken or attempted by a Party under this PPA, the level of effort in light of the facts known to such Party at the time a decision is made that: (a) can reasonably be expected to accomplish the desired action at a reasonable cost; (b) is consistent with Good Utility Practices; and (c) takes into consideration the amount of advance notice required to take such action, the duration and type of action, and the competitive environment in which such action occurs.

"Energy Markets Control Center" or "EMCC" means Company's merchant representatives responsible for dispatch of generating units, including the Facility. The term EMCC shall be deemed to have the same meaning as the term "SCC" under the original PPA.

"ERO" means the Electric Reliability Organization certified by FERC pursuant to Section 215 of the Federal Power Act or any successor organization. The certified ERO as of the date of this PPA is Midcontinent Independent System Operator, Inc. (MISO).

"Initial Term" means the period that commenced on the Effective Date of the PPA and ends on February 17, 2019.

"Nameplate Capacity" of the Facility means the sum of the designed maximum outputs of each Wind Turbine comprising the Facility, as designated by the manufacturer.

"NDPSC" means the North Dakota Public Service Commission, or any successor agency.

"New Term" means the ten (10) year period that commences immediately upon expiration of the Initial Term and ends on February 17, 2029.

"Park Potential" means the number of MW that depicts Seller's real time calculation of the Potential Energy capable of being provided by the Facility to Company at the Point of Delivery. Park Potential shall be calculated using the best-available data obtained through Commercially Reasonable methods; and shall be dependent upon measured wind speeds, power curves, Wind Turbine availability, and derate(s) and transmission line losses, and any other adjustment necessary to accurately reflect the Potential Energy at the Point of Delivery. Park Potential should be provided to the Company in real time through the Company's SCADA System in accordance with the AGC Protocols.

"PI System" means the "plant information" system for the Facility, as described and implemented in Exhibit I – AGC Protocols; Data Collection; Technical Specifications.

"Potential Energy" for any period of time means the MWh of energy that the Facility is actually capable of delivering to the Point of Delivery by virtue of the Park Potential during such period.

"SCADA" means supervisory control and data acquisition.

"SDPUC" shall mean the South Dakota Public Utilities Commission, or successor

agency.

"Transmission Authority" means collectively those entities owning and/or operating the interconnected transmission system which interconnect the Facility to an energy market pursuant to the TEMT, including (i) Northern States Power Company operating under and in accordance with the TEMT, and (ii) all entity(s) responsible under the Interconnection Agreement for providing the transmission lines, any Interconnection Facilities and other equipment and facilities with which the Facility interconnects at the Electric Interconnection Point and transmission system.

"Transmission Authority's System" means the contiguously interconnected electric transmission and sub-transmission facilities, over which the Transmission Authority has rights (by ownership or contract) to provide bulk transmission of capacity and energy from the Electric Interconnection Point.

c. The following definitions shall apply only for this Amendment No. 1 and, unless otherwise stated, for any subsequent amendments to the PPA, as applicable.

"MPUC Approval" shall have the meaning set forth in Article 1 of this Amendment 1.

No. 1.

"Non-Jurisdictional Regulatory Treatment" shall have the meaning set forth in Article 1 of this Amendment No. 1.

"ROFO" or "ROFO Notice" shall have the meaning set forth in Section 19.7.

3. <u>Amendment to Article 2 of the PPA "Term and Termination"</u>. The first sentence of Article 2 of the PPA is deleted in its entirety and replaced with the following:

"This PPA shall become effective as of the Effective Date, and shall remain in full force and effect throughout the Term, subject to any early termination or extension provisions set forth herein."

#### 4. Amendment to Section 3.3 of the PPA "General Design of the Facility".

a. At the end of Section 3.3(B), the period (".") is deleted and replace with "; and".

b. A new Section 3.3(C) is added to the PPA, containing the following:

"(C) include all equipment specified in Exhibit B – Facility Description and Site Maps and otherwise necessary to fulfill Seller's obligations under this PPA, including all

equipment and software necessary (i) to receive, accept, and react to an AGC signal from the Company's SCADA System and to comply with the AGC Protocols as further specified in Exhibit I – AGC Protocols; Data Collection; Technical Specs, and (ii) to interconnect successfully with the Transmission Authority's System for the delivery of Renewable Energy to the Point of Delivery."

## 5. <u>Amendment to Section 7.4 of the PPA "Company's Right to Curtail Energy"</u>. Section 7.4 of the PPA is deleted in its entirety and replaced with the following:

"7.4 <u>Company's Right to Curtail Energy</u>. Company may require Seller, by telephonic communication or through use of the AGC Set Point, to curtail the delivery of Renewable Energy to Company from the Facility, for any discretionary reason and in Company's sole discretion. Seller shall promptly comply with each such notification. Seller shall install, or arrange for the Interconnection Provider to install pursuant to the Interconnection Agreement, equipment necessary to disconnect the Facility."

# 6. <u>Amendments to Article 7 of the PPA "Sale and Purchase of Renewable Energy.</u>" A new Section 7.8 and Section 7.9 are added to the PPA, containing the following:

"7.8 <u>AGC</u>. Beginning on the first (1<sup>st</sup>) Day of the New Term, Company shall dispatch the Facility through the EMCC AGC system. Seller shall ensure that, throughout the Term:

(A) the SCADA signal is capable of functioning on all AGC Set Points within the margin of error specified in the manufacturer's energy set point margin of error; and

(B) the Facility AGC Remote/Local status is in "Remote" set-point control during normal operations.

7.9 <u>PTC Qualification</u>. If the Facility becomes eligible for PTCs as a result of a retrofit or repower, the Company will designate the Facility as a PTC-qualified project in its generation scheduling process, and will offer generation into the MISO market at a price no more than the negative of the PTC value at the time."

# 7. <u>Amendment to Section 8.1 of the PPA "Energy Payment Rate.</u>" Section 8.1 of the PPA is deleted in its entirety and replaced with the following:

"8.1 <u>Energy Payment Rate</u>. Except as modified pursuant to Section 4.10, commencing on the Commercial Operation Date of the Facility, Company shall pay Seller for all Renewable Energy delivered to Company by Seller to the Point of Delivery in a Commercial Operation Year, and net of losses prior to the Point of Delivery,

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For avoidance of doubt, and except as specifically provided for under Section 8.2, Company shall not be obligated to make any payment to Seller under this Article 8 for any energy which, regardless of reason or event of Force Majeure affecting either Party,

(A) does not qualify as Renewable Energy,

(B) is not measured by the Electric Metering Device(s) installed pursuant to Section 5.3, as such measurement may be adjusted pursuant to Section 5.4, or

- (C) is not delivered to Company at the Point of Delivery."
- 8. Amendments to Section 8.2 of the PPA "Curtailment Energy Payment Rate."
  - a. Section 8.2(A)(2) of the PPA is deleted in its entirety and replaced with the following:



- b. At the end of Section 8.2(C)(6), the period (".") is deleted and replace with ", or".
- c. A new Section 8.2(C)(7) is added to the PPA, containing the following:

"(7)

- 9. <u>Amendment to Section 10.2 of the PPA "Facility Operation.</u>" Section 10.2 of the PPA is deleted in its entirety and replaced with the following:
  - "10.2 Facility Operation and Administration.

(A) Seller shall comply with all requirements of law and Good Utility Practice in the operation of the Facility as well as the requirements of MISO, MRO, and any New Joint Transmission Authority. Seller shall staff, control, and operate the Facility consistent with Good Utility Practices, Exhibit I – AGC Protocols; Data Collection; Technical Specifications and any Operating Procedures developed pursuant to Section 10.5. Personnel capable of starting,

operating, and stopping the Facility shall be continuously available, either at the Facility, or capable of remotely starting, operating, and stopping the Facility with no more than minutes notice. In all cases Personnel capable of starting, operating, and stopping the Facility shall be continuously reachable by phone or pager.

(B) Seller shall comply with Good Utility Practices, the requirements of all Governmental Authorities and all its obligations under this PPA in the operation of the Facility. By way of example only, Seller shall perform all capacity testing of the Facility and related reporting, as and when required by Governmental Authorities.

(C) Seller shall provide to Company a non-binding day-ahead availability forecast in accordance with Exhibit I – AGC Protocols; Data Collection; Technical Specifications and any other reporting requirements required for compliance with NERC reliability standards. Company shall forward Seller's forecast to the applicable local reliability coordinator on Seller's behalf, provided, however, that Seller shall remain responsible to ensure the timeliness and accuracy of forecasts and any changes to the real-time or forecast availability of the Facility and provided further, that the Parties acknowledge and agree that such forecasts are estimates prepared by Seller in good faith and based upon data and information available to Seller as of the date such forecast are made and, as a result, are subject to risks, uncertainties and other factors that may cause the actual results to differ from such forecasts. If and to the extent that the ERO modifies the forecasting or other reporting requirements imposed on Company or the Facility, Seller shall timely provide required data to Company or the ERO, as applicable."

- 10. <u>Amendment to Section 10.4 of the PPA "Outage and Performance Reporting.</u>" A new Section 10.4(D) is added to the PPA, containing the following:
  - (D) <u>Real Time Data</u>. Commencing on the first (1<sup>st</sup>) Day of the New Term:

(1) Seller shall communicate all data necessary for Company to integrate the Facility into Company's EMCC in real time through the Facility's SCADA System in accordance with Exhibit I – AGC Protocols; Data Collection; Technical Specifications. Seller shall maintain the Facility's SCADA System so that it is capable of interfacing with and reacting to Company's AGC Set-Point and responding to signals from the Company's EMCC in accordance with the AGC Protocols.

(2) Seller shall use Commercially Reasonable Efforts to adjust the real time Park Potential of the Facility when Company communicates to Seller a measured difference of plus or minus one (1) MW between the metered Renewable Energy and Park Potential, during periods when generation is not curtailed.

(3) From and after the commencement of the New Term, Seller shall provide Company, at Seller's expense, real time performance and meteorological data for all Wind Turbines and meteorological towers at the Facility in accordance with Exhibit I – AGC Protocols; Data Collection; Technical Specifications for the Term of this PPA. Seller shall maintain Seller-owned data collection systems that are compatible with Company's PI System. Seller shall ensure that real time communications capabilities are available and maintained for transmission to Company's PI System. Seller shall ensure that all meteorological equipment at a minimum meets the specifications set forth in Exhibit I – AGC Protocols; Data Collection; Technical Specifications. Company shall have the right to disclose data gathered through the

Company's PI System publicly; *provided, however,* that such data is (i) masked to obscure the origin of the data, and (ii) aggregated so that the data cannot be correlated or attributed to the Facility or used by competitors of Seller and/or the supplier of the Wind Turbines.

#### 11. <u>Amendment to Section 10.5 of the PPA "Operating Committee and Operating</u> <u>Procedures.</u>" A new Section 10.5(C) is added to the PPA, containing the following:

(C) The Operating Committee shall review the requirements for AGC and Data Collection from time to time after the date hereof and may agree on modifications thereto to the extent necessary or convenient for operation of the Facility in accordance with this PPA.

- 12. <u>Amendment to Article 19 of the PPA "Assignment and Other Transfer Restrictions.</u>" A new Section 19.7 is added to the PPA, containing the following:
  - "19.7 Company Right Of First Offer.
    - (A) At any time during the Term,

(1) if Seller proposes to sell the Facility to an unaffiliated third party other than to a Facility Lender providing tax equity, Seller shall first offer to sell the Facility to Company via notice to Company,

(2) if Seller's parent proposes to sell a majority of the equity interests in Seller to an unaffiliated third party other than to a Facility Lender providing tax equity, Seller shall cause its parent first to offer to sell such equity interests to Company via notice to Company, and

(3) if Seller's parent owns no assets other than its equity interests in Seller and the parent of Seller's parent proposes to sell a majority of the equity interests in Seller's parent to an unaffiliated third party other than to a Facility Lender providing tax equity, Seller shall cause its parent's parent first to offer to sell such equity interests to Company via notice to Company

(in each case, a "ROFO" and such notice, a "ROFO Notice"). Any ROFO Notice shall describe the proposed transaction, including the minimum price, status of title to the Site, liabilities to be assumed and other terms which Seller or its relevant parent (as applicable) is willing to accept to proceed with the contemplated transaction. The contents of a ROFO Notice shall be deemed Confidential Information for purposes of Section 20.16 below.

(B) Following issuance of a ROFO Notice, Seller shall allow Company sixty (60) Days to investigate the proposed transaction and conduct due diligence. Due diligence shall include such physical inspections, surveys and operating tests of the Facility and the Site, such reviews of Seller's contracts, books and records, and interviews of such personnel, as Company may reasonably request. All information obtained by Company from such investigations shall be deemed Confidential Information subject to Section 20.16 below. Within such sixty (60)-Day period, Company may elect to purchase the Facility or the relevant equity interests (as applicable) on substantially the same terms as set forth in the ROFO Notice. If

Company fails to notify Seller of Company's election within such sixty (60)-Day period, Company shall be deemed to have rejected the transaction.

(C) If Company elects to purchase the Facility or the specified equity interests (as applicable), the Parties shall negotiate and execute a definitive contract for the transaction (a "PSA"). The PSA shall include the price and other terms set forth in the ROFO Notice. In the event that the Parties cannot agree on the final form of PSA, (i) the issue shall be submitted to "baseball" arbitration in Minneapolis, Minnesota before one arbitrator appointed by the Arbitration Service, i.e. each Party shall submit to the arbitrator a form of proposed PSA, and the arbitrator shall be required to select one of the two forms to be used as the PSA in the transaction, without compromise, as the arbitral award, (ii) the period for closing of the transaction shall be extended for the period required to complete arbitration, and (iii) the Party whose form PSA is rejected shall pay the fees and costs of the Arbitration Service.

(D) If Company rejects the transaction described in a ROFO Notice, Seller shall have the right to sell the Facility (or Seller's relevant parent shall have the right to sell the specified equity interests, as applicable) on terms not more favorable to Seller or its parent as compared to the terms set forth in the ROFO Notice, at any time within the twelve (12)-month period following issuance of the ROFO Notice. If Seller or its relevant parent fails to close a transaction on such terms within such twelve (12)-month period, any sale of the Facility or equity interests in Seller shall again be subject to this Section 19.7.

(E) This Section 19.7 shall be specifically enforceable by Company, without bond and without the need to prove irreparable harm.

(F) Seller shall cooperate in all respects reasonably necessary for Company to exercise its ROFO rights, and shall operate the Facility in the ordinary course of business following the date of issuance of a ROFO Notice.

13. <u>Exhibit C – Notice Addresses.</u> Exhibit C of the PPA is deleted in its entirety and replaced with the following:

#### EXHIBIT C (TO PPA)

#### NOTICE ADDRESSES

Company	Seller		
Notices:	Notices:		
Tara Fowler	Contract Administration		
Manager, Renewable Energy Power	Avangrid Renewables, LLC		
Purchases	1125 NW Couch, Suite 700		
1800 Larimer Street, Suite 1000	Portland, Oregon 97209		
Denver, CO 80202	Phone: (503) 796-7000		
Phone: (303) 571-7846	Fax: (503) 478-6394		

Company	Seller
Operating Committee Representative:	Operating Committee Representative:
Tara Fowler	Kristin Sare
Alternate:	Alternate:
Bruce Hallett	Jace Fabrycki

14. <u>Exhibit I – AGC Protocols; Data Collection; Technical Specifications.</u> A new Exhibit I is added to the PPA, containing the following:

#### EXHIBIT I (TO PPA)

#### AGC PROTOCOLS; DATA COLLECTION; TECHNICAL SPECIFICATIONS

#### <u>AGC</u>

#### 1. AGC Communications between Company and Seller

Company will receive and send AGC Set-Point and related data over an analog or digital line. The data points covered under this PPA, as described below, may overlap data requirements for the Transmission Authority or Company's applicable forecasting group.

#### 2. AGC Data Points to be sent from Seller to Company via SCADA

The following data points will be transmitted via SCADA from Seller to Company and represent Facility level data:

Description	Units
AGC Set-Point (echo)	MW
Power demand	MW
Actual power	MW
Park Potential	MW
Actual reactive power	Mvars
Average Voltage	kV
Number of turbines online and running	Integer
AGC Status	Remote/Local

#### 3. Response times and limitations of Facility in regards to AGC

The following protocols outline the expectations for responding to the AGC Set-Point. Except in the case of the Frequency of Changes, these protocols will be generally bound by the manufacturers' specifications for the equipment that Seller has chosen for the Facility.

a. <u>Allowable Variances in Excess of AGC Set-Point</u>. Once the Facility has reached the AGC Set-Point, there may be variances in excess of such set-point up to one (1) MW on average as measured during a ten (10)-minute period. This is due to changing wind conditions versus the manufacturer's specifications for responding to those new conditions.

b. <u>Frequency of Changes</u>. Company may send a new AGC Set-Point to the Facility once during each five (5)-minute MISO dispatch interval. If MISO changes its dispatch interval to be less than a five (5)-minute dispatch interval, and this change is applicable to the Facility, then the frequency of AGC Set-Point changes will be changed to match the MISO dispatch interval.

c. <u>Range of AGC Set-Point</u>. The range of set point values can be between zero percent (0%) and one hundred percent (100%) of Park Potential.

#### 4. Backup Communications

In the event of an AGC failure, Company and Seller shall communicate via telephone in order to correct the failure.

#### 5. Ramp Rate

The ramp rate for the Facility will be five (5) MW per minute.

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#### DATA COLLECTION

#### 1. Availability Forecasting Requirements

a. Not later than 5:00 a.m. Central Prevailing Time (C.P.T.) on each Day, Seller shall post an availability forecast for the Plant through 11:00 p.m. on the following Day. The forecast shall be submitted through an availability forecast system specified by Company to Seller. Prior to the first (1<sup>st</sup>) Day of the New Term, Company shall provide Seller with information necessary for Seller to access the chosen availability forecast system. Prior to the Commercial Operation Date, Company shall provide Seller with the information necessary for Seller to access the chosen availability forecast system.

b. If any events or circumstances reduce the forecasted availability of the Facility by five (5) MW or more, such reduction shall be (1) communicated to the real-time operator via telephone with (2) immediate update to the availability forecast in the availability forecast system. For example:

i. A disturbance at a 100.5 MW (67 x 1.5 MW wind turbines) wind plant causes twenty-six (26) wind turbines (39 MW) to become unavailable. Only two (2) turbines were planned to be down for maintenance (3 MW). The expected reduction in

the available capacity is 39 MW; exceeding the five (5)-MW requirement. A phone call to real-time operations with immediate update of the availability forecast is required. At the time of the outage, the estimated expected duration was thought to be six (6) hours. Three (3) hours into the outage, it became known that the twenty-six (26) turbines would be available in an hour. A phone call notifying real-time of the change in availability is required with a coincident update in the availability forecast system.

ii. A disturbance at a ten (10) MW (8 x 1.25 MW turbines) wind plant forces four (4) turbines (5 MW) off-line. Because the disturbance equals five (5) MW, a phone call to real-time operations with immediate update of the availability forecast is required. If the disturbance had only affected three (3) turbines (3.75MW), then no immediate action would be necessary.

iii. A twenty (20) MW (20 x 1 MW turbines) wind plant is off-line for transmission maintenance. The maintenance work is completed two (2) hours ahead of the projected completion. Because the change is greater than ten (10) MW, prior to coming on-line, a phone call is required coincident with an update to the availability forecast system to indicate the new availability.

#### 15. <u>General</u>

- a. **Representations Regarding this Amendment No. 1**. By its execution hereof, each Party represents and warrants that it is authorized to enter into this Amendment No. 1, that this Amendment No. 1does not conflict with any contract, lease, instrument, or other obligation to which it is a party or by which it is bound, which conflict could reasonably be expected to have a material adverse effect on the ability of such Party to perform its obligations hereunder, and that this Amendment No. 1 represents its valid and binding obligation, enforceable against it in accordance with its terms.
- b. **No Other Amendments**. Except as specifically provided in this Amendment No. 1, no other amendments, revisions, or changes are made or have been made to the PPA. All other terms and conditions of the PPA remain in full force and effect and the Parties hereby ratify and confirm their rights, obligations, and representations under the PPA, as amended hereby.
- c. **Conforming References**. Upon the effectiveness of this Amendment No. 1, each reference in the PPA to "this Agreement, "there under", "hereto", "herein", or words of like import, shall mean and be a reference to the PPA as amended hereby.
- d. **Counterparts**. This Amendment No. 1 may be executed in one or more counterparts, each of which shall be deemed to be an original, but all of which shall be one and the same document. The exchange of copies of this Amendment No. 1 and of signature pages by facsimile or other electronic transmission shall constitute effective execution and delivery of this Amendment No. 1 as to the Parties and may be used in lieu of the original Amendment No. 1 for all purposes. Signatures of the Parties transmitted by facsimile or other electronic means shall be deemed to be their original signatures for all purposes.

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#### **Final Version**

- e. **Governing Law**. The interpretation and performance of this Amendment No. 1 and each of its provisions shall be governed and construed in accordance with the laws of the State of Minnesota. The Parties hereby submit to the exclusive jurisdiction of the courts of the State of Minnesota, and venue is hereby stipulated as Minneapolis, Minnesota.
- f. Effectiveness of Amendment No. 1. The amendments to the PPA contemplated by this Amendment No. 1 shall become effective as of the first (1<sup>st</sup>) Day of the New Term (the "Effective Date").

IN WITNESS WHEREOF, the undersigned have executed this Amendment No. 1 to the PPA as of the date first written above.

Title:

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MORAINE WIND II, LLC

#### NORTHERN STATES POWER COMPANY

aura Beane

Name: Authorized Representative

Name: \_\_\_\_\_

By:\_\_\_\_\_

Title: Authorized Representative

Bv:

Name: <u>Steve Krump</u> Authorized Representative Title: Authorized Representative

- e. **Governing Law.** The interpretation and performance of this Amendment No. 1 and each of its provisions shall be governed and construed in accordance with the laws of the State of Minnesota. The Parties hereby submit to the exclusive jurisdiction of the courts of the State of Minnesota, and venue is hereby stipulated as Minneapolis, Minnesota.
- f. Effectiveness of Amendment No. 1. The amendments to the PPA contemplated by this Amendment No. 1 shall become effective as of the first (1<sup>st</sup>) Day of the New Term (the "Effective Date").

IN WITNESS WHEREOF, the undersigned have executed this Amendment No. 1 to the PPA as of the date first written above.

MORAINE WIND II, LLC

NORTHERN STATES POWER COMPANY

Ву:	By: Thomas a. Inller
Name:	Name:
Title: Authorized Representative	Title:
By: Name: Title: Authorized Representative	Thomas A. Imbler Vice President, Commercial Operations Xcel Energy Services Inc. Authorized signatory for Northern States Power Comparison A Minnesota corporation

## Strategist Modeling Assumptions and Outputs

## I. Strategist Modeling Assumptions

1. Discount Rate and Capital Structure

The discount rate used for levelized cost calculations and the present value of modeled costs is 6.53 percent. The rates shown in Table 1 below were calculated by taking a weighted average of NSP jurisdictions from the April 2018 Corporate Assumptions Memo.

			Before Tax	After Tax
	Capital	Allowed	Electric	Electric
	Structure	Return	WACC	WACC
Long-Term Debt	45.60%	4.87%	2.22%	1.32%
<b>Common Equity</b>	52.50%	9.39%	4.93%	4.93%
Short-Term Debt	1.90%	2.85%	0.05%	0.05%
Total			7.20%	6.30%

Table 1: Capital Structure

2. Inflation Rates

The inflation rates are used for existing resources, generic resources, and other costs related to general inflationary trends in the modeling and are developed using long-term forecasts from Global Insight. The General inflation rate is from the "Chained Price Index for Total Personal Consumption Expenditures" published in the second quarter of 2018.

- General inflation The inflation rate used for construction (capital) costs and any other escalation factor related to general inflationary trends is 2.0 percent.
- 3. Reserve Margin

The reserve margin at the time of MISO's peak is 8.4 percent. The coincidence factor between the NSP System and MISO system peak is 5 percent. Therefore, the effective reserve margin is:

$$(1 - 5\%) * (1 + 8.4\%) - 1 = 2.98\%.$$

## Table 2: Reserve Margin

Reserve Margin	
Coincidence Factor	5.00%
MISO Coincident Peak Reserve Margin %	8.40%
Effective RM Based on Non-coincident Peak	2.98%

4. Regulated  $CO_2$  Costs

Figure 1 below shows the annual Regulated  $CO_2$  Costs used in the analysis. The base assumption is \$15 per short ton starting in 2022, which is the average of \$5 per short ton and \$25 per short ton. The range of Regulated  $CO_2$  Costs is drawn from the Minnesota Public Utilities Commission's ORDER ESTABLISHING 2018 AND 2019 ESTIMATE OF FUTURE CARBON DIOXIDE REGULATION COSTS issued June 11, 2018 in Docket No. E999/CI-07-1199. All prices escalate at general inflation.

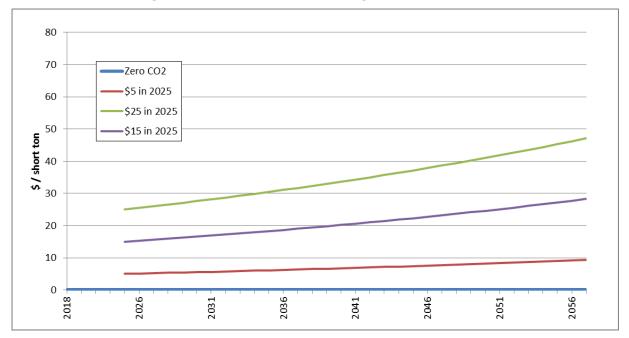


Figure 1: Carbon Dioxide Regulated CO<sub>2</sub> Cost

## 5. Externality Costs

The values of the criteria pollutants PM2.5, NOx and SO2 are derived from the "Low" and "High" (Base Case) values for each of the three locations, pursuant to the Commission's ORDER UPDATING ENVIRONMENTAL COST VALUES ISSUED January 3,

2018 in Docket No. E999/CI-14-643 (Order Point 2, pages 57-58). The values of the criteria pollutants CO and Pb are derived from the "Low" and "High" (Base Case) values for each of the three locations. All prices are escalated to 2018 real \$.

For plants located within 200 miles of Minnesota, it was decided that the NOx, PM2.5 and SO2 values would be selected based on the appropriate category Urban/Metro Fringe/Rural for each plant in question

	MPUC Externality Costs					
		\$2018 per short	ton			
	Urban Metro Fringe Rural <200mi					
SO2	\$6,116	\$4,829	\$3,643	\$0		
NOx	\$2,934	\$2,622	\$2,110	\$28		
PM2.5	\$10,697	\$6,856	\$3,654	\$872		
со	\$1.65	\$1.17	\$0.31	\$0.31		
Pb	\$4,857	\$2,562	\$624	\$624		

Table	3:	External	lity	Costs
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The  $CO_2$  values are derived from the above-referenced Orders. In the Base Case, the  $CO_2$  values until 2025 are based on the "High" (externalities) Environmental Cost Values for  $CO_2$ . The Base Case  $CO_2$  values from 2025 onwards are based on the "High" end of the range determined in the June 11th Order (see page 12 of June 11th Order). All prices are escalated to 2018 real \$ and escalate at general inflation (set at 2 percent per year) thereafter.

MPUC CO	MPUC CO <sub>2</sub> Externality Costs				
\$1	per short to	on			
Year	Low	High			
2018	9.09	42.76			
2019	9.49	44.58			
2020	9.90	46.45			
2021	10.32	48.39			
2022	10.77	50.38			
2023	11.22	52.43			
2024	11.69	54.55			
2025	12.16	56.72			
2026	12.67	58.97			
2027	13.17	61.29			
2028	13.70	63.67			
2029	14.24	66.12			
2030	14.80	68.64			
2031	15.37	71.24			
2032	15.97	73.91			
2033	16.57	76.67			
2034	17.21	79.50			
2035	17.85	82.41			
2036	18.52	85.41			
2037	19.20	88.50			
2038	19.91	91.68			
2039	20.62	94.96			
2040	21.38	98.32			
2041	22.14	101.78			
2042	22.94	105.34			
2043	23.74	109.00			
2044	24.58	112.76			
2045	25.43	116.63			
2046	26.33	120.61			
2047	27.23	124.71			
2048	28.17	128.92			
2049	29.12	133.24			
2050	30.12	137.69			
2051	31.14	142.26			
2052	32.18	146.97			
2053	33.26	151.80			
2054	34.36	156.76			
2055	35.50	161.87			
2056	36.66	167.11			
2057	37.86	172.51			

## Table 4: Carbon Dioxide Externality Costs

## 6. Demand and Energy Forecast

The Fall 2018 Load Forecast developed by the Xcel Energy Load Forecasting group is used. The forecast is shown with no DG solar reduction, as solar was modeled as a resource.

Demand (MW)				Energy (GWh)					
N/	Model	W/ Hist DSM,	w DSM/Eff	Final w EV	N	Model	W/ Hist DSM,	w DSM/Eff	Final w EV
Year	Output	Building Code Adj	Adjustments	Adjustments	Year	Output	Building Code Adj	Adjustments	Adjustments
2018	10,415	9,241	9,151	9,152	2018	50,447	44,348	43,909	43,914
2019	10,424	9,313	9,131	9,136	2019	50,530	44,649	43,772	43,798
2020	10,499	9,399	9,146	9,156	2020	50,847	45,129	43,800	43,865
2021	10,559	9,497	9,173	9,191	2021	50,746	45,223	43,449	43,560
2022	10,621	9,623	9,226	9,251	2022	50,844	45,598	43,375	43,529
2023	10,684	9,719	9,251	9,285	2023	50,991	45,857	43,186	43,394
2024	10,755	9,831	9,291	9,329	2024	51,326	46,318	43,189	43,425
2025	10,842	9,949	9,338	9,376	2025	51,333	46,589	43,021	43,257
2026	10,939	10,101	9,418	9,456	2026	51,483	47,061	43,044	43,281
2027	11,038	10,287	9,533	9,571	2027	51,699	47,722	43,256	43,493
2028	11,140	10,494	9,669	9,706	2028	52,079	48,780	43,852	44,089
2029	11,232	10,634	9,737	9,775	2029	52,105	49,097	43,735	43,972
2030	11,320	10,795	9,827	9,864	2030	52,279	49,704	43,893	44,130
2031	11,418	10,940	9,899	9,937	2031	52,516	50,195	43,935	44,172
2032	11,518	11,065	10,044	10,082	2032	52,895	50,712	44,424	44,661
2033	11,619	11,204	10,201	10,239	2033	52,931	50,918	44,639	44,875
2034	11,717	11,333	10,331	10,369	2034	53,112	51,274	44,995	45,232
2035	11,813	11,443	10,441	10,478	2035	53,346	51,577	45,298	45,534
2036	11,912	11,568	10,566	10,604	2036	53,746	52,103	45,806	46,042
2037	12,006	11,675	10,672	10,710	2037	53,750	52,169	45,890	46,126
2038	12,100	11,769	10,766	10,804	2038	53,911	52,329	46,050	46,287
2039	12,197	11,867	10,864	10,902	2039	54,165	52,584	46,305	46,541
2040	12,301	11,970	10,968	11,005	2040	54,589	53,007	46,709	46,946
2041	12,396	12,065	11,063	11,101	2041	54,599	53,018	46,739	46,975
2042	12,488	12,157	11,155	11,192	2042	54,767	53,186	46,907	47,143
2043	12,581	12,250	11,248	11,285	2043	55,031	53,450	47,171	47,407
2044	12,693	12,362	11,360	11,398	2044	55,467	53,884	47,587	47,823
2045	12,765	12,434	11,432	11,469	2045	55,503	53,921	47,642	47,879
2046	12,851	12,520	11,518	11,556	2046	55,700	54,119	47,840	48,076
2047	12,947	12,616	11,614	11,652	2047	55,996	54,415	48,136	48,372
2048	13,035	12,705	11,703	11,741	2048	56,359	55,038	48,740	48,977
2049	13,124	12,794	11,792	11,830	2049	56,435	54,854	48,575	48,811
2050	13,213	12,883	11,881	11,919	2050	56,667	55,085	48,806	49,042
2051	13,302	12,972	11,970	12,008	2051	56,899	55,316	49,037	49,274
2052	13,391	13,062	12,059	12,097	2052	57,288	55,700	49,403	49,640
2053	13,480	13,151	12,148	12,186	2053	57,362	55,779	49,500	49,736
2054	13,595	13,265	12,263	12,301	2054	57,812	56,228	49,949	50,185
2055	13,684	13,355	12,352	12,390	2055	58,043	56,459	50,180	50,417
2056	13,773	13,444	12,441	12,479	2056	58,436	56,847	50,549	50,786
2057	13,862	13,533	12,531	12,568	2057	58,507	56,922	50,643	50,880

Table 5: Fall 2018 Demand and Energy Forecast

## 7. DSM Forecast

The DSM forecast corresponds to what was used in the 2018v2.0 Load Forecast assumes impacts expected at a 75 percent rebate level which equals roughly 1.5 percent of sales through the planning period and is what is embedded in the 2018v2 Load Forecast.

	Energy	Demand
Year	(MWh)	(MW)
2018	439	114
2019	877	229
2020	1,330	316
2021	1,774	402
2022	2,223	489
2023	2,671	576
2024	3,129	663
2025	3,568	750
2026	4,017	837
2027	4,465	924
2028	4,928	1,011
2029	5,362	1,097
2030	5,811	1,184
2031	6,259	1,271
2032	6,287	1,244
2033	6,279	1,216
2034	6,279	1,216
2035	6,279	1,216
2036	6,297	1,216
2037	6,279	1,216
2038	6,279	1,216
2039	6,279	1,216
2040	6,297	1,216
2041	6,279	1,216
2042	6,279	1,216
2043	6,279	1,216
2044	6,297	1,216
2045	6,279	1,216
2046	6,279	1,216
2047	6,279	1,216
2048	6,297	1,216
2049	6,279	1,216
2050	6,279	1,216
2051	6,279	1,216
2052	6,297	1,216
2053	6,279	1,216
2054	6,279	1,216
2055	6,279	1,216
2056	6,297	1,216
2057	6,279	1,216

Table 6: DSM Forecast

## 8. Demand Response Forecast

The Load Management Forecast used was developed by the Xcel Energy Load Research group, 2018v4 vintage plus 406 MW of incremental generic DR starting in 2023. Table 7 below shows the July demand.

Table 7: 2018 Load Management Forecast
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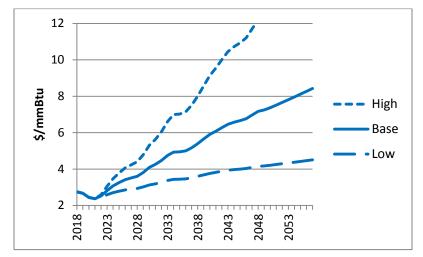
DR Fo	DR Forecast					
	July					
Year	Demand					
	(MW)					
2018	899					
2019	916					
2020	932					
2021	948					
2022	962					
2023	1,409					
2024	1,413					
2025	1,418					
2026	1,423					
2027	1,418					
2028	1,408					
2029	1,398					
2030	1,388					
2031	1,378					
2032	1,369					
2033	1,360					
2034	1,351					
2035	1,343					
2036	1,335					
2030	1,335					
2037	1,319					
2030						
2039	1,312 1,304					
2040	1,304					
2042	1,291					
2043	1,284					
2044	1,277					
2045	1,271					
2046	1,265					
2047	1,259					
2048	1,252					
2049	1,246					
2050	1,240					
2051	1,233					
2052	1,227					
2053	1,221					
2054	1,214					
2055	1,208					
2056	1,202					
2057	1,196					

9. Natural Gas Price Forecasts

Henry Hub natural gas prices are developed using a blend of market information (New York Mercantile Exchange futures prices) and long-term fundamentally-based forecasts from Wood Mackenzie, Cambridge Energy Research Associates (CERA) and Petroleum Industry Research Associates (PIRA).

Gas Prices as of October 18, 2018 were used. High and low gas price sensitivities were performed by adjusting the growth rate up and down by 50 percent from the base natural gas cost forecast starting in year 2022.

Figure 2: Ventura Natural Gas Price Forecast and Sensitivities



#### 10. Natural Gas Transportation Costs

Gas transportation variable costs include the gas transportation charges and the Fuel Lost & Unaccounted (FL&U) for all of the pipelines the gas flows through from the Ventura Hub to the generators facility. The FL&U charge is stated as a percentage of the gas expected to be consumed by the plant, effectively increasing the gas used to operate the plant, and is at the price of gas commodity being delivered to the plant. Table 13 contains gas transportation charges for generic thermal resources.

## 11. Natural Gas Demand Charges

Gas demand charges are fixed annual payments applied to resources to guarantee that natural gas will be available (normally called "firm gas"). Typically, firm gas is

obtained to meet the needs of the winter peak, as enough gas is normally available during the summer. Table 13 contains gas demand charges for generic thermal resources.

#### 12. Electric Power Market Prices

In addition to resources that exist within the NSP System, the Company is a participant in the MISO Market. Electric power market power prices are developed from fundamentally-based forecasts from Wood Mackenzie, CERA and PIRA. Figure 3 below shows the market prices under zero cost CO<sub>2</sub> assumptions.

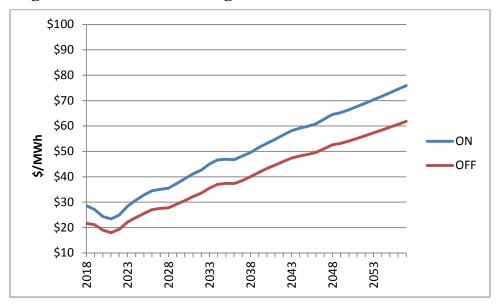
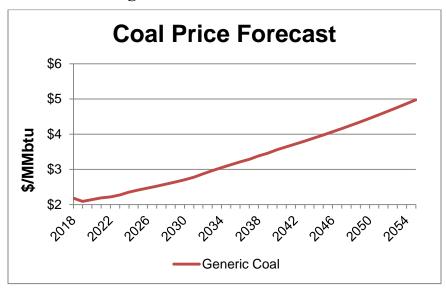


Figure 3: Minn Hub Average On and Off Peak Market Price

13. Coal Price Forecast

Coal price forecasts are developed using two major inputs: the current contract volumes and prices combined with current estimates of required spot volumes and prices. Typically coal volumes and prices are under contract on a plant-by-plant basis for a one- to five-year term with annual spot volumes filling the estimated fuel requirements of the coal plant based on recent unit dispatch. The spot coal price forecasts are developed from price forecasts provided by Wood Mackenzie, JD Energy, and John T. Boyd Company, as well as price points from recent Request for Proposal (RFP) responses for coal supply. Layered on top of the coal prices are transportation charges, SO<sub>2</sub> costs, freeze control and dust suppressant, as required.



**Figure 4: Coal Price Forecast** 

Surplus Capacity Credit 14.

The credit is applied for all 12 months of each year and is priced at the avoided capacity cost of a generic combustion turbine.

Tuble of ourplus Supurity Stealt								
2018	2019	2020	2021	2022	2023	2024	2025	20
3.72	3.79	3.87	3.95	4.03	4.11	4.19	4.27	4

Table 8: Surplus Capacity Credit

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
\$/kW-mo	3.72	3.79	3.87	3.95	4.03	4.11	4.19	4.27	4.36	4.45
	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
\$/kW-mo	4.54	4.63	4.72	4.81	4.91	5.01	5.11	5.21	5.31	5.42
	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
\$/kW-mo	5.53	5.64	5.75	5.87	5.98	6.10	6.23	6.35	6.48	6.61
	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057
\$/kW-mo	6.74	6.87	7.01	7.15	7.29	7.44	7.59	7.74	7.90	8.05

#### 15. Transmission Delivery Costs

Generic 2x1 combined cycle (CC), generic combustion turbine (CT), generic wind and generic solar have assumed transmission delivery costs. Table 9 below shows the transmission delivery costs on a \$/kW basis. The CC and CT costs were developed based on the average of several potential sites in the Minnesota. The general site

locations were investigated by Transmission Access for impacts to the transmission grid and expected resulting upgrade costs

	\$/kw			
CC	\$	330		
СТ	\$	100		
Wind	\$	200		
Solar	\$	70		

## Table 9: Transmission Delivery Costs

16. Interconnection Costs

Estimates of interconnection costs of the generic resources were included in the capital cost estimates.

17. Effective Load Carrying Capability (ELCC) Capacity Credit for Wind Resources

Existing wind units is based on current MISO accreditation. New wind additions are given a capacity credit equal to 15.6 percent of their nameplate rating per MISO 2017/2018 Wind Capacity Report.

18. ELCC Capacity Credit for Utility Scale Solar Photovoltaic (PV) Resources

Utility scale generic solar PV additions used in modeling the alternative plans were given a capacity credit equal to 50 percent of the AC nameplate capacity.

19. Spinning Reserve Requirement

Spinning Reserve is the on-line reserve capacity that is synchronized to the grid to maintain system frequency stability during contingency events and unforeseen load swings. The level of spinning reserve modeled is 182 MW and is based on a 12-month rolling average of spinning reserves carried by the NSP System within MISO.

20. Emergency Energy Costs

Emergency Energy Costs were assigned in the Strategist model if there were not enough resources available to meet energy requirements. The cost was set at \$500/MWh.

#### 21. Wind Integration Costs

Wind integration costs were priced based upon the results of the NSP System Wind Integration Cost Study. Wind integration costs contain five components:

- 1. MISO Contingency Reserves
- 2. MISO Regulating Reserves
- 3. MISO Revenue Sufficiency Guarantee Charges
- 4. Coal Cycling Costs
- 5. Gas Storage Costs

Table 10: which integration Costs								
	Integ	ration	Coal C	Cycling				
Year	\$/M	Wh	\$/N	IWh				
	Wind	Solar	Wind	Solar				
2018	0.00	0.00	0.00	0.00				
2019	0.00	0.00	0.00	0.00				
2020	0.41	0.41	0.00	0.00				
2021	0.42	0.42	0.00	0.00				
2022	0.43	0.43	0.00	0.00				
2023	0.44	0.44	0.00	0.00				
2024	0.44	0.44	0.00	0.00				
2025	0.45	0.45	0.00	0.00				
2026	0.46	0.46	0.00	0.00				
2027	0.47	0.47	0.00	0.00				
2028	0.48	0.48	0.00	0.00				
2029	0.49	0.49	0.00	0.00				
2030	0.50	0.50	0.00	0.00				
2031	0.51	0.51	0.00	0.00				
2032	0.52	0.52	0.00	0.00				
2033	0.53	0.53	0.00	0.00				
2034	0.54	0.54	0.00	0.00				
2035	0.55	0.55	0.00	0.00				
2036	0.56	0.56	0.00	0.00				
2037	0.57	0.57	0.00	0.00				
2038	0.59	0.59	0.00	0.00				
2039	0.60	0.60	0.00	0.00				
2040	0.61	0.61	0.00	0.00				
2041	0.62	0.62	0.00	0.00				
2042	0.63	0.63	0.00	0.00				
2043	0.65	0.65	0.00	0.00				
2044	0.66	0.66	0.00	0.00				
2045	0.67	0.67	0.00	0.00				
2046	0.69	0.69	0.00	0.00				
2047	0.70	0.70	0.00	0.00				
2048	0.71	0.71	0.00	0.00				
2049	0.73	0.73	0.00	0.00				
2050	0.74	0.74	0.00	0.00				
2051	0.76	0.76	0.00	0.00				
2052	0.77	0.77	0.00	0.00				
2053	0.79	0.79	0.00	0.00				
2054	0.80	0.80	0.00	0.00				
2055	0.82	0.82	0.00	0.00				
2056	0.84	0.84	0.00	0.00				
2057	0.85	0.85	0.00	0.00				

#### **Table 10: Wind Integration Costs**

#### 22. Wind Congestion Costs

Wind Congestion Costs were developed internally by Resource Planning using the MISO MTEP 2018 models and looking at the average congestion costs between representative wind bus locations and NSP.NSP. From the study, we included a congestion cost of \$3.43 per MWh in 2020, escalating at 2 percent thereafter for all new wind projects.

	Wind Congestion \$/MWh				
	Existing	New			
	Resources	Resources			
2018	-	-			
2019	-	-			
2020	-	3.43			
2021	-	3.50			
2022	-	3.57			
2023	-	3.64			
2024	-	3.71			
2025	_	3.79			
2026	-	3.86			
2027	-	3.94			
2028	-	4.02			
2029	-	4.10			
2030	-	4.18			
2031	-	4.27			
2032	_	4.35			
2033	_	4.44			
2034	-	4.53			
2035	_	4.62			
2036	_	4.71			
2037	_	4.80			
2038	-	4.90			
2039	_	5.00			
2040	_	5.10			
2041	-	5.20			
2042	-	5.30			
2043	_	5.41			
2044	_	5.52			
2045	_	5.63			
2046	_	5.74			
2040	_	5.86			
2047	-	5.97			
2040	_	6.09			
2049	-	6.22			
2050	-	6.34			
2051	-	6.47			
2052	-	6.60			
2053	-	6.73			
2054					
		6.86			
2056		7.00			
2057		7.14			

# **Table 11: Wind Congestion Costs**

23. Distributed Generation and Community Solar Gardens

The small solar inputs are based on the most recent Company forecast.

24. Assumption and Sensitivity Descriptions

The modeling uses the following assumptions and sensitivities. The Base Assumptions are combined with the Sensitivities to test the modeling results for critical variables.

Base Assumptions	Assumption Description
PVSC Base	All Strategist expansion plans are optimized under the PVSC Base assumption. PVSC Base includes the
	Regulated CO <sub>2</sub> Costs, Externality Costs, and Surplus Capacity Credit. Optimized expansion plans were
	also completed using the PVSC Reference assumption and the High Renewables Scenario. All Strategist
	outputs, except the Markets Off sensitivity, assume the modeling of MISO Energy Market interactions.
PVRR Base	This assumption removes Regulated CO <sub>2</sub> Costs, Externality Costs, and the Surplus Capacity Credit from
	the PVSC Base assumption.
	The following sensitivities were also ran using the PVRR assumption as the starting point:
	Low Gas, High Gas, Low Load, High Load, Markets off no dump, Markets off with dump, 3% Esc costs,
	1% esc. costs.
<u>Sensitivities</u>	Sensitivity Description
Markets Off No Dump	This sensitivity removes the modeling of the Company's hourly sales in the MISO Energy Market. No
Credit	credit was applied for dump energy.
Markets Off With Dump	This sensitivity removes the modeling of the Company's hourly purchases in the MISO Energy Market and
Credit	allows for a credit of one half of the all hours market price for dump energy.
Low Gas Price	This sensitivity decreases the annual year-over-year percent change in natural gas prices by 50% starting in year 2022.
High Gas Price	This sensitivity increases the annual year-over-year percent change in natural gas prices by 50% starting in year 2022.
Low CO <sub>2</sub> Externality Costs	This sensitivity removes the Regulated CO <sub>2</sub> Cost and models the Low Externality Price of CO <sub>2</sub> for the
All Years	modeling period.
Low CO2 Externality Costs	This sensitivity uses the Low Externality Price of CO2 through 2024, then the low Regulated CO2 Cost
through 2024	thereafter.
High CO <sub>2</sub> Externality Costs	This sensitivity models the High Externality Price of CO <sub>2</sub> for the full modeling period.
All Years	
Low Load	This sensitivity uses a minus one standard deviation from the base demand and energy forecast.
High Load	This sensitivity uses a plus one standard deviation from the base demand and energy forecast.
No CO2	This sensitivity assumes there are no Externality or Regulatory costs associated with CO2.

## Table 12: Assumption and Sensitivity Descriptions

#### 25. Owned Unit Modeled Operating Characteristics and Costs

Company-owned units were modeled based upon their tested operating characteristics and historical or projected costs. Below is a list of typical operating and cost inputs for each Company-owned resource.

- a. Retirement Date
- b. Maximum Capacity

- c. Current Unforced Capacity (UCAP) Ratings
- d. Minimum Capacity Rating
- e. Seasonal Deration
- f. Heat Rate Profiles
- g. Variable O&M
- h. Fixed O&M
- i. Maintenance Schedule
- j. Forced Outage Rate
- k. Emission rates for SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub>, Mercury and particulate matter (PM)
- 1. Contribution to spinning reserve
- m. Fuel prices
- n. Fuel delivery charges
  - 26. Thermal Power Purchase Agreement (PPA) Operating Characteristics and Costs

PPAs are modeled based upon their tested operating characteristics and contracted costs. Below is a list of typical operating and cost inputs for each thermal PPA.

- a. Contract term
- b. Maximum Capacity
- c. Minimum Capacity Rating
- d. Seasonal Deration
- e. Heat Rate Profiles
- f. Energy Schedule
- g. Capacity Payments
- h. Energy Payments
- i. Maintenance Schedule
- j. Forced Outage Rate
- k. Emission rates for SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub>, Mercury and PM
- 1. Contribution to spinning reserve
- m. Fuel prices
- n. Fuel delivery charges
  - 27. Renewable Energy PPAs and Owned Operating Characteristics and Costs

PPAs are modeled based upon their tested operating characteristics and contracted costs. Company-owned units were modeled based upon their tested operating characteristics and historical or projected costs. Below is a list of typical operating and cost inputs for each renewable energy PPA and owned unit.

- a. Contract term
- b. Name Plate Capacity
- c. Accredited Capacity
- d. Annual Energy
- e. Hourly Patterns
- f. Capacity and Energy Payments
- g. Integration Costs

Wind hourly patterns were developed through a "Typical Wind Year" process where individual months were selected from the years 2014-2017 to develop a typical year. Actual generation data from the selected months were used to develop the profiles for each wind farm. For farms where generation data was not complete or not available, data from nearby similar farms were used.

Solar hourly patterns were taken from the ELCC Study from Fall 2013 and updated to reflect the ELCC as stated above. The fixed panel pattern is an average of the four orientations and three years (2008-2010) of data and single-axis tracking pattern is an average of three years of data.

## 28. Generic Assumptions

Generic resources were modeled based upon their expected operating characteristics and projected costs. Below is a list of typical operating and cost inputs for each generic resource.

## Thermal

- a. Retirement Date
- b. Maximum Capacity
- c. UCAP Ratings
- d. Minimum Capacity Rating
- e. Seasonal Deration
- f. Heat Rate Profiles
- g. Variable O&M
- h. Fixed O&M
- i. Maintenance Schedule
- j. Forced Outage Rate
- k. Emission rates for SO<sub>2</sub>, NO<sub>x</sub>, CO<sub>2</sub>, Mercury and PM
- 1. Contribution to spinning reserve
- m. Fuel prices
- n. Fuel delivery charges

#### <u>Renewable</u>

- a. Contract term
- b. Name Plate Capacity
- c. Accredited Capacity
- d. Annual Energy
- e. Hourly Patterns
- f. Capacity and Energy Payments
- g. Integration Costs

Tables 13-14 below show the assumptions for the generic thermal and renewable resources.

Resource	Sherco CC	Generic CC	Generic CT	<b>Generic</b> CT	<b>Generic</b> CT
Technology	7H	7H	7H	7F	7H
Location Type	Brownfield	Greenfield	Brownfield	Brownfield	Greenfield
Cooling Type	Wet	Dry	Dry	Dry	Dry
Book life	40	40	40	40	40
Nameplate Capacity (MW)	916	916	374	232	374
Summer Peak Capacity with Ducts (MW)	870	870	NA	NA	NA
Summer Peak Capacity without Ducts (MW)	643	643	331	228	331
Capital Cost (\$/kW)	\$914	\$951	\$446	\$495	\$445
Electric Transmission Delivery (\$/kW)	NA	\$301	NA	NA	\$100
Ongoing Capital Expenditures (\$/kW-yr)	\$6.77	\$6.77	\$4.77	\$3.85	\$3.85
Gas Demand (\$/kW-yr) 2018\$	\$32.56	\$21.14	NA	NA	\$2.07
Fixed O&M Cost (\$000/yr) 2018\$	\$2,605	\$3,105	\$422	\$736	\$668
Variable O&M Cost (\$/MWh)	\$1.42	\$1.42	\$4.90	\$4.90	\$4.90
Levelized \$/kw-mo (All Fixed Costs) \$2018	\$12.04	\$12.71	\$4.62	\$5.13	\$5.58
		-	•		
Heat Rate with Duct Firing (btu/kWh)	6,494	6,818	NA	NA	NA
Heat Rate 100% Loading (btu/kWh)	6,331	6,647	9,042	9,791	9,042
Heat Rate 75% Loading (btu/kWh)	6,464	6,787	9,474	10,234	9,474
Heat Rate 50% Loading (btu/kWh)	6,876	7,220	10,833	12,006	10,833
Heat Rate 25% Loading (btu/kWh)	7,831	8,222	11,279	12,835	11,279
Forced Outage Rate	3%	3%	3%	3%	3%
Maintenance (weeks/yr)	5	5	2	2	2

 Table 13: Thermal Generic Information (Costs in 2018 Dollars)

	GENERIC	WIND	GENERIC SOLAR		
Year	PTC	ECC (\$/MWH)	Year	ITC	ECC (\$/MWH)
2023	60%	33.06	2023	30%	43.45
2024	40%	37.72	2024	30%	43.75
2025	0%	46.48	2025	10%	44.05
2026	0%	46.76	2026	10%	44.34
2027	0%	47.07	2027	10%	44.64
2028	0%	47.39	2028	10%	44.93
2029	0%	47.74	2029	10%	45.22
2030	0%	48.11	2030	10%	45.50
2031	0%	48.55	2031	10%	46.04
2032	0%	49.00	2032	10%	46.58
2033	0%	49.49	2033	10%	47.12
2034	0%	50.00	2034	10%	47.66
2035	0%	50.53	2035	10%	48.21
2036	0%	51.09	2036	10%	48.77
2037	0%	51.68	2037	10%	49.32
2038	0%	52.30	2038	10%	49.88
2039	0%	52.95	2039	10%	50.44
2040	0%	53.63	2040	10%	51.01
2041	0%	54.34	2041	10%	51.52
2042	0%	55.08	2042	10%	52.02
2043	0%	55.86	2043	10%	52.53
2044	0%	56.67	2044	10%	53.04
2045	0%	57.53	2045	10%	53.55
2046	0%	58.41	2046	10%	54.06
2047	0%	59.34	2047	10%	54.57
2048	0%	60.32	2048	10%	55.08
2049	0%	61.33	2049	10%	55.58
2050	0%	62.39	2050	10%	56.09
2051	0%	63.64	2051	10%	57.21
2052	0%	64.91	2052	10%	58.36
2053	0%	66.21	2053	10%	59.52
2054	0%	67.53	2054	10%	60.71
2055	0%	68.88	2055	10%	61.93
2056	0%	70.26	2056	10%	63.17
2057	0%	71.66	2057	10%	64.43

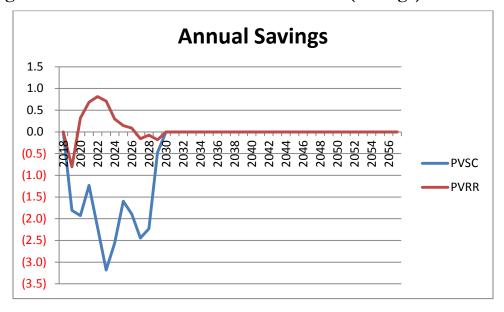
Table 14:	Renewable	Generic ECC	Costs -	\$/MWh
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# II. Strategist Modeling Outputs

1. Annual Net Costs and Savings

The PVSC Base and PVRR Base annual costs and savings for the proposed extension of Moraine II PPA are shown below in Figure 5.

Figure 5: Annual PVSC and PVRR Net Costs (Savings) in \$millions



## **CERTIFICATE OF SERVICE**

I, Paget Pengelly, hereby certify that I have this day served copies of the foregoing document on the attached list of persons.

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

or

 $\underline{xx}$  electronic filing

# Docket No. E002/M-08-1487

# **Xcel Energy Miscellaneous Electric**

Dated this 15<sup>th</sup> day of January 2019

/s/

Paget Pengelly Regulatory Administrator

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