

March 2, 2020

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

RE: **Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. IP7006/CN-19-309

Dear Mr. Seuffert,

Attached are the comments of the Minnesota Department of Commerce, Division of Energy Resources (Department) in the following matter:

In the Matter of the Application of Buffalo Ridge Wind, LLC for a Certificate of Need for the 109 MW Large Wind Energy Conversion System in Lincoln and Pipestone Counties, Minnesota

The Application was filed on July 12, 2019 by:

Andrew Gibbons
Stinson LLP
50 South Sixth Street, Suite 2600
Minneapolis, Minnesota 55402

The Department recommends that the Minnesota Public Utilities Commission (Commission) consider the impacts detailed in the Environmental Report, and, if the impacts are acceptable, **grant the Certificate of Need**. The Department is available to answer any questions the Commission may have.

Sincerely,

/s/ MATTHEW LANDI
Rates Analyst

ML/ja
Attachment



Before the Minnesota Public Utilities Commission

Comments of the Minnesota Department of Commerce
Division of Energy Resources

Docket No. IP7006/CN-19-309

I. SUMMARY OF FILING

A. EXEMPTION REQUEST

On May 7, 2019, Buffalo Ridge Wind, LLC (BRW or the Applicant) filed a *Petition for Exemption from Certain Certificate of Need Application Requirements* (Exemption Petition). Specifically, BRW requested that the Commission grant full or partial exemptions to Minnesota Rules:

1. 7849.0240, subp. 2 (B): Promotional Activities;
2. 7849.0250 (B) (1) – (5): Description of Certain Alternatives;
3. 7849.0250 (C) (1) – (6), (8), and (9): Details Regarding Alternatives;
4. 7849.0250 (C) (7): Effect of Project on Rates Systemwide;
5. 7849.0250 (D): Map of Applicant’s System;
6. 7849.0270: Peak Demand and Annual Consumption Forecast;
7. 7849.0280: System Capacity;
8. 7849.0290: Conservation Programs;
9. 7849.0300: Consequences of Delay;
10. 7849.0330: Transmission Facilities; and
11. 7849.0340: No-Facility Alternative.

On May 28, 2019, the Minnesota Department of Commerce, Division of Energy Resources (Department) filed comments regarding the Exemption Petition.

On July 3, 2019, the Minnesota Public Utilities Commission (Commission) issued an order (Exemption Order)¹ approving the Exemption Petition with conditions.

B. CERTIFICATE OF NEED PETITION

On July 12, 2019, Buffalo Ridge Wind, LLC (BRW), a subsidiary of NextEra Energy Resources, LLC (NEER), filed an Application for a Certificate of Need (CN) for an approximately 109.2-megawatt wind project in southwestern Minnesota (Project). On August 9, 2019, BRW filed an updated Application that included additional information related to its turbine array. The updated Application also indicated that the Project will produce up to approximately 109 MW instead of 109.2 MW.² However, on February 21, 2020, BRW filed an

¹ [Commission Exemption Order](#), Docket No. IP7006/CN-19-309, dated July 3, 2019.

² [Updated Application](#), dated August 9, 2019, at 1.

Amendment to their updated Application involving BRW's modification to the wind turbine technology and layout with the original 17,609-acre Project Area.³ The Amendment indicates that the Project's total power capacity will decrease slightly from 109 MW to 108.7 MW.⁴

BRW is an independent power producer (IPP) that proposes to develop, construct, own, and operate the proposed 108.7-MW wind energy conversion system (Project). Its parent company, NEER, is a national renewable energy company that owns and operates over 23,500 MW of electric generating capacity in 36 states and Canada. The Project would be located in Lincoln and Pipestone Counties in southwestern Minnesota on approximately 16,893 acres (26.4 square miles) of land. The Project would consist of the following turbines: 36 General Electric (GE) 2.82-MW wind turbines, four GE 2.3-MW turbines, and include five alternate GE 2.82-MW wind turbines for a total of 45 wind turbine locations. The Project would interconnect to the electric transmission grid at the existing Buffalo Ridge substation owned by Northern States Power Company, a subsidiary of Xcel Energy. BRW plans to construct the Project on a schedule that facilitates an in-service date as early as November 30, 2020. BRW has entered into a power purchase agreement (PPA) with Great River Energy (GRE)

On August 12, 2019, the Department filed comments on the completeness of the Application.

On August 20, 2019, BRW filed reply comments regarding completeness.

On August 23, 2019, the Department filed a response to BRW's reply comments regarding completeness.

On November 12, 2019, the Commission issued its *Order Accepting Application, Directing Use of Information Review Process and Other Action (Completeness Order)*.⁵

On December 16, 2019, BRW filed three letters demonstrating that BRW completed the notice requirements.⁶

On December 27, 2019, the Commission issued a *Notice of Comment Period on the Merits of the Certificate of Need Application* (Notice) which established comment and reply comment deadlines of January 31, 2020 and February 14, 2020, respectively, regarding the merits of the Application. Subsequently, however, the Department requested an extension to obtain additional time to analyze the merits of the Application. The Commission approved the extension and established new comment and reply comment deadlines of March 2, 2020, and March 12, 2020, respectively. According to the Notice, the topics open for comment include:

³ [Amendment to the Updated Application](#), dated February 21, 2020.

⁴ Amendment, at 2. Given the changes in the wind turbine configuration explained in the Amendment, the Department has asked BRW to confirm its calculation of the total power capacity of the Project.

⁵ [Order Accepting Application, Directing Use of Informal Review Process and Other Action](#), Docket No. IP7006/CN-19-309, dated November 12, 2019.

⁶ [BRW Compliance Filing](#), Docket No. IP7006/CN-19-309 and Docket No. IP7006/WS-19-394, dated December 16, 2019.

- Should the Commission issue a certificate of need for the project?
- Is the proposed project needed and in the public interest?
- What are the costs and benefits of the proposed project?
- Are there other issues or concerns related to this matter?

In response to the Notice, below are the comments of the Department. Overall, as explained in details below, the Department:

- does not have any contested issues of fact with respect to the representations made in the Petition;
- concludes that the Commission should grant a certificate of need (CN) for the project;⁷
- notes that the costs associated with the proposed Project include approximately \$170 million in capital costs related to the construction of the proposed Project, \$140,000 of operational and maintenance (O&M) costs in the proposed Project's first year of operation, and \$3.3 million in O&M costs in total for the remaining 24 years of the expected life of the proposed Project;
- concludes that the benefits of the proposed Project are myriad, as explained in greater detail below, and the proposed Project is expected to benefit GRE's members and the state of Minnesota; and
- does not have any other issues or concerns.

II. DEPARTMENT ANALYSIS

A. BACKGROUND

Minnesota Statutes, section 216B.2421, subd. 2 (1) defines a large energy facility (LEF) as:

...any electric power generating plant or combination of plants at a single site with a combined capacity of 50,000 kilowatts or more and transmission lines directly associated with the plant that are necessary to interconnect the plant to the transmission system.

Since the proposed Project would have a design capacity of up to 109 MW (109,000 kilowatts), it qualifies as an LEF. Further, Minnesota Statutes, section 216B.243, subd. 2 states that, "no large energy facility shall be sited or constructed in Minnesota without the issuance of a certificate of need by the Commission." The updated Application indicates that BRW plans to construct the Buffalo Ridge Wind project, a wind energy generating facility of approximately 109 MW in Lincoln County, MN. Therefore, a CN is required.

⁷ This assumes that, after consideration of the Environmental Report, the Commission determines that the proposed facility "will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health."

The Commission's review of CN applications primarily consists of two steps:

1. Determine whether the application meets certain content requirements;
2. Based on a complete application, determine whether the facility is needed, and if so, grant the CN.

At this stage in BRW's CN proceeding, the Commission is on the second step.

There are several factors to be considered by the Commission in making a determination in CN proceedings. In general, these factors are located in different sections of Minnesota Statutes. Some of the general statutory criteria are reflected in a more specific way in Minnesota Rules, part 7849.0120. However, some statutory criteria do not appear to be reflected in rules. To clarify the analysis, the Department groups all of the statutory and rule criteria into one of five factor categories.⁸ The Department addresses each of the statutory and rule criteria below. A cross-index matching the statutory and rule criteria to the section where each is addressed along with a summary of Department's analysis is provided as Attachment 1.

The Department notes that we rely on the Environmental Report (ER) for an analysis of the effects of the proposed Project and the alternatives upon the natural and socioeconomic environments. The Department recommends that the Commission consider the ER in making its determination.

B. NEED ANALYSIS

Overall, the need analysis is governed by Minnesota Rules, part 7849.0120 (A) which states that a CN must be granted upon determining that:

[T]he probable result of denial would be an adverse effect upon the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states.

The rule lists five distinct criteria. The Department presents the analysis of the need for the proposed Project in two parts. The first part is designed to address the accuracy of the forecast underlying the claimed need. The second is designed to address any broader reliability needs. Each is addressed separately below.

⁸ Need Analysis, Link to Planning Process, Alternatives Analysis, Socioeconomic Analysis, and Policy Analysis.

1. *Forecast Analysis*

a. *Accuracy of the Forecast*

In the Exemption Order, the Commission granted BRW an exemption to Minnesota Rules, part 7849.0270, which requires an applicant to provide information regarding its system peak demand and annual energy consumption. Instead, to fulfill this requirement, BRW was required to: (1) provide an estimate of GRE's annual renewable energy credit (REC) requirements for the 2018-2032 planning period; (2) provide information related to the Project's ability to assist GRE in complying with Minn. Stat. §216B.1691, subp. 2a (Minnesota Renewable Energy Standards, or Minnesota RES), which requires utilities in Minnesota to provide 25% of their total retail electric sales from eligible renewable resources by 2025; and (3) provide a general overview of GRE's future renewable resource needs and how the Project assists GRE in meeting those needs.

On page 4 of BRW's August 20, 2019 Completeness Reply Comments, BRW indicated that GRE created a self-imposed goal of 50% of their total retail electric sales to its all-requirement members to be met from eligible renewable resources by 2030. Further, to meet this goal, BRW explained that GRE's 2018-2032 integrated resource plan (IRP) identified wind power purchase agreements as the only future generation resource acquisitions.⁹ BRW also explained that these future wind resource acquisitions were being accelerated due to advantageous pricing and the need to meet the 50% renewable energy goal.¹⁰

The Department reviewed the record in GRE's IRP in Docket No. ET-2/RP-17-286 (GRE's IRP).¹¹ The Commission's Order in that docket (IRP Order) accepted GRE's IRP, which reflected GRE's goal to generate 50% of their total retail electric sales for its all-requirement members from eligible resources by 2030.¹² As reflected in GRE's 2018-2032 IRP and the IRP Order, GRE planned to acquire enough renewable energy generation through wind PPAs for compliance with the Minnesota RES in 2020 and 2021, and thus secured 300 MW and 100 MW in those years, respectively.¹³

However, according to GRE's preferred capacity expansion plan, summarized in Table 3 of its 2018-2032 IRP, GRE would not procure additional wind resources until 2029.¹⁴ However, the Department's September 8, 2017 comments indicated the following:

In light of [Minnesota Statutes § 216H.06 and 216B.2422, subd. 3, which require the Commission to consider future carbon dioxide regulation costs and environmental externality costs in resource acquisition proceedings], the Department generally recommends an expansion plan based on at

⁹ BRW Completeness Reply Comments, at 4.

¹⁰ BRW Completeness Reply Comments, at 4.

¹¹ Docket No. ET-2/RP-17-286.

¹² IRP Order, Order Point #1, at 15.

¹³ GRE's IRP, at 8.

¹⁴ GRE's IRP, at 13.

least some level of externalities. However, in this case, the Department believes that application of externalities and future carbon costs in GRE's modeling leads to unreasonable results. Using the middle externality and CO₂ regulation values in the Reference Case scenarios results in plans that include 100 MW to 2,400 MW of more wind in addition to the 400 MW of wind that the Cooperative has already committed to in the next five years and the 600 MW GRE estimates will be cost-effective in the 2029-2032 timeframe. The Reference Case, which is based on mid-externality values, mid future costs of CO₂ regulation, and the expected value of all other assumptions, resulted in the retirement of the 605 MW Coal Creek 2 coal generation plant in 2022. [footnote omitted] Even if GRE did decide to close Coal Creek 2, it would be unreasonable to add more than 2,000 MW of wind to a system with a peak of approximately 2,500 MW.

Based upon review of [ABB Ltd.'s System Optimizer Model, or SOM's] outputs, the Department concludes that GRE's five-year action plan is reasonable. In particular, the amount of wind being added is reasonably achievable. The 1,000 MW or more of wind that frequently appears in the expansion plan in GRE's modeling outputs, which would be in addition to the 1,000 MW of wind already planned, is simply not achievable. The Department recommends that the Commission advise GRE to limit modeling such that the resulting expansion plans are achievable. Potential actions beyond the five-year action plan can be reviewed in future IRPs.[footnote omitted]

As GRE stated on page 116 of its IRP, the application of mid-level externalities resulted in the retirement of Coal Creek 2 in 2022. GRE states that the introduction of the future cost of CO₂ regulation values is the principal driver of the coal plant's closure.

The IRP Order indicated that:

The Commission concurs with the Department that GRE has generally employed appropriate planning methods in its 2018-2032 resource plan.

...

The Commission will also ask that GRE limit the modeling conducted such that the resulting expansion plans developed are achievable.

The proposed Project is consistent with the modeling results conducted in GRE's last IRP, which indicated that adding more wind than planned is likely least-cost. The PPA also suggests that GRE has concluded that those planned post-2028 wind PPA acquisitions are presently cost-effective, given that

GRE and BRW have entered into a PPA associated with a project with an expected in-service date in November of 2020. The proposed Project may reduce GRE's need to procure additional wind PPAs during the time period beginning 2029 and through the end of the planning period, to the extent additional wind is achievable in the context of GRE's system. The proposed Project would mitigate the need for future wind PPA acquisitions, and would do so while resource costs for wind are demonstrably low, as explained later in these comments.

In summary, considering the potential need for wind resources reflected in GRE's last IRP, and in consideration of GRE's own renewable energy goals, the Department concludes that BRW's forecast of the need for renewable energy expected to be produced by the proposed project is reasonable.

b. Overall State Energy Needs

Also related to the forecast analysis is Minnesota Rules, part 7849.0120 C (1) which states that the Commission is to consider:

[T]he relationship of the proposed facility, or a suitable modification thereof, to overall state energy needs.

A review of the most recently approved IRPs shows that Minnesotans are expected to demand more electricity over time and most utilities are planning on adding wind generating capacity. The proposed Project could help Minnesota meet its energy needs while supporting the state's renewable energy and greenhouse gas emissions-reductions goals (see Minn. Stat. §§216B.1691 and 216H.02). Therefore, the Department concludes that the proposed Project fits the state's overall energy needs.

2. Reliability Analysis

Minn. Stat. §216B.243, subd. 3 (5) states that, in assessing need, the Commission shall evaluate:

[T]he benefits of this facility, including its uses to...increase reliability of energy supply in Minnesota and the region.

BRW will need to apply to the Midcontinent Independent System Operator (MISO) in order to interconnect to the transmission grid. MISO engineers study the impact on the reliability of the electrical system of each addition to the grid and the Department relies upon MISO's analysis. Therefore, the Department concludes that this criterion has been met.

C. LINK TO PLANNING PROCESS

This section discusses the following aspects of this proposal: size, type and siting; renewable preference; and analysis of demand-side management (DSM) as an alternative to the proposed Project.

1. Size, Type, and Timing

Minn. R. 7849.0120 B (1) states that the Commission is to consider:

[T]he appropriateness of the size, the type, and the timing of the proposed facility compared to those of reasonable alternatives.

a. Size

Regarding size, as noted above, in GRE's most recent IRP proceeding, the modeling results indicated that adding 100 to 2,500 MW of wind resources, in addition to the 400 MW added for 2020 and 2021 and the 600 MW GRE estimated would be cost-effective in the 2029-2032 timeframe, would be cost effective, but that adding amounts in the high end of that range would not necessarily be reasonable in the context of GRE's system. Thus the PPA with BRW's 108.7-MW Project is consistent with GRE's most recent IRP.

Also, collectively, information submitted by the utilities subject to the Minnesota RES indicates that there is enough capacity in aggregate to meet needs through 2025, but this does not consider that there may be individual utilities with insufficient capacity that will need additional renewable generation to meet Minnesota's RES obligations. In addition, utilities in neighboring states may have a need for renewable energy. If the proposed Project is granted a CN and is implemented, it will have to compete with the other wind energy projects in the wind energy market to fulfill any needs.

Furthermore, the Petition stated that the proposed Project Area incorporates a recently decommissioned wind facility, called the Buffalo Ridge Wind Farm, and will interconnect to the transmission grid at the existing Buffalo Ridge substation owned by Northern States Power Company (Xcel Energy, or Xcel).¹⁵ Based on the discussion above regarding GRE's wind energy needs as determined by the Commission, the forecasted wind energy needs for the region, and the Applicant's economic incentives, the Department concludes that the proposed Project's size is not excessive and therefore is reasonable.

b. Type

The Commission's Exemption Order granted BRW an exemption to Minn. R. 7849.0250 (B) (1), an exemption to Minn. R. 7849.0250 (B) (2), (3), and (5) conditioned upon BRW providing equivalent data on renewable alternatives from GRE, and a partial exemption from Minn. R. 7849.0250 (B) (4) that allows BRW to address only renewable alternatives to the proposed Project.

BRW stated that since the goal of the project is to provide renewable energy that will help GRE satisfy Minnesota's RES and GRE's 50% renewable energy goal, information regarding non-renewable alternatives would not be relevant. Regarding Minn. R. 7849.0250 (B) (2) and (3), BRW stated that GRE

¹⁵ Updated Application, at 1.

does not have the potential to upgrade existing GRE facilities suitable of producing an equivalent amount of energy as the proposed Project, nor does GRE have plans to own or operate transmission alternatives that would or could provide an equivalent amount of energy as the proposed Project.¹⁶

Minn. R. 7849.0250 (B) (4) and (5), and the Commission's Exemption Order, require BRW to evaluate new renewable generating facilities as alternatives to the proposed Project, and reasonable combinations thereof. BRW evaluated the ability of solar, hydropower, biomass, and emerging technologies to serve as reasonable alternatives to the proposed Project. On a cost basis, none of the alternatives evaluated were as cost-effective as the proposed Project. Further, the Commission's IRP Order found "that GRE has adequately employed its capacity expansion modeling to identify and explore least-cost alternatives, given regulatory and other constraints."¹⁷ The modeling results indicated that additional wind generation resources would be least cost. Given these factors, the Department concludes that the proposed Project's type is reasonable.

c. Timing

BRW stated that the proposed Project is expected to be in-service as early as the fourth quarter of 2020.¹⁸ While the timing of the wind resource acquisition is accelerated compared to what was contemplated in GRE's IRP, the modeling results indicated that adding 100 to 2,500 MW of wind resources, in addition to the 400 MW added for 2020 and 2021 and the 600 MW GRE estimated would be cost-effective in the 2029-2032 timeframe. Therefore, the Department concludes that BRW's 108.7-MW Project is consistent with GRE's most recent IRP.

Absent BRW's PPA with GRE, the Department notes that there is unlikely to be a one-to-one relationship between CN applications and Minnesota RES obligations. More specifically, the Department notes that:

- there will not likely be a one-to-one match between CN applications based on the regional need for renewable generation and Minnesota utilities' RES compliance level;
- additional renewable resources will be needed for certain Minnesota utilities to meet their 2025 RES requirements due to capacity expirations;
- capacity additions are typically added in "chunks" due to the benefits of economies of scale;
- the renewable energy production tax credit is being gradually phased out. This may lead to earlier wind additions than might be the case otherwise; and
- there are uncertainties involved in accomplishing the associated transmission additions or upgrades needed for integrating the output of previously approved and variously located wind generation projects.

¹⁶ Updated Petition, at 20.

¹⁷ *Order Accepting 2018-2032 Resource Plan and Setting Future Filing Requirements*, Docket No. ET2-RP-17-286, November 28, 2018, page 14.

¹⁸ Updated Petition, at 8.

Finally, the Department notes that Minnesota Rules, part 7849.0400 requires the recipient of a CN to notify the Commission if the proposed in-service date is delayed by more than one year. In summary, the Department concludes that the timing of the proposed Project is reasonable.

2. Renewable Preference

There are two sections of Minnesota Statutes that provide a preference for renewable resources in resource planning and resource acquisition decisions. First, Minn. Stat. §216B.243, subd. 3a states that:

The Commission may not issue a certificate of need under this section for a large energy facility that generates electric power by means of a nonrenewable energy source, or that transmits electric power generated by means of a nonrenewable energy source, unless the applicant for the certificate has demonstrated to the Commission's satisfaction that it has explored the possibility of generating power by means of renewable energy sources and has demonstrated that the alternative selected is less expensive (including environmental costs) than power generated by a renewable energy source. For purposes of this subdivision, "renewable energy source" includes hydro, wind, solar, and geothermal energy and the use of trees or other vegetation as fuel.

Second, Minn. Stat. §216B.2422, subd. 4 states that:

The Commission shall not approve a new or refurbished nonrenewable energy facility in an integrated resource plan or a certificate of need, pursuant to section 216B.243, nor shall the Commission allow rate recovery pursuant to section 216B.16 for such a nonrenewable energy facility, unless the utility has demonstrated that a renewable energy facility is not in the public interest.

Minnesota Statutes indicate a clear preference for renewable facilities; the proposed Project meets a renewable preference.

3. DSM Analysis

The Commission's Exemption Order exempted BRW from providing information on conservation programs, Minn. R. 7849.0290 and the potential for reducing the need for this generation project because BRW does not have retail customers and does not operate any conservation programs. However, BRW was required to provide relevant information regarding the purchasing utility's conservation efforts—here GRE. The IRP Order determined that GRE had need for additional wind resources despite GRE's conservation efforts. Therefore, the Department concludes that DSM is not an alternative to the proposed Project.

D. ANALYSIS OF ALTERNATIVES

Overall, the analysis of alternatives is governed by Minn. R. 7849.0120 (B) which states that a CN must be granted upon determining that:

[A] more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record.

The rule then proceeds to list four distinct criteria. The Department breaks down its analysis of the alternatives to the proposed facility into four broad areas:

- alternatives analysis;
- reliability analysis;
- distributed generation (DG); and
- preference for an innovative energy project (IEP) as defined in Minnesota Statutes.

Each area is addressed separately below.

1. Alternatives Analysis

a. Non-CN Facilities Analysis

Minn. R. 7849.0120 A (4) states that the Commission is to consider:

[T]he ability of current facilities and planned facilities not requiring certificates of need to meet the future demand.

The primary alternatives to the proposed facilities are purchases from renewable facilities outside Minnesota or construction of renewable facilities that are small enough not to require certificates of need (less than 50 MW).

As an IPP, BRW is a producer or seller, rather than a purchaser, of electric generation. A renewable facility of less than 50 MW would not contribute as a substantial amount of renewable energy towards GRE's need for additional wind resources, and would not benefit as much from economies of scale as the proposed Project. In addition, BRW has the incentive to site generation in an economically efficient manner inside or outside Minnesota. Further, the Department notes that any party wishing to do so may propose an alternative to the proposed facility; at this time, no party filed such a proposal in this proceeding. Therefore, the Department concludes that current and planned facilities not requiring a CN have not been demonstrated to be more reasonable than the proposed Project.

b. Cost Analysis

Minn. R. 7849.0120 B (2) states that the Commission is to consider:

[T]he cost of the proposed facility and the cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives.

In the Exemption Order, the Commission granted BRW an exemption to Minn. R. 7849.0250 (C), which requires an applicant to provide a description of alternatives that could provide electric power at the asserted level of need. Only details regarding renewable alternatives need to be provided, including an estimate of the proposed Project's effect on wholesale rates in Minnesota or the region.

BRW provided the requisite information in its Completeness Reply Comments.¹⁹ BRW also included a discussion of alternatives to the proposed Project, including fuel cells, solar photovoltaic, solar thermal, hydropower, biomass, and emerging technologies such as energy storage. In Table 3 of its Reply Comments, BRW provided information related to renewable energy technology costs based on cost information from the U.S. Department of Energy's Energy Information Administration and its *Assumptions to the Annual Energy Outlook 2019: Electricity market Module* report.²⁰ BRW concluded that wind energy resources are cost effective compared with other renewable resources. The Department concludes that the data provided by BRW is reasonable and demonstrates wind energy's cost advantages and disadvantages relative to other, new renewable sources.

BRW stated that "GRE represents it would be too early to state a positive or negative impact on rates due to the relative value of the project depending on MISO market prices, but GRE expects that the addition of a competitively-priced renewable energy resource to be a benefit to its membership."²¹ For the most part, the Department concurs with GRE's conclusion. The wind facility the size of the proposed Project is not likely to have a significant effect on MISO wholesale prices.

As far as wind resources in aggregate, wind facilities are the "first" resources dispatched under the protocols of MISO. Therefore, since pricing in the MISO market is based on the last (marginal) resource (typically natural gas or coal), electricity produced by wind facilities in aggregate can decrease the amount of natural gas, coal, or whatever resource is on the margin (the highest priced option) at a given time, that is used for generating electricity.

The Department concludes that the cost of the proposed Project and the cost of energy to be supplied by the proposed Project are less than the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives.

¹⁹ BRW provided trade secret information related to the cost of the project on a per kilowatt hour basis on page 2 of its Completeness Reply Comments.

²⁰ BRW Completeness Reply Comments, at 3. Table 3: Renewable Energy Technology Costs.

²¹ Updated Petition, at 24.

c. Natural and Socioeconomic Environments Analysis

Minn. R. 7849.0120 B (3) states that the Commission is to consider:

[T]he effects of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives.

The proposed Project will have relatively minor pollution impacts. In addition, the updated Petition states that approximately only an average of 0.75 acres of land per turbine will be taken out of agricultural production for the siting of turbine pads and access road construction.

As an emission-free source of fuel for electricity generation, wind does not result in CO₂, NO_x, or other air pollutants. Therefore, consideration of the effects on the natural and socioeconomic environments using the Commission-approved externality values would not impact the overall cost analysis against the proposed Project. Therefore, the Department concludes that this sub-criterion has been met; however and as noted above, the Environmental Report, being conducted concurrently in this proceeding and in the related siting proceeding, will include a full analysis of the effects of the proposed Project and the alternatives upon the natural and socioeconomic environments.

d. Conclusion

The Commission's Notice includes a topic asking for the costs and benefits of the proposed Project. BRW stated in its Petition that the proposed Project's capital expenditure cost is estimated to be \$170 million, which includes all costs associated with development, design, and construction.²² Additional costs relate to the proposed Project's operational and maintenance costs, initial spare parts, operating equipment, and operating supplies, which BRW stated amount to \$140,000 for the first year and \$3.3 million over 24 years.²³

While the cost aspects of the proposed Project are relatively straightforward, the benefits of the proposed Project are not as easily quantifiable at this time, and involve an analysis of avoided costs, direct and indirect economic benefits, and qualitative benefits. The Department notes that benefits of the proposed Project are myriad in form:

- The proposed Project is expected to help GRE meet and exceed its Minnesota RES goals, as well as GRE's goal to generate 50% of its total electric retail sales from renewable energy by 2030;
- The proposed Project would help meet the current and future energy needs of GRE's members, and generate enough electricity to meet the needs of approximately 24,400 average Minnesota households annually;

²² Updated Application, at 24.

²³ Updated Application, at 24.

- The proposed Project is an emissions-free source of electricity generation, which is an avoided cost that is otherwise imposed upon the local and regional air quality by alternative, fossil fuel generation sources of electricity;
- The Project's cost is low compared to the alternatives identified in the Application;
- The proposed Project would be a low-cost (no fuel cost) wind energy resource in MISO and has priority dispatch in the MISO market, meaning that when the proposed Project can generate electricity reliably, it will be among the first generation sources dispatched to meet MISO's energy needs;
- The proposed Project would increase the counties' tax base;
- Wind Energy Production Tax credit of \$0.0012 per kilowatt-hour (kWh) of electricity generated, would result in an annual payment ranging from \$500,000 to \$600,000 depending on the proposed Project's actual generation;
- The proposed Project would provide adjacent or otherwise affected landowners lease payments for the placement of, and access to, the wind turbines constructed and operated over the life of the proposed Project;
- Temporary and full-time positions related to the construction and maintenance of the proposed Project would be created;
- The proposed Project would engender local and regional purchase of products such as fuel, equipment services, and supplies necessary to construct and operate the proposed Project; and
- Potential future development may be induced by the proposed Project.

Each of the benefits identified above can be reasonably expected to materialize if the proposed Project is approved. Therefore, the Department concludes that the proposed Project can be expected to provide benefits to GRE and the state of Minnesota if approved.

2. Reliability Analysis

Minn. R. 7849.0120 B (4) states that the Commission is to consider:

[T]he expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives.

BRW estimated that the proposed Project will have an availability of about 95 percent, which it stated is consistent with industry standard. BRW also estimated a net capacity factor of between 48 and 52 percent.²⁴ The Department concludes that the proposed capacity factor is reasonable considering capacity factors estimated in other recent dockets involving wind resources.²⁵

²⁴ Updated Application, at 10.

²⁵ For examples, see Docket Nos. IP6964/CN-16-289 and IP6981/CN-17-306.

Additionally, as proposed, the Project will use several different wind turbines: 36 General Electric (GE) 2.82-MW wind turbines, four GE 2.3-MW turbines, and five alternative GE 2.82-MW wind turbines.²⁶ If there is a problem with one turbine, the other turbines can remain available for producing power. This design will minimize the impact of problems experienced with any single turbine. Therefore, the Department concludes that this sub-criterion has been met.

3. Distributed Generation Analysis

Minnesota Statutes, section 216B.2426 states that:

The Commission shall ensure that opportunities for the installation of distributed generation, as that term is defined in section 216B.169, subdivision 1, paragraph (c), are considered in any proceeding under section 216B.2422, 216B.2425, or 216B.243.

Minnesota Statutes, section 216B.169 states:

For the purposes of this section, the following terms have the meanings given them
. . . (c) “High-efficiency, low-emission, distributed generation” means a distributed generation facility of no more than ten megawatts of interconnected capacity that is certified by the commissioner under subdivision 3 as a high efficiency, low- emission facility.

The Department notes that no proposals for distributed generation as an alternative to the proposed Project have been filed in this proceeding. Additionally, if another buyer (other than GRE) is an investor-owned utility (IOU), the Commission would have the opportunity to review the resulting PPA or facility purchase to ensure that the price and terms are reasonable. Non-IOU buyers of the proposed Project’s output, such as GRE, should have an incentive to use the lowest cost resource available. Non-IOU generation and transmission utilities are non-profit, compete for distribution utility clients, and therefore have an incentive to reduce costs to the greatest extent practicable while also meeting its generation needs.

Therefore, the Department concludes that a potential buyer of the proposed Project’s output has the incentive to consider all resources available, including distributed generation. The Department concludes that the requirement to consider distributed generation has been met.

4. Innovative Energy Project (IEP) Preference

Minnesota Statutes, section 216B.1694, subd. 2 (a) (4) states that an IEP:

²⁶ Amendment, at 2.

... shall, prior to the approval by the commission of any arrangement to build or expand a fossil-fuel-fired generation facility, or to enter into an agreement to purchase capacity or energy from such a facility for a term exceeding five years, be considered as a supply option for the generation facility, and the commission shall ensure such consideration and take any action with respect to such supply proposal that it deems to be in the best interest of ratepayers.

This statute does not apply since the proposed facility is not a fossil-fuel-fired generation facility.

E. SOCIOECONOMIC ANALYSIS

Overall, the socioeconomic analysis is governed by Minnesota Rules, part 7849.0120 C which states that a CN must be granted upon determining that:

... by a preponderance of the evidence on the record, the proposed facility, or a suitable modification of the facility, will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health.

BRW stated that the proposed Project would provide a large amount of renewable energy with minimal environmental impact, which will help meet the RES and other needs for wind energy resources. Further, BRW stated that the Project will benefit the local economies through landowner lease payments, production taxes, jobs (both temporary construction and permanent operations and maintenance jobs), and other local spending.²⁷ Finally, BRW noted that the proposed Project will be situated on agricultural land and that turbine placements will be chosen to minimize the proposed Project's effect on land use, noise, and shadow flicker.²⁸

As noted above, the Department relies on its ER for its socioeconomic analysis in a CN proceeding. The ER provides information related to:

- Minnesota Rules 7849.0120 A (5)—the effect of the proposed facility, or a suitable modification thereof, in making efficient use of resources;
- Minnesota Rules 7849.0120 C (2)—the effects of the proposed facility, or a suitable modification thereof, upon the natural and socioeconomic environments compared to the effects of not building the facility;
- Minnesota Rules 7849.0120 C (3)—the effects of the proposed facility, or a suitable modification thereof, in inducing future development; and
- Minnesota Rules 7849.0120 C (4)—the socially beneficial uses of the output of the proposed facility, or a suitable modification thereof, including its uses to protect or enhance environmental quality.

²⁷ Updated Petition, at 5-6, 9.

²⁸ Updated Petition, at 29-37.

The Department recommends that the Commission consider the ER filed by the Department's Energy Environmental Review and Analysis staff in the Commission's decision in the site permit proceeding (Docket No. IP7006/WS-19-394).

F. POLICY ANALYSIS

There are several remaining criteria in Minnesota statutes and rules that are applicable to a CN but do not closely fit into the need, planning, alternatives, and socioeconomic categories discussed above. Therefore, these criteria are grouped into a final category of policy consideration. In this policy section, the Department addresses criteria related to:

- policies of other state and federal agencies;
- promotional practices;
- Minnesota RES compliance;
- environmental cost planning;
- transmission planning compliance; and
- CO₂ emissions.

1. Other State and Federal Agencies

Minn. R. 7849.0120 D states that a CN must be granted on determining that:

[T]he record does not demonstrate that the design, construction, or operation of the proposed facility, or a suitable modification of the facility, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

BRW indicated that the proposed Project serves overall state and regional energy needs and addresses federal and state renewable energy policies.²⁹ BRW further stated that the proposed Project would meet or exceed the requirements of all federal, state, and local environmental laws and regulations.³⁰ BRW provided a table listing the potential permits and approvals needed for the proposed Project (see Table 2: List of Approvals and Consultations). The Department has no reason to believe that BRW will fail to comply with the requirements of the listed federal, state, and local governmental agencies.

Further, the Department notes that state agencies authorized to issue permits for the proposed Project are required to present their position and participate in the public hearing process (see Minn. Stat. §216B.243, subd. 7). The Department observes that the Commission has consistently considered state agency input in its final CN decisions. Therefore, the Department concludes that the record at this time does not demonstrate that the design, construction, or operation of the proposed Project, or suitable modification of the facilities, will fail to comply with relevant and applicable policies, rules, and regulations of other state and federal agencies and local governments.

²⁹ Updated Petition, at 12-13.

³⁰ Updated Petition, at 13-15.

2. Promotional Practices

Minn. R. 7849.0120 A (3) states that the Commission is to consider:

[T]he effects of promotional practices of the applicant that may have given rise to the increase in the energy demand, particularly promotional practices which have occurred since 1974.

In the Exemption Order, the Commission granted a partial exemption to Minn. R. 7849.0240, subp. 2 (B) which calls for the applicant to provide a summary of the promotional practices that may have given rise to the demand for the facility, and instead required equivalent data from the purchaser, GRE. The partial exemption was granted because BRW does not sell electricity to retail, but GRE's members do serve end-use customers. BRW stated that GRE indicated that it has conducted no promotional activities associated with the proposed Project, and there is no information to submit.³¹ Therefore, the Department concludes that this sub-criterion has been met.

3. RES Compliance

Minn. Stat. §216B.243, subd. 3 (10) states that the Commission shall evaluate "whether the applicant or applicants are in compliance with applicable provisions of sections 216B.1691" Minn. Stat. §216B.1691 relate to Minnesota's requirements regarding the provision of renewable energy to retail customers. Given that BRW has no retail customers in Minnesota, the Department concludes that this statute does not apply.

4. Environmental Cost Planning

Minn. Stat §216B.243, subd. 3 (12) states that the Commission shall evaluate

[I]f the applicant is proposing a nonrenewable generating plant, the applicant's assessment of the risk of environmental costs and regulation on that proposed facility over the expected useful life of the plant, including a proposed means of allocating costs associated with that risk.

In this case, BRW is proposing a renewable generation facility. Therefore, the Department concludes that this statute does not apply.

5. Transmission Planning Compliance

Minn. Stat. §216B.243, subd. 3 (10) states that the Commission shall evaluate:

³¹ Updated Petition, at 5, 24.

[W]hether the applicant or applicants are in compliance with applicable provisions of section 216B.1691 and 216B.2425, subdivision 7, and have filed or will file by a date certain an application for certificate of need under this section or for certification as a priority electric transmission project under section 216B.2425 for any transmission facilities, or upgrades identified under section 216B.2425, subdivision 7.

BRW stated that the proposed Project will interconnect to the existing Buffalo Ridge substation. Additionally, BRW is an IPP and does not own existing transmission and distribution infrastructure. Since Minn. Stat. §216B.2425 is applicable only to entities that own or operate electric transmission lines in Minnesota, the Department concludes that this statute does not apply.

6. Carbon Dioxide Emissions

Minn. Stat. §216H.03, subd. 3 states that:

[O]n and after August 1, 2009, no person shall: (1) construct within the state a new large energy facility that would contribute to statewide power sector carbon dioxide emissions.

The Department notes that the proposed Project will not contribute to statewide power sector CO₂ emissions.

III. DEPARTMENT RECOMMENDATION

Based upon the above analysis, the Department recommends that the Commission determine that BRW has shown that:

- the probable result of denial would be an adverse effect upon the future adequacy, reliability, or efficiency of energy supply to the Applicant, to the Applicant's customers, or to the people of Minnesota and neighboring states;
- a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record; and
- the record does not demonstrate that the design, construction, or operation of the proposed facility, or a suitable modification of the facility, will fail to comply with relevant policies, rules, and regulations of other states and federal agencies and local governments.

Should the Commission find, after consideration of the ER, that the proposed facility "will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health," the Department recommends that the Commission issue a CN to BRW.

CERTIFICATE OF SERVICE

I, Sharon Ferguson, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

Minnesota Department of Commerce
Comments

Docket No. IP7006/CN-19-309

Dated this **2nd** day of **March 2020**

/s/Sharon Ferguson

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Barbara	Case	barbara.case@state.mn.us	Office of Administrative Hearings	600 N. Robert St. St. Paul, Mn. 55101	Electronic Service	Yes	OFF_SL_19-309_Official CC Service List
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1400 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_19-309_Official CC Service List
Kate	Fairman	kate.frantz@state.mn.us	Department of Natural Resources	Box 32 500 Lafayette Rd St. Paul, MN 551554032	Electronic Service	No	OFF_SL_19-309_Official CC Service List
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Karen	Kromar	karen.kromar@state.mn.us	MN Pollution Control Agency	520 Lafayette Rd Saint Paul, MN 55155	Electronic Service	No	OFF_SL_19-309_Official CC Service List
Susan	Medhaug	Susan.medhaug@state.mn.us	Department of Commerce	Suite 280, 85 Seventh Place East St. Paul, MN 551012198	Electronic Service	No	OFF_SL_19-309_Official CC Service List

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Brian	Meloy	brian.meloy@stinson.com	STINSON LLP	50 S 6th St Ste 2600 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_19-309_Official CC Service List
Brian J	Murphy	Brian.J.Murphy@nee.com	Nextera Energy Resources, LLC	700 Universe Blvd LAW-JB Juno Beach, FL 33408	Electronic Service	No	OFF_SL_19-309_Official CC Service List
Kevin	Pranis	kpranis@liunagro.com	Laborers' District Council of MN and ND	81 E Little Canada Road St. Paul, Minnesota 55117	Electronic Service	No	OFF_SL_19-309_Official CC Service List
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	Yes	OFF_SL_19-309_Official CC Service List
Stephan	Roos	stephan.roos@state.mn.us	MN Department of Agriculture	625 Robert St N Saint Paul, MN 55155-2538	Electronic Service	No	OFF_SL_19-309_Official CC Service List
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul, MN 55101	Electronic Service	Yes	OFF_SL_19-309_Official CC Service List
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