

May 1, 2017

PUBLIC DOCUMENT

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

RE: **PUBLIC Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E002/M-16-777

Dear Mr. Wolf:

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

Petition of Xcel Energy for Approval of the Acquisition of Wind Generation from the Company's 2016-2030 Integrated Resource Plan.

The request for proposals (RFP) was filed on September 22, 2016, the petition for utility-owned generation was filed on October 24, 2016 and the selection of projects from the RFP was filed on March 15, 2017 by:

Aakash Chandarana
Regional Vice President
Northern States Power Company
414 Nicollet Mall
Minneapolis, MN 55401

The Department recommends that **Xcel provide additional information in reply comments**. Based on the information provided to date, the Department expects to recommend that the Commission **approve the petition with modifications**. However, the Department's team of Sue Peirce, Mark Johnson and myself intend to provide final recommendations after reviewing Xcel's response; we are available to answer any questions the Minnesota Public Utilities Commission may have.

Sincerely,

/s/ STEVE RAKOW
Analyst Coordinator

SR/It
Attachment

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

PUBLIC COMMENTS OF THE
MINNESOTA DEPARTMENT OF COMMERCE

DOCKET NO. E002/M-16-777

I. INTRODUCTION

A. DOCKET HISTORY

On September 22, 2016 Northern States Power Company d/b/a Xcel Energy (Xcel or the Company) filed a letter informing the Minnesota Public Utilities Commission (Commission) that the Company issued a request for proposals (RFP) for wind resources that would achieve commercial operation prior to December 31, 2020 in order to qualify for 100 percent of the current production tax credit (PTC). RFP bids were to be submitted to Xcel by October 25, 2016.

On October 24, 2016, Xcel filed the Company's *Petition for Approval of the Acquisition of Wind Generation from the Company's 2016-2030 Integrated Resource Plan* (Petition). The Petition requested approval for the Company build, own, and operate a 750 MW portfolio consisting of four separate self-build wind projects. The Petition also indicated that Xcel would supplement the Petition in the first quarter of 2017, after the Company received and evaluated bids received in response to the pending RFP.

On November 4, 2016, the Commission issued a notice indicating that no comment period was being established on the Petition.

On November 17, 2016, the Company provided a corrected Attachment C to the Petition.

On January 4, 2017, Xcel filed a progress report regarding the RFP.

On March 14, 2017, Xcel filed the Company's *Application for Consideration of a Resource Treatment Framework to Address Jurisdictional Cost Allocation Issues*, a petition originally filed December 31, 2016 in Docket No. E002/M-16-223.

On March 15, 2017, Xcel filed the Company's *Supplement: Wind Generation Acquisition* (Supplement).

On March 20, 2017, the Commission issued its *Notice of Comment Period on Petition* on various issues concerning Xcel's total proposed portfolio of 1,550 MW of wind, providing the due dates of May 1, 2017 for comments and May 15, 2017 for reply comments.

On April 3, 2017, Xcel filed a letter (April 3 Letter) regarding the application of Minnesota Statutes § 216B.50 and Minnesota Rule 7825.1800 to the Petition and the Supplement.

On April 7, 2017, the Commission issued a *Revised Notice of Comment Period on Petition* (Notice), maintaining the due dates for comments but expanding the topics open for comment.

Below are the comments of the Department regarding the Petition, the Supplement, and the issues listed in the Notice.

B. GOVERNING STATUTE AND XCEL'S REQUESTS

Xcel filed the Petition and Supplement per Minnesota Statutes § 216B.2422, subd. 5, which provides an exemption from the certificate of need statute (Minnesota Statutes §216B.243) for resources selected through a bidding process approved or established by the Commission. The Company requests that approval of the Petition be effective upon the date of the Commission Order. If the Petition is approved, Xcel indicated that the Company will make a separate cost recovery filing at a later date.

The Department agrees with Xcel that no specific statute controls the timeframe for processing Xcel's filing. The filing requirements for miscellaneous filings are contained in Minnesota Rules 7829.1300. The Department reviewed the Petition for compliance with the filing requirements. Based upon this review the Department concluded that the Petition is complete.

In the Supplement Xcel requested that the Commission:

- approve a 1,550 MW portfolio of wind resource additions;
- approve an aggregate, symmetrical capital expenditure cap for the self-build projects;
- confirm that the 1,550 MW proposed wind portfolio is a reasonable and prudent way to continue to meet the obligations under Minnesota's Renewable Energy Standard (RES) [see Minnesota Statutes § 216B.1691]; and
- establish a procedural schedule such that the Commission may complete deliberations in July 2017.

In the Supplement Xcel committed to:

... filing a project progress report with the Commission in January 2018. This report will allow the Company to raise any viability concerns that arise with any of the projects, and will give the Company and Commission the opportunity to address those concerns in a timely fashion.

Xcel's requests were supplemented in the April 3 Letter, which requested approval of the New Lake Benton project that Xcel proposes to own under § 216B.50 as well as a variance from Minnesota Rules 7825.1800 (B) regarding supplying certain information.

C. CERTIFICATE OF NEED

Minnesota Statutes § 216B.243 subdivision 2 states that no large energy facility (LEF) shall be sited or constructed in Minnesota without the issuance of a certificate of need by the Commission. Minnesota Statutes § 216B.2421 subdivision 2 (1) defines 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." Several of the proposed projects meet the definition of an LEF. However, Minnesota Statutes §216B.2422 subdivision 5 (b) provides that if "an electric power generating plant, as described in section 216B.2421, subdivision 2, clause (1), is selected in a bidding process approved or established by the Commission, a certificate of need proceeding under section 216B.243 is not required." Since the Company is using a Commission-approved bidding process none of the projects selected in this proceeding require a certificate of need.

D. APPLICATION OF MINNESOTA STATUTES § 216B.50

Minnesota Statutes § 216B.50 [Restrictions on Property Transfer and Merger, or PA Statute] governs the transfer of utility assets exceeding \$100,000:

No public utility shall sell, acquire, lease, or rent any plant as an operating unit or system in this state for a total consideration in excess of \$100,000 ... without first being authorized so to do by the commission.... If the Commission finds that the proposed action is consistent with the public interest, it shall give its consent and approval.... In reaching its determination, the Commission shall take into consideration the reasonable value of the property, plant, or securities to be acquired or disposed of, or merged and consolidated...

The Department initially reviewed the Commission's December 13, 2013 *Order Approving Acquisitions with Conditions* (2013 Order) in Docket Nos. E002/M-13-603 and E002/M-13-716 (Xcel's most recent wind acquisition proceeding) and found analysis regarding the PA Statute. As background, in the 2013 proceeding Xcel proposed to acquire four wind farms:

- Courtenay—an agreement to buy from Geronimo Energy (Geronimo) the output of a 200 MW wind farm to be erected in Jamestown, North Dakota;
- Odell—an agreement to buy from Geronimo the output of a 200 MW wind farm to be erected in Mountain Lake, Minnesota;
- Border Winds—an agreement to buy from RES Americas a collection of wind turbines and related facilities to be erected as a wind farm in Rolette County, North Dakota; and

- Pleasant Valley—an agreement to buy from RES Americas a 200 MW wind farm to be erected in Austin, Minnesota.

The 2013 Order discusses the Department's comments, cites the PA Statute, and states:

This statute does not apply to the Courtenay and Odell projects – which would not involve Xcel acquiring the wind farms themselves – nor the Border Winds project – which would not be located within Minnesota. But the statute would apply to the Pleasant Valley project. Thus Xcel may not proceed to acquire that project until the Commission determines that doing so would be consistent with the public interest.

Initially, based on the analysis in Docket Nos. E002/M-13-603 and E002/M-13-716, the Department concluded that the PA Statute only applied to the proposed Lake Benton II Repowering Wind Project (New Lake Benton) Build-own-transfer agreement (BOT) since Xcel is paying greater than \$100,000 to acquire an operating unit in Minnesota. Under this assumption, the Department assessed whether Xcel met the requirements of Minnesota Rules 7825.1800 (B), which states that Xcel must provide:

- all information as required in part 7825.1400, items A to J;
- the agreed upon purchase price; and
- the terms for payment and other considerations.

As a result, Department Information Request No. 13 requested Xcel address the PA Statute and Minnesota Rules 7825.1800 regarding the Lake Benton II Repowering Wind Project; see the April 3 Letter. Briefly, Xcel's response was that the Petition and Supplement provided sufficient information for the Commission to determine the New Lake Benton transaction is in the public interest. Therefore, the April 3 Letter requested approval of New Lake Benton under the PA Statute as well as a variance from Minnesota Rules 7825.1800 (B). The Department agrees with Xcel's request regarding New Lake Benton, for the reasons discussed further below.

However, further review of issues regarding the PA Statute indicates that the PA Statute applies to any resource that affects the operating system in Minnesota.¹ For example, Otter Tail Power Company needed to seek approval from the Commission in Docket No. E017/PA-16-441 to acquire 3.5 miles of transmission facilities in South Dakota from Northern States Power Company.

A second example is the Commission's January 23, 2008 order in Docket No. E,G 001/D-07-328. The Commission's order re-printed the Department's comments, which stated:

¹ Ultimately, the Department's error in the 2013 wind proceeding had little impact since the projects were determined to be in the public interest under other statutes.

In telephone conversations with IPL representatives, the Department learned that the gains and losses that were allocated to Minnesota were from the sale of the Company's hydro generation plants located in Iowa but that served customers in both Iowa and Minnesota.[citation omitted] The hydro plants were sold for over \$500,000 to Iowa Hydro, LLC on August 1, 2006. IPL did not seek Commission approval of its sale of the hydro generation plants, and did not file a notice of changed circumstances, as discussed further below.

...

The statute [216B.50] applies to these transactions since IPL, a Minnesota public utility, sold its Iowa hydro plants in 2006 for a sum in excess of the \$100,000 threshold. Therefore, the Department recommends that the Commission require IPL to file a petition pursuant to Minn. Stat. §216B.50 for approval of the 2006 sale of its Iowa hydro generation plants. That proceeding could, for example, address appropriate rate treatment for Minnesota ratepayers as a result of the Company's decisions.

The Commission's order required that IPL file a petition pursuant to the PA Statute for approval of the 2006 sale of the Iowa hydro generation plants.

Based upon this analysis, the Department concludes that, in the instant docket, the PA Statute also applies to Blazing Star I (BSI), Blazing Star II (BSII), Foxtail, and Freeborn purchase and sale agreements (PSAs)—the self-build projects—along with the Crowned Ridge and New Lake Benton BOTs.

Xcel's Petition and Supplement provide the agreed upon purchase price, the terms for payment, and other considerations. However, the Department concludes that Xcel should also provide the information required in part 7825.1400, items A to J. Elsewhere in these comments, the Department reviews whether Xcel's proposed action is consistent with the public interest. The Department recommends that, in reply comments, Xcel discuss the need for a variance regarding reporting the information outlined under Minnesota Rules 7825.1400 (A) to (J) or provide the required information.

II. NEED, ALTERNATIVES, AND POLICY ANALYSIS

A. NEED ANALYSIS—CONSISTENCY WITH 2015 INTEGRATED RESOURCE PLAN

1. Department Analysis

The Department's July 8, 2016 comments in Xcel's most recent integrated resource plan (IRP) (Docket No. E002/RP-15-21) stated that the capacity expansion modeling (Strategist) results demonstrated that there appeared to be no reasonable economic limit to the amount of wind to be acquired as part of the 5-year action plan:

... the Department determined its preferred expansion plan based on Strategist analyses, starting with the five-year action plan, years 2016 to 2020. For wind, 1,000 MW (2 units of 500 MW each) was selected in 2019 in all but one contingency. The fact that both units that were made available to be selected were chosen in nearly every contingency indicates that the amount of wind added in the five-year action plan is not limited to 1,000 MW by economic factors unless the price of wind is substantially higher than assumed by Xcel and the Department. Further evidence that 1,000 MW is not an economic limit is that, during testing, the Department gradually increased the amount of wind allowed to be selected. The Department stopped testing when Strategist was offered 2,000 MW of wind in the early years (1,000 MW in 2018 and another 1,000 MW in 2019) and the model selected all of the wind. *Citation omitted.*

Ultimately, when considering such modeling issues as the size of the expansion units, the number of expansion options that can be made available, and real-world factors such as the number of viable projects, transmission availability, and so on, the Department decided to limit the amount of wind available to 2 units of 500 MW each for modeling purposes. At this time the Department recommends that the Commission order Xcel to pursue acquisition of approximately 1,000 MW of wind resources in 2018 or 2019, with the exact quantity to be determined during the subsequent resource acquisition proceeding.

The Department's July 8, 2016 comments also examined whether the preferred plan enabled compliance with Minnesota's renewable energy standards (RES) or if adjustments were needed to ensure compliance. The analysis concluded that:

Xcel is able to comply with Minnesota's Renewable Energy Standard (RES) in every contingency through 2029. Starting in

2030 only one contingency (+\$20 per MWh [to base] wind prices) indicates a potential compliance issue.

From this analysis, the Department concluded that no changes to the least cost plan were necessary in order to bring the least cost plan into compliance with the RES. In this case, the levelized costs of energy (LCOEs) of Xcel's proposed self-build projects and the projects selected from the RFP are less than the LCOE assumed in the IRP.

2. *Commission Order*

Overall, a well-developed IRP provides the analytical basis for determinations in subsequent proceedings. In the past, when a utility's proposed resource acquisition has been consistent with the IRP analysis and subsequent Commission decision, no further resource-planning type analysis has been needed.² In other instances, when facts regarding the specific resources proposed by the utility have fallen outside of the analysis and Commission decision in the IRP, further resource-planning type analysis using the updated facts has been warranted. In essence, resource acquisition typically conforms with the Commission's most recent IRP order unless facts in the resource acquisition proceeding dictate that the action plan should change.³ This approach appears to be consistent with the Commission's order in a recent resource acquisition proceeding:

... while a resource plan is intended to plot a utility's course for the next 15 years, it is based on facts known as of a specific point in time. As more facts become known, circumstances change and utilities must adapt – even in the absence of a new resource plan order.⁴

In this case the Commission's January 11, 2017 *Order Approving Plan with Modifications and Establishing Requirements for Future Resource Plan Filings* (IRP Order) in Docket No. E002/RP-15-21 stated:

3. **It is reasonable to acquire at least 1000 MW of wind by 2019.** Acquisition of greater than 1000 MW may be approved upon submission of evidence such as price, bidder qualifications, rate impact, transmission availability, and location.

...

² Examples include Docket Nos. IP6838/CN-10-80 and E002/M-11-713 (Prairie Rose Wind); Docket No. E015/M-13-907 (Bison 4); and Docket Nos. E017/M-09-883 and E017/M-09-1484

³ A recent example is Xcel's acquisition of 750 MW of wind generation in Dockets E002/M-13-603 and E002/M-13-716. In this case Xcel's 2010 IRP called for the addition of 200 MW of wind. However, Xcel subsequently found the cost of wind generation was below the cost evaluated in the IRP. Additional analysis with updated costs was performed by Xcel and the DOC.

⁴ See the Commission's December 13, 2013 *Order Approving Acquisitions with Conditions* in Docket Nos. E002/M-13-603 and E002/M-13-716.

5. Concerning wind and solar resource acquisitions, Xcel:
 - a. may use the modified Track 2 process for the acquisition of wind resources included in the five-year action plan, and for any additional solar, if needed, through 2021;
 - b. shall, if Xcel intends to provide a bid for wind generation, acquire wind resources through the modified Track 2 process.
 - c. shall file a contingency plan early in the process (preferably with the filing of the Company's self-build proposal) to address the potential for the bidding process to fail; and
 - d. shall, in wind acquisition proceedings, describe how revenues from wind generation sold into the MISO market will be returned to Minnesota ratepayers, and provide an estimate of these revenues.

The proper mix of purchased power and Company-owned resources shall be determined during the resource acquisition process.

6. In any filing seeking approval of wind resources, Xcel shall discuss each project's wind curtailment risk. (Emphasis added)

As explained by the Commission's orders cited above, acquisition of the 1,000 MW of wind approved in the most recent IRP is contingent upon the facts surrounding the proposed projects and other information such as whether the demand and energy forecasts fall within the bands studied in the last IRP. As explained by the IRP Order, the Company's proposal to acquire 550 MW of wind above the 1,000 MW level is contingent upon evidence—such as price, bidder qualifications, rate impact, transmission availability, and location—supporting the acquisition of additional resources. These issues, along with the proper mix of purchased power and Company-owned resources, are evaluated below in these comments.

Regarding the process used, both the Petition and the Supplement explain that Xcel used the modified Track 2 process in this instance. The Department agrees with Xcel on the structure of the process used. Therefore, the Department concludes that Xcel has complied with this portion of the IRP Order.

Regarding curtailment, the Company discussed curtailment in section III E (Operational Risks) and in section III G (Wind Curtailment) of the Supplement. Thus, the Company complied with the curtailment risk requirements of the IRP Order.

The Company discussed in section III G 6 (Treatment of Wind Generation Sales) how revenues from wind generation sold into the MISO market would be returned to Minnesota ratepayers, and provided an estimate of these revenues. The Department concludes that the information the Company provided was sufficient to comply with the IRP Order.

3. *Updated Capacity Expansion Modeling*

The Department reviewed the Petition and Supplement for information to determine if information available indicated that any re-analysis of resource planning-related issues was warranted. Regarding wind prices, the Department's IRP modeling (Docket No. E002/RP-15-21) used a LCOE of \$34.14 per MWh for projects coming on-line in 2019 with an additional \$5.25 added for regional transmission costs.⁵ Wind price contingencies of \pm \$10 per MWh \pm \$20 per MWh were also run. The LCOEs calculated by Xcel in the Supplement [TRADE SECRET DATA HAS BEEN EXCISED⁶]

Regarding the demand and energy forecasts, the Petition states that "the Fall 2016 Load Forecast, which was developed by the Xcel Energy Load Forecasting group, was used." The output for the Fall 2016 Load Forecast is provided in the Supplement's Appendix L, at page 4 of 27. The Department compared the Supplement's forecast data to the forecast bands used by the Department in Strategist for the 2015 IRP and concludes that the new forecast, while lower than the IRP base case, remained within the contingency bands.

Further, the Department compared the Company's updated forecasts for natural gas prices—a competing fuel—and again concluded that the new forecast, while lower than the IRP base case, remained within the contingency bands. The Department also compared the Company's updated forecasts for coal prices to those used in the 2015 IRP and concluded that the new forecast of coal prices was less than the low contingency band used in the 2015 IRP during the first few years—through 2021. This result occurs because the Department's contingency bands for coal resemble a funnel—gradually getting wider rather than being higher or lower by a consistent amount in every year. Since the proposed projects will not be in-service until about 2020, the Department did not consider updated coal prices to be a significant issue. In addition, the Department is not aware of any significant changes to Xcel's supply-side and demand-side resource portfolio that were not effectively considered in the IRP.

Overall, the Department concludes that the Company's key modeling inputs have not changed in a manner indicating that re-consideration of the IRP analysis is necessary. Therefore, the Department concludes that need for wind capacity has not changed by the updates provided by Xcel.

4. *Xcel's Proposal and the IRP Results*

As mentioned above, the Commission's IRP Order determined that it is reasonable to acquire at least 1,000 MW of wind by 2019; additional amounts would be possible based upon the circumstances. In the resource plan modeling, 1,000 MW of wind is expected to produce about 3,600 GWh of energy annually—assuming a capacity factor of 41.1 percent; 1,500 MW of wind would be expected to produce about 5,400 GWh of energy annually.

⁵ See the Department's July 8, 2016 comments for further details.

⁶ Note that the IRP [TRADE SECRET DATA HAS BEEN EXCISED]

In this resource acquisition docket the 1,550 MW of wind capacity Xcel is proposing is forecast to produce more, about [TRADE SECRET DATA HAS BEEN EXCISED] For comparison purposes, [TRADE SECRET DATA HAS BEEN EXCISED] of wind in the resource plan docket (at the 41.1 percent capacity factor) would produce the same amount of energy as is forecasted to be produced by the 1,550 MW from Xcel's proposal in the resource acquisition docket.

To further place the scale of Xcel's resource acquisition proposal in context, the Department notes that according to Xcel's FERC Form 1 filings, for 2001 to 2015:

- A.S. King produced, on average, 2,913 GWh annually;
- Monticello produced, on average, 4,408 GWh annually;
- Prairie Island (2 units) produced, on average 8,222 GWh annually; and
- Sherco (3 units) produced, on average, 11,657 GWh annually.

B. ALTERNATIVES ANALYSIS—RFP PROCESS

1. Summary of RFP Process

a) Background

Xcel selected the proposed Crowned Ridge, New Lake Benton, and Clean Energy projects through the RFP process. The Commission-approved five-year action plan from Xcel's most recent IRP (Docket No. E002/RP-15-21) included the solicitation of proposals for at least 1,000 MW of wind in the 5-year action plan. Consistent with that action plan, on September 22, 2016, Xcel made a filing in the 2015 IRP Docket and in this proceeding notifying the Commission of an RFP that the Company issued the same day, for up to 1,500 MW of nameplate wind capacity.

Xcel announced its RFP through a variety of mediums, including trade press and industry-related websites.⁷ The RFP was open to wind projects of 75 MW or greater and of various ownership structures. In response, Xcel received 95 proposals associated with 48 projects from 17 separate Bidders in six states. The proposals totaled nearly 10,000 MW of nameplate wind capacity.⁸

b) Completeness Review

In the first phase of the RFP, the Company performed a completeness and threshold review of all of the proposals. According to the RFP document the completeness review ensures compliance with all bid submittal requirements (fees, sufficient information provided in bid responses, etc.) and the threshold review ensures that the bidder and RFP project complies with all specific bid requirements (size, location, bidder creditworthiness, bidder experience, etc.). Bidders were allowed 5 days to remedy any deficiencies. Of the 95 separate

⁷ See section 3.02 of Attachment B to the Supplement and page 8 of the Supplement.

⁸ See section 4.01 of Attachment B to the Supplement and page 6 of the Supplement.

proposals, 6 were disqualified from further consideration (all met the completeness requirements but failed the threshold requirements), leaving 89 proposals.⁹ The LCOE of the proposals that passed the initial review ranged from [TRADE SECRET DATA HAS BEEN EXCISED] and sizes ranged from [TRADE SECRET DATA HAS BEEN EXCISED]¹⁰

c) *LCOE Analysis*

The Department notes that Minnesota Statutes § 216B.2422 subdivision 5 states that “a utility may select resources to meet its projected energy demand through a bidding process approved or established by the Commission. A utility shall use the environmental cost estimates determined under subdivision 3 in evaluating bids submitted in a process established under this subdivision.” In this case, Xcel evaluated projects that do not have emissions. Therefore, the Commission’s externality values do not apply.

In the second phase, Xcel calculated the LCOE for all 89 proposals that met all completeness and threshold criteria. Xcel calculated the levelized cost of each proposal with a power purchase agreement (PPA) structure using energy production and pricing data provided in the bid.

For proposals resulting in Company ownership (BOTs), Xcel first developed estimates of annual operation and maintenance (O&M) expenses and ongoing capital expenditures that were applied to all BOT proposals. Second, Xcel used these estimates, along with the BOT payments and expected energy production provided in the bids, to determine the annual revenue requirements for each BOT proposal. Third, Xcel used the estimated annual revenue requirements, along with estimates of energy production, to calculate the LCOE of each BOT proposal. Note that the LCOE calculations were based on costs at the point of interconnection. No proposals were assigned items such as congestion costs or costs incurred due to curtailment.¹¹

Xcel then ranked all proposals by estimated LCOE in “buckets.” The lowest LCOE project was placed in “Bucket 1.” No other projects were within 10 percent of the LCOE for this project so Bucket 1 contained one proposed project. Xcel placed the next lowest LCOE project and any proposals that were within 10 percent of its LCOE in “Bucket 2.” Xcel placed the remaining project with the lowest LCOE and any proposals that were within 10 percent of its LCOE in “Bucket 3.” Through this process, Xcel determined a threshold price at which a sufficient number of proposals to meet the RFP procurement target of 1,500 MW could then progress to the non-price step of the evaluation process. Of the 89 separate proposals that passed the completeness and threshold criteria, Xcel placed 26 into Buckets 1, 2, or 3 and moved them from the LCOE Review onto the Non-price/Qualitative Factor Review. These 26 proposals totaled 6,370.6 MW (nameplate).¹² Xcel did not consider the remaining proposals further.

⁹ See section 3.9.1 of Attachment B to the Supplement and page 8 of the Supplement.

¹⁰ See Attachment #1 to Attachment B to the Supplement.

¹¹ See section 3.9.1 of Attachment B to the Supplement and page 9 of the Supplement.

¹² See section 3.9.2 of Attachment B to the Supplement and page 40 of the Supplement.

d) *Non-price Analysis*

In the third phase, Xcel performed two types of review. First, Xcel performed a non-price review¹³ by scoring the proposed projects in five different areas including:

- 1) generator technology, availability and warranties;
- 2) permitting and compliance;
- 3) site control;
- 4) transmission; and
- 5) accounting assessment.¹⁴

The non-price review was done through evaluators answering a series of yes/no questions and calculating a non-price score based upon the answers. As part of this review Xcel retained a consulting firm to assess the capacity factor and loss values for the proposed projects. Note that the LCOE calculations used energy production and ongoing costs provided by the Bidders.¹⁵ In addition, transmission and interconnection costs were evaluated for individual projects and for groups of projects by an independent consultant. The findings of these evaluations were included within the non-price assessment but not the LCOE calculations, which relied upon bidder-provided upgrade costs. In essence, bidders are being held to their own cost estimates while Xcel is taking steps to ensure that the bidders' estimates are reasonable.

Second, Xcel performed a qualitative assessment where evaluators were asked to:

- give written comments justifying their answers in the non-price review;
- detail any specific, major risks associated with a proposed project; and
- recommend how to proceed with a proposed project.

The qualitative assessment supplemented the non-price rankings but was not used as part of the determination of scores or rankings as part of the RFP evaluation process.¹⁶

After this additional review, Xcel determined the final ranking of all projects. As explained above Bucket 1 contained one proposed project so no actions with the non-price review were necessary. All projects in Bucket 2 were ranked based upon the non-price review score as were the projects allocated to Bucket 3. From the rankings, the Company determined a short list of proposed projects to move on to negotiations and back-up projects in case short-listed projects withdrew during negotiations. The short list included the project in Bucket 1 and three of the projects in Bucket 2. The remaining projects in Bucket 2 were different configurations of projects already on the short list. The Company also created a back-up list of projects consisting of the two highest ranked projects in Bucket 3.¹⁷

¹³ See section 3.9.3 of Attachment B to the Supplement.

¹⁴ The accounting assessment reviewed bids for the possibility of adverse accounting impacts.

¹⁵ See sections 3.9.3 and 3.9.4 of Attachment B to the Supplement.

¹⁶ See section 3.9.3 of Attachment B to the Supplement.

¹⁷ See section 3.9.5 of Attachment B to the Supplement and page 10 of the Supplement.

e) *Negotiations and Due Diligence*

In the fourth phase, Xcel began to negotiate specific agreements based upon the model agreements included in the RFP. At the same time the Company began a detailed due diligence review of each project. The Supplement reports that one of the short-listed bidders formally withdrew project from consideration “indicating that they would not be able to support the security requirements.” In addition, the due diligence process found that one project on the short list, was “subject to significant transmission issues that would substantially increase the cost.” The bidder was unable to remedy these issues and, as a result, decided to withdraw the bid.¹⁸

With the withdrawal of two projects the Xcel began negotiations with both projects on the back-up list. The parties were unable to reach a satisfactory agreement regarding one of the back-up projects and decided not to move forward with the transaction. Xcel reached an agreement with the other project on the back-up list. The negotiation and due diligence phase concluded with the Company filing the Supplement proposing 800 MW of wind projects—400 MW of PPA (Crowned Ridge and Clean Energy) and 400 MW of BOT (Crowned Ridge and New Lake Benton).

2. *Analysis of Xcel’s RFP*

a) *Process Review*

The Department relied upon the independent auditor’s review of Xcel’s process as documented in Attachment B of the Supplement. The potential issues identified by the auditor and the auditor’s conclusion are summarized below:

- an Xcel engineer responsible for developing the operations and maintenance (O&M) and ongoing capital cost assumptions for the self-build (PSA) projects was assigned to develop the methodology and guidelines for the input assumptions for O&M and ongoing capital costs for BOT proposals prior to the receipt of bids. No changes were allowed after receipt of the bids.
 - The independent auditor reviewed the methodology and guidelines and agreed that they were reasonable and sufficiently rigid so as not to enable bias to be introduced into the evaluation of project costs.
- Xcel did not entertain questions posed in any format other than email. However, there were two separate attempts by bidders to contact Xcel personnel via telephone.
 - The independent auditor determined that Xcel staff did not violate the protocol for communication as described in the RFP document or Xcel’s internal RFP process documents and did not cause undue bias.

¹⁸ See page 11 of the Supplement.

- It was disclosed to the auditor after the conclusion of Xcel's evaluation process that one of the individuals involved, working for a company contracted by Xcel to assist in evaluating the bids, is the spouse of personnel employed by one of the bidders.
 - The independent auditor concluded that this was an easily recognizable conflict of interest and this information should have been made known to Xcel and the independent auditor prior to the evaluation. However, the auditor did not feel this conflict of interest impacted the evaluation or rankings.

Overall, the independent auditor concluded that:

- Xcel's RFP documents and notifications achieved intended goals;
- Xcel's communications were appropriate and were consistent with intended goals for conduct of the RFP Process;
- Xcel's evaluation criteria were reasonable and correctly applied; and
- Xcel's evaluation process was rigorous, robust, and consistent.

Based upon the above review the Department concludes that Xcel's RFP process was reasonable.

b) Project Selection Review

The short list of proposals to move to negotiations included one bid in Bucket 1 and three of the six bids in Bucket 2. Buckets 1 and 2 contain the least cost bids. As previously mentioned, various bidders submitted multiple proposals for the same wind project. The three non-short-listed bids in Bucket 2 were different configurations of bids already included on the short list.

Regarding the three non-short-listed bids in Bucket 2, one bid **[TRADE SECRET DATA HAS BEEN EXCISED]** already on the short list. The Department concludes that Xcel's selection of a bid for the short list is reasonable. The other two non-short listed bids **[TRADE SECRET DATA HAS BEEN EXCISED]** Again, the Department concludes that Xcel's selection of a bid for the short list is reasonable. In summary, the Department agrees with the independent auditor that the Company selected appropriate bids for the short-list.

Since all of the bids in Buckets 1 and 2 were either on the short-list or variations on short-listed bids, the bids proposed for the back-up list had to be drawn from Bucket 3. The Department notes that the two back-up bids do not represent the least cost bids from Bucket 3. As explained by the independent auditor's report (section 3.9.5) the Company considered bids within a bucket to be close in cost and ranked bids based upon the non-price score. Thus, the back-up bids represent the remaining bids with the best non-price score; in other words, the least-risk bids. **[TRADE SECRET DATA HAS BEEN EXCISED]**

Based upon the above analysis the Department concludes that Xcel's selection of bids for the back-up list was reasonable.

The Department notes that there are different versions of the LCOE numbers for each of the proposed projects. The projects resulting from the RFP process—Clean Energy, Crowned Ridge, and New Lake Benton—had one LCOE calculation performed during the RFP process that was consistent with all other bids. Then, a second LCOE was calculated with updated assumptions, largely reflecting the results of the negotiations. These changes are discussed on pages 13 to 18 of the Supplement. The Company's proposed self-build projects—BSI, BSII, Foxtail, and Freeborn—had one LCOE calculation performed for the Petition. Then a second LCOE was calculated with updates to:

- net capacity factors, due to a number of factors discussed in the Supplement;
- discount rate, to be consistent with the rate used in the RFP process; and
- proration of accumulated deferred income tax (ADIT) to be consistent with the Company's position in other proceedings.¹⁹

c) *Transaction Structure*

The Department notes that the Company is not neutral when comparing PPA transactions to Company-ownership. Commission Orders in certain past dockets have set approximate allocation targets for generation to be acquired via independent power producers, community-based energy development (C-BED) projects, and utility-owned resources.²⁰ However, the Commission's IRP Order stated a requirement that projects be evaluated on an equal basis and that ratepayers should not be forced to bear needless costs incurred solely to allow Xcel to maintain a preset ownership allocation. "The proper mix of purchased power and Company-owned resources shall be determined during the resource acquisition process." In the context of the instant docket, the concern is that Xcel might choose a premium for one transaction structure in order to maintain the balance of PPA versus utility-owned generation proposed by the Company in the resource plan or to increase the share of projects that are utility-owned beyond the least cost level.

Given a common LCOE model, the only way for the Company to make utility-owned generation appear better than warranted are to:

- embed errors in the LCOE model calculations;
- make inappropriate adjustments to the LCOE model inputs; or
- bias the non-price review process.

Xcel used one basic LCOE model for evaluating utility-owned proposals throughout the RFP. However, it appears that different units within Xcel have different versions of the LCOE model. Thus, the LCOE model for the four self-build proposals—evaluated by one group

¹⁹ See pages 19 to 21 of the Supplement.

²⁰ See, for example, the Commission's June 19, 2009 *Order Approving Target Portfolio Allocation Within Xcel's Renewable Energy Plan* in Docket No. E002/M-07-1558.

within Xcel—was consistent across the proposals. The LCOE model used to evaluate the two BOT proposals—evaluated by a different group within Xcel—also was consistent across the BOT proposals. However, the Department noted differences between the self-build and BOT LCOE models. However, the differences were confined to the input pages and how the inputs were organized rather than a substantive difference; that is, the differences did not impact the final LCOE calculations. Furthermore, in the LCOE model the Company generally used the inputs provided by the bidders—minimizing the opportunity to bias the analysis.

The remaining issue is the treatment of the non-price scoring. The Department reviewed the Company's non-price scoring information and did find any bias in the information. Further, the non-price scoring ultimately only impacted the projects placed on the back-up list; non-price scoring did not impact the short list. Thus, the Department concludes that the mix of PPA and Company-owned projects is reasonable.

3. *New Lake Benton Repowering Analysis*

If the New Lake Benton project were not selected via the RFP process, then the existing Lake Benton II facility would continue under the current PPA until it expires. Chart 1 shows a comparison of the estimated annual cost of energy from New Lake Benton compared to the cost of energy from the existing Lake Benton II PPA supplemented with the cost of a generic wind replacement added after the current PPA expires in 2025.²¹

The cost of the existing Lake Benton PPA was taken from Xcel's Strategist database for this docket (see the response to Department Information Request No. 9) and Xcel's April 3, 2000 comments in Docket No. E002/M-00-311. The cost of the generic wind replacement was taken from the Supplement's Attachment B at page 3-12. The cost of the proposed New Lake Benton project was taken the Company's revenue requirements calculation as documented in the response to Department Information Request No. 10 at Attachment I.

Chart 1 shows that the cost of New Lake Benton [TRADE SECRET DATA HAS BEEN EXCISED] Then the cost of New Lake Benton [TRADE SECRET DATA HAS BEEN EXCISED] As a result the LCOE for New Lake Benton is [TRADE SECRET DATA HAS BEEN EXCISED] while the Department calculated the LCOE for the existing PPA with subsequent generic replacement to be [TRADE SECRET DATA HAS BEEN EXCISED], assuming both alternatives produce the same amount of energy. The Department recognizes that this calculation could be improved, for example, by reconciling the assumed quantity of energy produced under the existing PPA to New Lake Benton's assumed energy output.

The price of energy available to replace the existing Lake Benton facility is not known. Therefore, the Department calculated that only if the price of energy from a replacement PPA started at no more than [TRADE SECRET DATA HAS BEEN EXCISED], then the alternative of allowing the Lake Benton II PPA to continue to its expiration date and then replacing it would have the same overall LCOE as New Lake Benton. However, given the unlikelihood of

²¹ Note that New Lake Benton's costs are annual revenue requirements divided by estimated, annual energy production while the existing PPA is a known per MWh payment followed by an estimated per MWh payment for a replacement contract. Thus, the two lines have different risk profiles.

such an outcome, any refinements are unlikely to change the Department's conclusion that New Lake Benton is preferred to continuing with the existing PPA.

Chart 1: Alternatives to New Lake Benton

[TRADE SECRET DATA HAS BEEN EXCISED]

C. ALTERNATIVES ANALYSIS—SELF-BUILD PROJECTS

1. Completeness of Xcel's Self-Build Proposals

The Department's Information Request No. 1 requested Xcel to provide the information requested by the RFP at Appendix A. The Department reviewed Xcel's response to ensure that the information was complete—that it contained sufficient information regarding Xcel's proposed projects to begin the analysis. The Department considered Xcel's proposals to be complete.

The Department also performed a threshold review to ensure that the projects complied with the applicable specific bid requirements from the RFP:

- **RFP Project size**
 - Requirement: Each project must have a nameplate electric rating greater than or equal to 75 MW.
 - Result: At 150 MW to 200 MW, each proposed project met the requirement.
- **Location and Interconnection**
 - Requirement: Each project must have a Point of Interconnection (POI) location within MISO in a state where NSP customers or generation resources are located including Minnesota, Wisconsin, Michigan, North Dakota or South Dakota.
 - Result: Each proposed project met the requirement:
 - BSI, BSII, and Freeborn²²: POI is in Minnesota; and
 - Foxtail: POI is in North Dakota.
- **Bidder creditworthiness**
 - Requirement: Proposals must include detail and address all questions regarding financial aspects of all projects including financing information, credit history, and legal claims.
 - Result: The Department is not aware of any issues with Xcel's creditworthiness at this time.
- **Bidder experience**
 - Requirement: Provide qualifications and experience in developing, constructing, commissioning and operating generation facilities similar to the proposed project.

²² Note that, as discussed in the Supplement, some of the turbines for Freeborn will be located in Iowa but the POI is in Minnesota.

- Result: Xcel has significant experience in operating wind generating facilities. While Xcel has worked with other parties constructing wind projects, the Department understands that the Company has not managed wind construction. Finally, Xcel is working with experienced developers on each project:
 - Freeborn—Invenergy;²³
 - Foxtail—ESI Energy;²⁴
 - BSI and BSII—Geronimo.²⁵

Note that the Department did not review three threshold requirements applied by Xcel to RFP bids, for the reasons indicated below:

- **Compliance with Wind Farm Technical Requirements**
 - Requirement: proposals must document any exceptions to NSP's Model Wind Farm Technical Requirements.
 - Reason not evaluated: Evaluation of such materials is beyond the Department's expertise.
- **Compliance with Model Purchase and Sale Term Sheet**
 - Requirement: Compliance with NSP's Model Term Sheet for the Purchase and Sale of an Operational Wind Project.
 - Reason not evaluated: Not applicable to a self-build proposal.
- **Wind production resource studies**
 - Requirement: Provide wind production resource studies.
 - Reason not evaluated: Evaluation of such materials is beyond the Department's expertise.

While the Company's potential lack of experience in directly managing construction of wind projects in the upper Midwest region could be an issue, the Company has managed construction of numerous other projects. Therefore, the Department concludes that the Company's proposed projects pass the threshold review.

2. *LCOE Review of Xcel's Self-Build Proposals*

As noted above the Department reviewed the LCOE models used by Xcel and determined that they were different versions of the same model; differing in how certain inputs were arranged. But the Department concluded that the calculated LCOE would not be impacted by the differences. As noted above Xcel sorted the bids into 4 buckets:

- Bucket 1: [TRADE SECRET DATA HAS BEEN EXCISED]
- Bucket 2: [TRADE SECRET DATA HAS BEEN EXCISED]
- Bucket 3: [TRADE SECRET DATA HAS BEEN EXCISED] and

²³ Invenergy's website lists numerous projects, including the 48 MW Ashtabula wind project in Barnes County, North Dakota.

²⁴ Note ESI is also the bidder for the Crowned Ridge and New Lake Benton projects.

²⁵ For example, Geronimo developed the 200 MW Courtenay wind project in Stutsman County, North Dakota now owned by Xcel.

- Bucket 4: all other projects

The LCOEs for Xcel's proposed self-build projects are:

- BSI: [TRADE SECRET DATA HAS BEEN EXCISED] qualifying for Bucket 2;
- BSII: [TRADE SECRET DATA HAS BEEN EXCISED] between Buckets 2 and 3;
- Foxtail: [TRADE SECRET DATA HAS BEEN EXCISED] qualifying for Bucket 2; and
- Freeborn: [TRADE SECRET DATA HAS BEEN EXCISED] between Buckets 2 and 3.

The Department reviewed Xcel's LCOE calculations and concludes that they are reasonable. The LCOEs show that both BSI and Foxtail clearly would have been placed in Bucket 2 and that BSII and Freeborn are closer to Bucket 2 than Bucket 3. Therefore, the Department concludes that it is reasonable to conclude that all four projects should be treated as short-listed proposals.

Xcel assumes that the capacity factors for the self-build projects are [TRADE SECRET DATA HAS BEEN EXCISED] However, the Department notes that Xcel has an incentive to inflate the capacity factor for the self-build proposals, because the higher the capacity factor, the lower the resulting LCOE. To check for such bias the Department reviewed the energy production data for Xcel's Nobles (2008 in-service date) and Grand Meadow (2010 in-service date) facilities for 2011 to 2015 as reported in FERC Form 1. This data is shown in Table 3 below.

Table 3: Xcel-owned Wind Generation

Year	Grand Meadow		Nobles Wind	
	Net Generation Excluding Plant Use	Capacity Factor	Net Generation Excluding Plant Use	Capacity Factor
2015	334,806,710	38.2%	740,612,852	42.1%
2014	347,489,000	39.7%	761,942,422	43.3%
2013	331,149,000	37.8%	656,443,860	37.3%
2012	308,425,000	35.2%	645,506,722	36.7%
2011	305,419,000	34.9%	576,813,498	32.8%

For comparison, Xcel's petition in Docket No. E002/M-08-1437 at page 14 used a net capacity factor of [TRADE SECRET DATA HAS BEEN EXCISED] for the cost evaluation process on the Nobles project. Xcel's petition in Docket No. E002/M-07-873 at page 4-6 estimated a net capacity factor of [TRADE SECRET DATA HAS BEEN EXCISED] for the Grand Meadow project. From this data, the Department concludes that there is no evidence of systematic bias in capacity factor estimates for previously approved projects.

Furthermore, the net capacity factors supplied by Xcel and the various bidders for the proposed projects, with one exception, are similar to Xcel's assumed capacity factors for

self-build projects.²⁶ While the projects are in different locations and using different turbines, different parties have come to a similar conclusion regarding expected energy production. Again, there is no evidence of systematic bias in capacity factor estimates for the proposed projects.

3. *Non-Price Review of Xcel's Self-Build Proposals*

The Department concluded above that all of the Company's proposed self-build projects should be considered as part of Bucket 2 and considered them as having advanced to the contract negotiations phase. Where there were multiple variations on a single project in Buckets 1 and 2, Xcel advanced the least cost proposal; the non-least cost variations were placed on hold. The way the RFP process eventually worked out, non-price ranking of projects within Buckets 1 and 2 did not matter.

The non-price score, used to rank projects within a bucket, determined which projects from Bucket 3 should be placed on hold—kept available in case difficulties arose during negotiations. As noted above, the Department concluded that all four of Xcel's proposed self-build projects should be considered as part of Bucket 2. Therefore, a non-price score for the self-build projects is not necessary and the Department did not pursue such analysis.

4. *Final Ranking of Xcel's Self-Build Proposals*

The Department concludes that all four self-build projects (BSI, BSII, Foxtail, and Freeborn) should be considered as being similar in cost to the projects placed on the short list.

D. *ANALYSIS OF ALTERNATIVES—TRANSMISSION RISK*

1. *Transmission Capital Costs*

Regarding the projects selected via the RFP process, in section 3.03 of Attachment B of the Supplement, the independent auditor stated that:

Xcel reaffirmed the responsibilities for interconnection costs in a separate email to Bidders which is provided in Appendix C. Bidders were asked to confirm their understanding of the requirements. All Bidders responded affirmatively confirming they understood that they were responsible for all future transmission costs and therefore the proposed price(s) could not be subject to any future adjustments to a higher price.

Similarly, in the Supplement at page 11 Xcel stated that "a bidder's ability to achieve a Commercial Operation Date (COD) to allow for the full PTC tax benefit and responsibility for transmission cost risk was also non-negotiable." Therefore, the Supplement is clear that transmission risk was allocated to the bidders in the RFP. This approach provides an

²⁶ See also Table 3 above.

incentive for bidders to use the transmission system in an efficient manner and accurately estimate transmission costs.

Regarding Xcel's self-build projects, the Supplement at pages 22-23 provides the total capital costs of each self-build project separately and notes, for each project, that the total capital costs "includes the estimated transmission upgrades and interconnection costs discussed in our October filing." Furthermore, Xcel proposes that the capital costs for Xcel's self-build projects be subject to a symmetric cost cap:

In light of our proposed self-build portfolio approach, we also reiterate our proposal to subject our cost recovery to an aggregate capital cap (including allowance for funds used during construction (AFUDC)) ... If we exceed these costs in our execution of the projects, the Company will bear those costs. Symmetrically, if we are able to achieve any cost-savings, we would retain those savings.⁷

⁷ This is consistent with the Commission's April 16, 2015 Order in Docket. No. E002/CN-12-1240.

Therefore, the Department concludes that Xcel has treated transmission-related capital costs similarly for the RFP projects and the self-build projects in that Xcel's ratepayers are not subject to transmission capital cost risks for any of the proposed projects. The remaining risk is that actual transmission cost for one or more projects will exceed the bidder's estimate by an amount large enough to offset the termination payments built into the BOTs and PPAs, and thus lead the seller(s) to terminate the projects.

2. Transmission Curtailment Costs

The impact of curtailment for the individual projects is explained below in the sections reviewing the individual agreements. However, a summary of the impact of curtailment on the LCOE calculations is provided below in Table 4.²⁷ Table 4 demonstrates that, at the levels discussed by Xcel, curtailment has a less than 10 percent impact on LCOE. Thus, if Xcel has accurately forecasted curtailments, along with the project costs and capacity factors, it appears that curtailment would not create an impact that would lead to a need to consider rejecting a one or more of the proposed projects.

²⁷ The calculations are based upon Xcel's response to Department Information Request No. 10 at Attachment A, which is an electronic version of Attachment M of the Supplement.

Table 4: Curtailment and LCOE

[TRADE SECRET DATA HAS BEEN EXCISED]

The status of the transmission system can also impact capacity accreditation; for an example of the impact see the Commission's February 5, 2015 *Order Approving Power Purchase Agreement with Calpine, Approving Power Purchase Agreement with Geronimo, and Approving Price Terms with Xcel* in Docket Nos. E002/CN-12-12410, E002/M-14-788, and E002/M-14-789. In response to Department Information Request No. 14 Xcel estimated 195 MW of accredited capacity for the proposed projects based upon MISO's 15.6 percent total system capacity credit. The accredited capacity is expected to be realized for the first time in the 2020-2021 or 2021-2022 planning years for the various projects. Note that Xcel's estimate did not estimate any accredited capacity related for Clean Energy or for a 200 MW portion of Crowned Ridge because expected accredited capacity was only provided for projects that currently have MISO study results qualifying the projects for accredited capacity. Thus, the final accredited capacity of the entire portfolio could be somewhat higher.

The average accreditation for wind generation in MISO's Zone 1 is currently 18.3 percent; higher than the 15.6 percent estimate used by Xcel. However, Xcel explained the choice of a lower accreditation factor by reference to MISO studies, which show a lower overall capacity credit as wind penetration increases.²⁸ Xcel's response to Commission Staff Information Request No. 5 shows a chart from MISO that demonstrates this fact. Further information on how capacity accreditation can be impacted by wind penetration is available in MISO's report: *Planning Year 2016-2017 Wind Capacity Credit*.²⁹

²⁸ Wind penetration is calculated as registered wind capacity divided by peak demand.

²⁹ The report is available at:

<https://www.misoenergy.org/Library/Repository/Report/2016%20Wind%20Capacity%20Report.pdf>.

E. POLICY ANALYSIS—COMPLIANCE WITH THE RES

Minnesota Statutes § 216B.1691, Subd. 2a(b) (RES Statute) requires Xcel to obtain 30 percent of its Minnesota retail sales from renewable energy sources starting in 2020. Of the 30 percent, the RES Statute requires that at least 25 percent must be generated by solar or wind energy generation, with the remaining five percent coming from other eligible energy technologies. Of the 25 percent, no more than one percent may be from solar generation with the remaining 24 percent to come from wind generation.

Having determined the cost effective level of wind additions, the Department turned to an analysis of which cost effective projects would contribute towards meeting the RES Statute's requirements. The Company's response to Commission Information Request No. 6 stated:

The Company will utilize a combination of production and banked RECs to meet the 30% RES, including the 24% Wind requirement. Currently, the Company estimates this combination will be sufficient to meet the 24% Wind requirement through year 2027. To maintain compliance with the 30% RES, including the 24% Wind requirement, through year 2030, it is estimated the additional need is 300- 400 MW wind capacity. The addition of the 1550 MW Wind Portfolio, as proposed, extends the RES compliance forecast through year 2044.

The Department initially analyzed the Company's RES compliance status. However, at this time the Department has requested further information regarding the Company's response to Commission Information Request No. 6 and will provide a complete RES analysis in reply comments.

F. POLICY ANALYSIS—RELATED COMMISSION FILINGS

1. Xcel Filings

In the Petition Xcel indicated that "NSP-MN will execute additional agreements in support of our proposed wind projects, and will file any necessary affiliate interest agreements with the Commission pursuant to Minn. Stat. § 216B.48, subd. 3 in the future." Furthermore, Xcel made an affiliated interest (AI) filing concurrent with the Supplement (see Docket No. E002/AI-17-215) pursuant to Minnesota Statutes § 216B.48. The Company requested that the Commission approve the AI filing in parallel with the Petition. The Department will not address the AI filing in these comments.

2. *Minnesota Power Filings*

Regarding Clean Energy, the Supplement stated:

The Clean Energy #1 Project was initially submitted for an interconnection study by ACE affiliate, Minnesota Power. The full System Impact Study has been finalized and the GIA was executed and dated May 8, 2014. Minnesota Power plans to transfer the GIA to ACE (subject to regulatory approval) in order to execute the obligations under the PPA.

Minnesota Statutes § 216B.48 subdivision 3 states that no arrangement for the sale of a service, property, right or thing between a public utility and an affiliated interest is valid until approved by the Commission.³⁰ Furthermore, **[TRADE SECRET DATA HAS BEEN EXCISED]** since the transfer of the GIA will be reviewed by the Commission in a subsequent filing, the Department will not review the overall appropriateness of the GIA transfer in this proceeding.

The Department's comments in this proceeding focus on the resource planning and financial impacts of the Supplement on Xcel. However, to ensure that the action here would not negatively impact MP's resource planning, the Department requested MP to provide an update on MP's progress towards meeting the Commission's requirement that "by the end of 2017, Minnesota Power shall initiate a competitive bidding process to procure 100-300 MW of installed wind capacity." MP's response to Department Information Request No. 12 stated that:

From the independent evaluator's economic analysis, Minnesota Power shortlisted and has begun contract negotiations with selected counterparties. Minnesota Power is working toward a final selection in the second quarter of 2017.

From this response, the Department concludes that there is no information indicating that MP is making inadequate progress towards the action plan from MP's most recent resource plan. Thus, there is no evidence at this time that Xcel's proceeding with Clean Energy would impact MP's compliance with MP's Commission-ordered resource planning goals.

G. *POLICY ANALYSIS—CONSIDERATION OF SMALLER PROPOSALS*

The terms of Xcel's RFP stated that the RFP was open to wind projects of 75 MW or greater. That leaves open the question of the potential for smaller projects to be competitive but not have a venue to demonstrate their competitiveness at this time. The Department's March 16, 2017 comments in Docket No. E002/M-17-26 stated that:

³⁰ Minnesota Statutes § 216B.48 subdivision 4 states that the provisions "requiring the written approval of the Commission shall not apply to transactions with affiliated interests where the amount of consideration involved is not in excess of \$50,000."

As a preliminary matter, the Department notes that this project is only one of around a dozen existing PPAs with front-end loaded pricing schedules. In addition, there are approximately 20 existing PPAs that have a levelized price for the remaining balance of their contract term that is equal to or less than the Woodstock Hills 1997 PPA.

The analysis above indicated that the New Lake Benton project, consisting of rebuilding an existing project, results in savings for the Company's ratepayers. See the analysis elsewhere in these comments. To resolve issues in multiple dockets regarding smaller PPAs, the Department recommends that the Commission order Xcel to provide projects of less than 12 MW, the threshold at which the Company's competitive bidding process applies, a reasonable period (perhaps 60 days) to provide proposals for re-powering existing facilities. In addition to the criteria applied in this proceeding Xcel should be required to use two additional criteria:

- That the repowered project has a lower overall LCOE than the existing PPA—supplemented by a generic replacement if necessary; and
- That the repowered project has an LCOE that is equal to or less than the highest LCOE approved by the Commission in this proceeding [Docket No. E002/M-16-777].

III. DEPARTMENT ANALYSIS OF AGREEMENTS

A. TERMS OF THE PPAs

1. *Protection of Ratepayers from Risks*

a) *Financial Risks*

For PPAs, there are two main financial risks that may have negative impacts on Xcel's ratepayers. They are:

- a seller default and termination of the PPA before the expiration of the contract period, and
- entitlement by a lender or other party, as a result of the seller's failure to pay debt, to take over the project and terminate the PPA.

Under these events, Xcel may be forced to find more costly replacement power when the PPA is terminated. Further, under both events, the projects may be terminated and jeopardize Xcel's compliance with various statutory requirements and Commission orders.

The terms of both the Clean Energy and Crowned Ridge PPAs are similar to the terms of the Courtenay and Odell PPAs approved by the Commission in Docket No. E002/M-13-603. Article 11 of the PPAs describes the Security Fund required to be established by the seller to

account for damages caused by the seller. Examples include items such as damages caused by [TRADE SECRET DATA HAS BEEN EXCISED] The Security Fund will be [TRADE SECRET DATA HAS BEEN EXCISED]

Article 12 of the PPAs includes events that constitute seller's default and include: [TRADE SECRET DATA HAS BEEN EXCISED] Article 7 of the PPAs [TRADE SECRET DATA HAS BEEN EXCISED]

After reviewing the risk mitigation features of the PPAs, the Department concludes that Xcel's ratepayers would be reasonably protected from financial risks.

b) Operational Risks

As is typically true of PPAs, the operational risks are the risks that the wind projects will not be built and operated as expected. These risks include a complete shutdown or a partial shutdown of the project due to technical problems. In the case of a partial shutdown, ratepayers must be assured that their payments for the wind energy are reduced accordingly. In the case of a complete shutdown, once again Xcel may face the risk of non-compliance with the various legislative or Commission requirements, and may need to find what is likely to be more expensive replacement power.

The PPAs included specific features that protect both Xcel and its ratepayers from the operational risks discussed above. These features include the security fund discussed above, and payments only for net energy actually delivered to Xcel (except for curtailment issues discussed elsewhere in these comments).

Article 19 of the PPAs includes restrictions on the transfer of the PPAs. Such restrictions make it less likely that the PPAs will be assigned to a party that is unable to meet the PPA's terms. Finally, the PPAs specify the amount of time the seller has to cure an event of default. Failure to cure constitutes an event of default and would allow Xcel to terminate the contract and draw on the security fund to compensate for any losses caused by seller's default.

After reviewing these features in the PPAs, the Department concludes that Xcel's ratepayers would be reasonably protected from the operational risks.

2. Curtailment Provisions

For wind power, payments for curtailed energy may be necessary to maintain financial viability of the wind project. The PPAs establish both compensable and non-compensable curtailments. In principle, Xcel must pay for the curtailed energy only if the curtailments are initiated by Xcel and the seller is able to produce and deliver wind energy (a compensable curtailment). Xcel does not make curtailment payments in other circumstances (a non-compensable curtailment).

Section 8.3 of the PPAs contains provisions to ensure that the projects would continue to receive payments for energy that would have been generated during any period of compensable curtailment. The PPAs define compensable and non-compensable curtailments. Examples of non-compensable curtailments are **[TRADE SECRET DATA HAS BEEN EXCISED]** Compensable curtailments are the result of Xcel's refusal to accept delivery for reasons other than non-compensable events. Examples of compensable curtailments include Xcel **[TRADE SECRET DATA HAS BEEN EXCISED]**

The Department requests that Xcel clarify two provisions in the contract in its reply comments. Provision 8.3 A and 8.3 B.1(a) say that the following is compensable:

[TRADE SECRET DATA HAS BEEN EXCISED] (Emphasis added.)

Then, Provision 8.3 B.2 states that the following is non-compensable:

[TRADE SECRET DATA HAS BEEN EXCISED] (Emphasis added.)

Xcel should explain, for example, whether curtailments due to insufficient transmission outlet from MISO's Zone 1 would be compensable or non-compensable.

In the Supplement, Xcel identified the projects vulnerable to higher levels of curtailment. For Clean Energy Xcel expects that "over the lifetime of the project, curtailment will be consistent with our overall curtailment average of approximately four percent." For the Crowned Ridge PPA Xcel expects that:

...over the lifetime of the project, curtailment will be consistent with our overall curtailment average of approximately four percent. However, during the early years of production (2020 through 2023) Crowned Ridge is likely to experience higher curtailment while necessary transmission upgrades are completed.

The PPA's proposed payments per MWh for voluntary curtailment are **[TRADE SECRET DATA HAS BEEN EXCISED]**

The Department has consistently reviewed proposed wind projects for curtailment risk. The Department notes that the voluntary curtailments are necessary to maintain the integrity of the transmission system. Further, as noted above, Xcel conducted Strategist modeling that included 3.8 percent curtailment and the project remained cost-effective. Finally, the Department estimated the impact of curtailment of the LCOE. The impact was estimated by not changing the overall revenue requirements but reducing the energy output by the curtailment percentage and adding to the cost the corresponding lost production tax credits. The degree of curtailment was based upon Xcel's statement in the Supplement that "we expect curtailments to range from as low as two percent to as high as six percent ... we expect that over the lifetime of these wind projects the overall average curtailment rate will be approximately four percent." The results of the curtailment adjustment for the PPAs are:

- Clean Energy [TRADE SECRET DATA HAS BEEN EXCISED] without curtailment and [TRADE SECRET DATA HAS BEEN EXCISED] with 4 percent annual curtailment.
- Crowned Ridge PPA [TRADE SECRET DATA HAS BEEN EXCISED] without curtailment and [TRADE SECRET DATA HAS BEEN EXCISED] with 6 percent annual curtailment through 2023 and 4 percent thereafter.

As in past proceedings, the Department recommends that Xcel report in its monthly fuel clause filings and annual automatic adjustment filings (AAA) the amount of any curtailment payments. The Department reviews those filings and reserves the right to make recommendations regarding the appropriateness of any curtailment payment beyond a reasonable level.

B. TERMS OF THE BOTS

1. Protection of Ratepayers from Risks

a) Financial Risks

For the New Lake Benton and Crowned Ridge BOTs, the Department notes that the operational risk lies with Xcel as the Company takes over the projects upon completion of construction. During the operational phase, the New Lake Benton and Crowned Ridge BOTs are no different than any other Company-owned power plant. Thus, the risks associated with BOT contracts occur during the project development and construction phases.

The main financial risks of the BOTs that may negatively impact Xcel's ratepayers are the same risks as for PPAs:

- a seller default and termination of the BOT before delivery of the completed project, and
- entitlement by a lender or other party, as a result of the seller's failure to pay debt, to take over the project and terminate the BOT.

However, unlike PPAs the risks related to BOTs are limited to the period prior to operation. Again, under these events, Xcel may be forced to find more costly replacement power when the BOT is terminated. Further, under both events, the contract may be terminated and jeopardize Xcel's compliance with various statutory requirements and Commission orders.

Regarding these issues, the Department notes that Article 10 of each BOT describes the Termination Payment required if the BOT is terminated. The Termination Payment will be [TRADE SECRET DATA HAS BEEN EXCISED] Article 10 of each BOT also describes a payment for delay damages if a wind turbine is not completed by a required date. The delay damages payment will be [TRADE SECRET DATA HAS BEEN EXCISED]

After reviewing these features in the BOTs, the Department concludes that Xcel's ratepayers would be reasonably protected from the financial risks.

b) Operational Risks

For the New Lake Benton and Crowned Ridge BOTs, the Department notes that the risks shift to Xcel upon transfer of the projects. Xcel would then be responsible for all operation and maintenance activities and costs after the projects are transferred and would be compensated for the risks through its overall rate of return.³¹ However, under Xcel's proposed structure to recover the costs of the projects, throughout the collective lives of the projects, Xcel would need to account for all costs of these projects separately from all other projects. Xcel would also need to maintain full documentation as to how any joint costs, overhead, etc. are allocated to these projects. Such accounting would be subject to audit. Thus, the main risks associated with the BOTs are limited to the development and construction phases while the accounting risks and responsibilities would be ongoing throughout the lives of the projects.

2. Curtailment Provisions

Since the BOTs do not cover the operational period, there are no contract terms related to curtailment in the BOTs. However, as noted above in the discussion of the PPAs, the Department has consistently reviewed proposed wind projects for curtailment risk and Xcel conducted Strategist modeling that included 3.8 percent curtailment and concluded that the project remained cost-effective. Also, the Department estimated the impact of curtailment of Xcel-owned projects on the LCOE.

For New Lake Benton Xcel expects that "over the lifetime of the project, curtailment will be consistent with our overall curtailment average of approximately four percent." As noted above, for Crowned Ridge Xcel expects that:

...over the lifetime of the project, curtailment will be consistent with our overall curtailment average of approximately four percent. However, during the early years of production (2020 through 2023) Crowned Ridge is likely to experience higher curtailment while necessary transmission upgrades are completed.

The results of the curtailment adjustment for the BOTs are:

- New Lake Benton [TRADE SECRET DATA HAS BEEN EXCISED] without curtailment and [TRADE SECRET DATA HAS BEEN EXCISED] with 4 percent annual curtailment.
- Crowned Ridge BOT [TRADE SECRET DATA HAS BEEN EXCISED] without curtailment and [TRADE SECRET DATA HAS BEEN EXCISED] with 6 percent annual curtailment through 2023 and 4 percent thereafter.

³¹ Operation and maintenance costs will be recovered in Xcel's rates. The risk is that the recovery will be insufficient for some reason.

C. *TERMS OF THE PSAS*

1. *Protection of Ratepayers from Risks*

a) *Financial Risks*

For the BSI, BSII, Foxtail, and Freeborn PSAs, the Department notes that the risks shift to Xcel prior to construction of the projects. During the construction and operational phases, the PSAs are no different than any other Company-owned power plant. Thus, the risks associated with PSA contracts occur during the project development phase.

However, given the current constraints in the transmission system, Xcel negotiated a clause in the PSA contracts that would help protect ratepayers from excessive costs of interconnecting with the transmission system. Specifically,

... for those projects without an executed interconnection agreement, we have negotiated contractual rights in our site Purchase and Sale Agreements that give us the ability to terminate the contracts if network upgrade costs exceed a predetermined amount in each contract, making the project unviable.³²

The main financial risks of the PSAs that may have negative impacts on Xcel's ratepayers are the same as for PPAs and BOTs:

- a seller default and termination of the PSA before delivery of the development work, and
- entitlement by a lender or other party, as a result of the seller's failure to pay debt, to take over the project and terminate the PSA.

Under these events, Xcel may be forced to find more costly replacement power when the PSA is terminated. Further, under both events, the projects may be terminated and jeopardize Xcel's compliance with various statutory requirements and Commission Orders.

Given the early stages of the work being performed, the relatively small financial amounts in question, and the PSAs reaching their end relatively soon, the Department concludes that Xcel's ratepayers are exposed to minimal financial risks via the PSAs.

b) *Operational Risks*

For the BSI, BSII, Foxtail, and Freeborn PSAs, the Department notes that the risks shifts to Xcel at the start of construction. Thus, Xcel will be responsible for all operation and

³² See page 27 of the Supplement.

maintenance risks and associated costs and will be compensated for that risk through its overall rate of return.³³

As with BOTs, under Xcel's proposed cost recovery, Xcel will need to maintain separate accounts for these projects throughout their collective life. Xcel would need to account for all costs of these projects separately from all other projects. Xcel would also need to maintain full documentation as to how any joint costs, overhead, etc. are allocated to these projects. Such accounting will be subject to audit.

2. *Curtailment Provisions*

Since the PSAs do not cover the operational period, there are no terms related to curtailment in the PSAs. However, as noted above in the discussion of the PPAs and BOTs, the Department has consistently reviewed proposed wind projects for curtailment risk and Xcel conducted Strategist modeling that included 3.8 percent curtailment and concluded that the project remained cost-effective. Also, the Department estimated the impact of curtailment on the LCOE.

In the Supplement Xcel identified the projects vulnerable to higher levels of curtailment. Regarding BSI, Xcel states:

We expect that over the lifetime of the project, curtailment will be consistent with the overall average curtailment level of approximately 4 percent. However, during the early years of production (2020 through 2023) Blazing Star I is likely to experience higher curtailment while necessary transmission upgrades are completed.

BSII has the same vulnerability to higher curtailment before 2023. Regarding both Foxtail and Freeborn Xcel states "We expect that, over the lifetime of the project, curtailment will be consistent with the overall Company curtailment average of approximately four percent."

The results of the Department's curtailment adjustment to the LCOE for the PSAs are:

- BSI [TRADE SECRET DATA HAS BEEN EXCISED] without curtailment and [TRADE SECRET DATA HAS BEEN EXCISED] with 6 percent annual curtailment through 2023 and 4 percent thereafter.
- BSII [TRADE SECRET DATA HAS BEEN EXCISED] without curtailment and [TRADE SECRET DATA HAS BEEN EXCISED] with 6 percent annual curtailment through 2023 and 4 percent thereafter.
- Foxtail [TRADE SECRET DATA HAS BEEN EXCISED] without curtailment and [TRADE SECRET DATA HAS BEEN EXCISED] with 4 percent annual curtailment.
- Freeborn [TRADE SECRET DATA HAS BEEN EXCISED] without curtailment and [TRADE SECRET DATA HAS BEEN EXCISED] with 4 percent annual curtailment.

³³ Actual operation and maintenance costs will be recovered in Xcel's rates. The risk is that the recovery will be insufficient for some reason.

V. COST RECOVERY ISSUES

A. RES RIDER

The Petition indicated that the Company would make a separate cost recovery filing at a later date. Similarly, in the Supplement the Company did not make a direct request regarding cost recovery. However, the Company did request that the Commission “confirm the 1,550 MW proposed wind portfolio is a reasonable and prudent way to continue to meet our obligations under Minnesota’s Renewable Energy Standard.” This finding would enable Xcel to “return to the Commission to seek recovery of these costs through the annual RES rider process as opposed to our next rate case which will not be filed until 2019, at the earliest, if the settlement is approved.”

Minnesota Statutes § 216B.1645 Subd. 2a (a) states that Xcel:

...may petition the Commission to approve a rate schedule that provides for the automatic adjustment of charges to recover prudently incurred investments, expenses, or costs associated with facilities constructed, owned, or operated by a utility to satisfy the requirements of section 216B.1691, provided those facilities were previously approved by the Commission under section 216B.2422 or 216B.243, or were determined by the commission to be reasonable and prudent under section 216B.243, subdivision 9.

In this case the proposed facilities would be selected via a process approved by the Commission under Minnesota Statutes § 216B.2422 subd. 5 (a) which states that “a utility may select resources to meet its projected energy demand through a bidding process approved or established by the Commission.”³⁴ Also, note that analysis of Xcel’s compliance with the RES is on-going and will be completed in reply comments.

B. AGGREGATE SYMMETRICAL COST CAP

In the Petition Xcel proposed to limit the Company’s recovery to an aggregate capital cost cap (including AFUDC) for the entire portfolio of self-build projects (BSI, BSII, Foxtail, and Freeborn, the PSAs above). In the Supplement Xcel reiterated the Company’s proposal to:

...subject our cost recovery to an aggregate capital cap (including allowance for funds used during construction (AFUDC)) of [TRADE SECRET DATA HAS BEEN EXCISED] for all of the four self-build projects. If we exceed these costs in our execution of the projects, the Company will bear those costs.

³⁴ Note that the Commission imposed limits on the process used in this proceeding: “The Commission will therefore approve the bidding process described by Xcel for the limited purpose of acquiring wind and solar resources in the 2016–2021 timeframe.”

Symmetrically, if we are able to achieve any cost-savings, we would retain those savings.

Xcel indicates that this is similar to the approach the Commission directed in the Commission's April 16, 2015 *Order Denying Petitions for Reconsideration, Reconsidering Prior Order, and Revising Price Term* in Docket. No. E002/CN-12-1240 where the Commission stated:

Xcel's final bid proposed to recover the full amount of its bid, regardless of how much Xcel might ultimately spend to implement its Black Dog Unit 6 proposal. Regarding finance costs, Xcel proposed to recover only the amount required to finance the actual cost to build Black Dog Unit 6 – but under no circumstances more than the amount to finance its bid costs.

Here Xcel's bid is competing against other bids to meet the identified need. If the final cost to ratepayers were not considered to be firm or known when the Commission is evaluating bids, ratepayers would be at risk to incur some amount of unknown costs. Further, if one bidder were allowed to pass extra costs onto ratepayers while other bidders were not, the bidding process would not be fair to all bidders. Finally, the Department intends to recommend that the Commission hold each bidder to the prices used to evaluate each bid for purposes of cost recovery from Xcel retail ratepayers. Xcel's proposal not to adjust the cost of the Company's bid—the symmetrical cost cap—following Commission selection of Xcel's proposal would be fair to other bidders and to ratepayers.

The only remaining question is whether such a cost cap should be applied to individual projects or to the aggregate of all Company-owned projects, as proposed by Xcel. In this case, the Department analyzed the four self-build projects individually to review whether each was reasonable in isolation. If Xcel had proposed each project separately, this approach would have maximized the Commission's options in deciding how to treat the Company-owned projects. For example, the Commission could have chosen to approve a subset of the Company-owned projects. However, each bidder, including Xcel, should be allowed to propose any structure(s) that meets the terms of the RFP. By proposing an aggregate cost cap, Xcel essentially requested that the Commission treat the four projects as a single proposal. This approach is similar to how the Crowned Ridge proposal, which actually is three separate projects in MISO's transmission study process, was instead presented to Xcel as two projects.

Xcel's proposal to treat all four projects as one takes the risk that a failure of one of the four components of the proposed project might result in all four components being rejected. Nonetheless, to respect the structure of Xcel's proposal to treat the four projects as one, the Department concludes that Xcel's proposal to apply the capital cost cap to the four projects in aggregate is reasonable.

C. *RESOURCE ACQUISITION AND RATE RECOVERY*

The Department notes that differences can exist between the costs used in the resource acquisition process to determine the annual revenue requirements and resulting LCOE calculations, and the costs used in a rate rider or rate case to determine the annual revenue requirements to be recovered from ratepayers. In this proceeding the Department is attempting to better align the two processes. The Department discusses several of these cost differences below.

1. *Prorated Accumulated Deferred Income Tax Liabilities (ADITL)*

Accumulated Deferred Income Tax Liabilities (ADITL) result from the difference between straight-line depreciation, which is required under Minnesota Rule 7825.0800 for ratemaking purposes, and accelerated depreciation, which is allowed for tax purposes. Since ratepayers pay income taxes based on straight-line depreciation and the utility pays income taxes based on accelerated depreciation, this timing difference is reflected in ADIT balances. Moreover, since ratepayers are essentially prepaying income taxes before the taxes are due to the Internal Revenue Service (IRS), ratepayers have traditionally received an ADIT credit, which reduces rate base, to compensate ratepayers for the prepayment of income taxes. This overall approach is generally referred to as deferred tax accounting.

Minnesota utilities, including Xcel, have recently argued in riders and rate cases that the Internal Revenue Service (IRS) requires the proration of ADITL balances for ratemaking purposes that use forecasted test periods. The proration of ADITL balances generally results in lower ADITL balances for ratemaking purposes, which increases rate base and increases the proposed annual revenue requirements to be recovered from ratepayers in riders and rate cases that use forecasted test periods.

The Department asked Xcel, in Department Information Request No. 4, if the Company used prorated ADIT balances in its revenue requirement and levelized cost calculations. Xcel replied that:

The Company included deferred income tax expense and related accumulated deferred income tax liability in calculating revenue requirements for each project. A proration adjustment was not applied to the ADIT calculation in Attachment C of the Petition. Included as Attachment A of this IR response are levelized cost calculations that include proration of the ADIT for each proposed project. As shown in Attachment A, the inclusion of a proration adjustment does not materially impact the levelized costs. The Company believes that a proration of ADIT is appropriately included in cost recovery calculations, but acknowledges that this is currently a disputed issue in the Company's [transmission cost recovery] TCR Rider filing and potential other cost recovery dockets. With that said, levelized costs shown in Attachment A reflect the Company's position regarding the proration of ADIT. To ensure bids received in response to the RFP are

treated the same as the Company proposed projects, we will provide both a levelized cost calculation that includes proration of ADIT and a levelized cost calculation that does not include proration for any BOT projects selected in RFP process. We expect the conclusions regarding the relative cost-effectiveness of evaluated projects to be the same under either method.

Regarding the specific calculation of ADIT, we calculated book vs. tax depreciation timing differences using straight line, remaining life, full month convention for book purposes and applied the 5-year MACRS (Modified Accelerated Cost Recovery System) half-year convention and applicable bonus depreciation percentage for tax depreciation. We applied the applicable composite federal and state tax rate to the timing differences to generate the deferred income tax expense and related ADIT liability. The deferred income tax expense was included as a separate item within the revenue requirements and the ADIT liability was deducted from rate base for purposes of calculating the return.

The Department reviewed Xcel's Attachment A to Department Information Request No. 4. In addition, the Department reviewed Xcel's detailed prorated ADIT calculations found in the Attachments to Department Information Request No. 10, and the Company's March 16, 2017 Supplemental Filing, Page 20. Based on our review, the Department notes that prorated ADIT balances do not have a material effect on the levelized cost calculations because once the ADIT balances begin to reverse in future years, the effect of proration on ADIT balances provides a benefit to ratepayers (reduction in rate base).³⁵ As a result, the Department concludes that Xcel appropriately reflected the effects of prorated ADIT in its levelized cost calculations.

2. Production Tax Credits (PTCs) and Accumulated Deferred Tax Assets

Production tax credits (PTCs) are tax credits authorized by the IRS Code. Owners of PTC-eligible wind turbines can claim a credit against their taxable income based on the amount of energy produced from these turbines. PTCs are eligible to be claimed for 10 years after energy production begins.

The Department asked Xcel, in Department Information Request No. 3, how the PTCs associated with the wind farms would flow through to ratepayers. Xcel replied that:

The Production Tax Credits (PTCs) flow through to the ratepayers in each of the years in which the credits are generated from the projects. Each project will generate PTCs for a period of 10 years from their in-service date and pass through directly to the customer each year.

³⁵ For example, see Xcel's response to DOC Information Request No. 10, Attachment G, tab "Regulated Model," Line 155 which shows the effects of prorated ADIT on the Foxtail wind farm over time.

Xcel also stated the following regarding PTCs in its Response to Department Information Request No. 4:

It should also be noted that the Company expects to [TRADE
SECRET DATA HAS BEEN EXCISED]

The Department notes that Xcel's proposal would use a form of deferred tax accounting that is consistent with the Company's past ratemaking practice and Generally Accepted Accounting Principles (GAAP). The Department approves of this approach.

The immediate flow through of the value of PTCs to ratepayers is a significant factor in the LCOE of projects. To illustrate the PTC impact on LCOE the Department started with Attachment A to Xcel's response to Department Information Request No. 10, which shows that the LCOE for BSI is [TRADE SECRET DATA HAS BEEN EXCISED] The Department then eliminated the value of PTCs in the first two or three years of operation and added the PTCs to later years to reflect a two-year and three-year delay in realizing the value of PTCs. The resulting LCOE for BSI is [TRADE SECRET DATA HAS BEEN EXCISED] Thus, delays in realizing PTC benefits could impact project rankings.

3. *Net Operating Losses and Accumulated Deferred Income Tax Assets (ADITA)*

The Department notes that Xcel claimed to be in a net operating loss carryforward position in their pending rate case (Docket No. E002/GR-15-826). However, the Department notes that Xcel did not discuss the impacts that these wind farms would have on Company's net operating losses and resulting deferred tax assets in their LCOE calculations in the Petition.

The Department discussed this issue with Company personnel. According to Xcel, the Company included the impacts these wind farms have on the Company's net operating losses and resulting deferred tax assets in its LCOE calculations. For example, in the spreadsheets provided in the Company's Response to Information Request No. 10, under the tab "Regulated Model," Lines 129-132, Xcel shows the impact that these wind farms have on the Company's net operating losses and resulting deferred tax assets.

The Department reviewed the Company's calculations and resulting deferred tax assets included in the LCOE calculations. Based on our review, the Department concludes that Xcel appropriately reflected the wind farms' net operating losses and resulting deferred tax assets in the LCOE calculations.

4. *North Dakota Investment Tax Credits (NDITC)*

The Department asked Xcel, in DOC Information Request No. 2, if there were any North Dakota Investment Tax Credits (NDITC) associated with the wind farms. If so, the Department asked Xcel to explain how these credits would flow through to ratepayers. Xcel replied that:

Wind projects are only eligible for NDITC if construction on them began prior to January 1, 2015 and are completed by January 1, 2017. Consequently, Foxtail will not qualify.

Since Foxtail is the only BOT or PSA wind farm located in North Dakota, the Department concludes that none of the wind farms will have any related NDITCs.

VI. DEPARTMENT ANALYSIS OF TOPICS OPEN FOR COMMENT

The Commission's Notice indicated that the following topics are open for comments:

- Should the Commission approve Xcel's proposed 1,550 MW of wind resource additions to the NSP system?
- Should the Commission authorize an aggregate, symmetrical cost cap for the four self-build project portfolio?
- Should the Commission determine that Xcel's proposal to acquire 1,550 MW of wind resources is a reasonable and prudent approach to meeting its obligations under Minnesota's RES pursuant to Minn. Stat. 216B.1645, subd. 1?
- Is the company's proposal to deal with the jurisdictional cost allocation issues and cost recovery of these projects reasonable? If not, what are reasonable options?
- Are there any other any other related issues or concerns?
- Is the acquisition of the Lake Benton II Project consistent with the public interest and should the Commission approve the project pursuant to Minn. Stat. § 216B.50?
- Should the Commission grant a variance for the Lake Benton II Project from the filing requirements provided in Minn. Rule 7825.1800 (B)?

For clarity, below are the Comments of the Department regarding the issues listed in the Notice.

A. *APPROVE 1,550 MW OF WIND ADDITIONS?*

The Commission's Notice indicated that the following topic is open for comments:

Should the Commission approve Xcel's proposed 1,550 MW of wind resource additions to the NSP system?

Based upon the need, cost, impact, and risk analyses the Department recommends that the Commission approve Xcel's proposed 1,550 MW of wind resource additions.

B. AGGREGATE SYMMETRICAL COST CAP

The Commission's Notice indicated that the following topic is open for comments:

Should the Commission authorize an aggregate, symmetrical cost cap for the four self-build project portfolio?

As discussed above, Xcel's proposal not to adjust the cost of the Company's bid—the symmetrical cost cap—following Commission selection of Xcel's proposal would be fair to other bidders and to ratepayers.

In addition, while the Department analyzed the four self-build project components individually to review whether each was reasonable in isolation, each bidder should be allowed to propose any structure(s) that meets the terms of the RFP. Therefore, the Department concludes that Xcel's proposal to consider the four components as one project and apply the capital cost cap to the one project with four components in aggregate is reasonable, with the understanding that Xcel bears the risk that the entire project may be rejected if any of the four components is rejected.

C. MEETING THE RES

The Commission's Notice indicated that the following topic is open for comments:

Should the Commission determine that Xcel's proposal to acquire 1,550 MW of wind resources is a reasonable and prudent approach to meeting its obligations under Minnesota's RES pursuant to Minn. Stat. 216B.1645, subd. 1?

As discussed above, the Department's analysis of the RES Statute's overall 30 percent requirement and 24 percent wind sub-requirement is on-going and will be completed in reply comments

D. JURISDICTIONAL COST ALLOCATION ISSUES

The Commission's Notice indicated that the following topic is open for comments:

Is the company's proposal to deal with the jurisdictional cost allocation issues and cost recovery of these projects reasonable? If not, what are reasonable options?

Regarding jurisdictional issues, the supplement at page 5 states that "Based on the overall benefits provided by our wind portfolio, we believe the Commission can proceed with their consideration of our proposed new wind generation in this docket as it would with any other

resource and any jurisdictional allocation issues can be addressed later in the RTF docket [E002/M-16-223].” The Department agrees with Xcel that jurisdictional allocation issues can best be addressed at a later date in the RTF docket, with the understanding that Xcel bears the risks of any unfavorable decisions. Therefore, the Department concludes that no Commission action is necessary at this time.

E. OTHER RELATED ISSUES OR CONCERNS

The Commission’s Notice indicated that the following topic is open for comments:

Are there any other related issues or concerns?

One of the concerns expressed by the Department regarding the quantity of wind recommended in Xcel’s most recent resource plan (Docket No. E002/RP-15-21) was the potential for a spike in rates due to the addition of a large quantity of wind in a short period. The revenue requirement impacts of Xcel’s proposed projects are illustrated below in Chart 2, which shows two items. One is the annual revenue requirements estimated by Xcel in the Supplement’s Attachment M (in nominal dollars) and the other is the annual revenue requirements translated into real (2016) dollars assuming a two percent annual inflation rate.

Considering either the nominal or real dollar stream of revenue requirements, Chart 2 forecasts [TRADE SECRET DATA HAS BEEN EXCISED] Of the eight proposed projects (4 self-builds, 2 BOTs, and 2 PPAs) all but one [TRADE SECRET DATA HAS BEEN EXCISED] The Department has no recommendations regarding this intergenerational issue but reports the information so that the Commission is aware of the consequences of the proposed projects.

Chart 2: Portfolio Revenue Requirements

[TRADE SECRET DATA HAS BEEN EXCISED]

A. IS NEW LAKE BENTON IN THE PUBLIC INTEREST?

The Commission’s Notice indicated that the following topic is open for comments:

Is the acquisition of the Lake Benton II Project consistent with the public interest and should the Commission approve the project pursuant to Minn. Stat. § 216B.50?

As noted above, at a high level, the levelized cost for New Lake Benton is [TRADE SECRET DATA HAS BEEN EXCISED] compared to an estimated levelized cost for the existing PPA with subsequent generic replacement to be [TRADE SECRET DATA HAS BEEN EXCISED], assuming both alternatives produce the same amount of energy. The value of repowering Lake Benton II at this time depends upon a comparison of the price of energy from the New Lake Benton bid to the price of wind energy from the existing Lake Benton II facility combined with the price available to replace the existing Lake Benton facility in the future

(when the PPA expires), which is not known. Therefore, the Department calculated that if the price of energy from a replacement PPA does not exceed a cost starting at [TRADE SECRET DATA HAS BEEN EXCISED] then the alternative of allowing the Lake Benton II PPA to continue to its expiration date and then replacing it would have the same overall LCOE as New Lake Benton. Thus, the Department concludes that New Lake Benton is preferred to continuing with the existing PPA.

B. VARIANCE TO MINNESOTA RULES 7825.1800 (B)

The Commission's Notice indicated that the following topic is open for comments:

Should the Commission grant a variance for the Lake Benton II Project from the filing requirements provided in Minn. Rule 7825.1800 (B)?

As discussed above, the Department agrees with Xcel that the information outlined under Minnesota Rules 7825.1400 (A) to (J) is not relevant to the current filing. Therefore, the Department recommends that the Commission grant a variance from the filing requirements provided in Minn. Rule 7825.1800 (B) to Xcel for the New Lake Benton project. Note that the Department also requests reply comments from Xcel that have the potential to expand the variance beyond New Lake Benton.

VII. DEPARTMENT RECOMMENDATION

The Department recommends that, in reply comments Xcel discuss:

- the need for a variance regarding reporting the information outlined under Minnesota Rules 7825.1400 (A) to (J) or provide the required information; and
- clarification of the difference in the following provisions in the contracts regarding (non-) compensation for curtailments:
 - combination of Provisions 8.3 A and 8.3 B.1(a) and
 - Provision 8.3 B.2.

The Department will provide its final recommendations after reviewing Xcel's reply comments.

/lt

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
Public Comments**

Docket No. E002/M-16-777

Dated this 1st day of May 2017

/s/Sharon Ferguson

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George	Crocker	gwillc@nawo.org	North American Water Office	PO Box 174 Lake Elmo, MN 55042	Electronic Service	No	OFF_SL_16-777_M-16-777
Carl	Cronin	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	Yes	OFF_SL_16-777_M-16-777
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Patricia	DeBleekere	tricia.debleeckere@state.mn.us	Public Utilities Commission	Suite 350 121 Seventh Place East St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_16-777_M-16-777
James	Denniston	james.r.denniston@xcelenergy.com	Xcel Energy Services, Inc.	414 Nicollet Mall, Fifth Floor Minneapolis, MN 55401	Electronic Service	Yes	OFF_SL_16-777_M-16-777
Elizabeth	Dickinson	eadickinson@mindspring.com	Saint Paul Mayoral Candidate	384 Hall Saint Paul, MN 55107	Electronic Service	No	OFF_SL_16-777_M-16-777
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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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Kristen	Eide Tollefson	N/A	R-CURE	28477 N Lake Ave Frontenac, MN 55026-1044	Paper Service	No	OFF_SL_16-777_M-16-777
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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
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