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May 15, 2017

—Via Electronic Filing—

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

RE: REPLY COMMENTS

WIND GENERATION ACQUISITION DOCKET NO. E002/M-16-777

Dear Mr. Wolf:

Northern States Power Company, doing business as Xcel Energy, submits the enclosed Reply Comments to the Minnesota Public Utilities Commission in the above-referenced docket.

Portions of the enclosed document are marked either partially or fully "Protected Data" as they contain information the Company considers to be trade secret data as defined by Minn. Stat. §13.37(1)(b). This data includes confidential pricing and other contract terms, as well as bid evaluation criteria. This information has independent economic value from not being generally known to, and not being readily ascertainable by, other parties who could obtain economic value from its disclosure or use. We have marked additional information as "Protected Data" because the knowledge of such information in conjunction with public information in our Reply Comments or previous filings in his docket could adversely impact future contract negotiations, potentially increasing costs for these services for our customers. For these reasons, the Company maintains this information as a trade secret.

We have electronically filed this document with the Commission, and copies have been served on the parties on the attached service list. We note that due to volume, for those parties electing to receive paper service, all attachments are provided on disc and for those parties receiving the trade secret version, Attachment A will be provided on disc.

Please contact me at <u>aakash.chandarana@xcelenergy.com</u> or (612) 215-4663 if you have any questions regarding this filing.

Sincerely,

/s/

AAKASH H. CHANDARANA REGIONAL VICE PRESIDENT RATES AND REGULATORY AFFAIRS

Enclosures c: Service Lists

# STATE OF MINNESOTA BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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

IN THE MATTER OF THE PETITION OF XCEL ENERGY FOR APPROVAL OF THE ACQUISITION OF WIND GENERATION FROM THE COMPANY'S 2016-2030 INTEGRATED RESOURCE PLAN DOCKET NO. E002/M-16-777

**REPLY COMMENTS** 

#### INTRODUCTION

Northern States Power Company, doing business as Xcel Energy, submits to the Minnesota Public Utilities Commission this Reply in response to Comments received from the Minnesota Department of Commerce (the Department), the Clean Energy Organizations (CEOs), the Office of Attorney General (OAG), Minnesota Chamber of Commerce (the Chamber), the Laborers District Council of Minnesota and North Dakota (Laborers Union), and Geronimo Energy on May 1, 2017 in the abovementioned docket.

We appreciate the support our proposed wind acquisition effort has generated and are excited by the opportunity to offer customers such significant benefits. Below we provide our reply.

## **REPLY COMMENTS**

# A. The Department

We appreciate the Department's support for our wind resource acquisitions and recommendation that the Commission approve our 1,550 MW wind portfolio. Though the Department provided a robust and thorough review of our entire filing, we call attention to the Department's following notable conclusions or comments:

- The Company's key modeling inputs have not changed in a significant manner from the 2015 Integrated Resource Plan (Docket No. E002/RP-15-21) and thus, the need for wind capacity has not changed;
- The Company's process was consistent and in compliance with IRP order;
- The Request for Proposal (RFP) process was reasonable;
- The Department agrees with the independent auditor that the Company selected appropriate bids for the short-list;
- The mix of Purchased Power Agreements (PPAs) and Company-owned projects is reasonable;
- The Company's self-build project proposal was complete;
- The Levelized Cost of Energy (LCOE) calculations for the self-build projects are reasonable;
- All four of the self-build projects should be considered as being similar in cost to the projects placed on the RFP short-list;
- There is no evidence of systematic bias in capacity factor estimates for either previously approved projects or the currently proposed projects;
- Xcel 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;
- If Xcel has accurately forecasted curtailments, along with project costs and capacity factors, it appears curtailment would not create an impact that would lead to a need to consider rejecting one or more of the proposed projects;
- 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; and
- To respect the structure of Xcel's proposal to treat the four self-build projects as one, the Department concludes Xcel's proposal to apply the capital cost cap to the four projects in aggregate is reasonable.

Below we address specific questions or issues the Department raised.

1. Application of Minn. Stat. § 216B.50 and Variance from Minn. R. 7825.1400

Minnesota Statute § 216B.50 governs the transfer of "any plant as an operating unit or system in this state for a total consideration in excess of\$100,000." The Department concluded in its Comments that this statute applies to any resource that affects the operating system in Minnesota. Based upon this analysis, the Department concludes that, in this docket, the statute applies to the agreements governing Blazing Star I,

Blazing Star II, Foxtail, Freeborn, Crowned Ridge and Lake Benton. The Department goes on to say that the information necessary for approval under Minn. Stat. § 216B.50 is provided within the docket, but that Xcel Energy, in its Reply, should provide the information required by Minn. R. 7825.1400, items A to J, or request a variance.

To the extent the Commission agrees with the Department's analysis, consistent with our response to Department IR No. 13 and our April 3, 2017 letter filed in this docket, we expand our request for a variance from the requirements outlined in Minn. R. 7825.1400 (A)-(J) for the Lake Benton Project to also include Blazing Star I, Blazing Star II, Foxtail, Freeborn, and Crowned Ridge.

The Commission has previously granted a variance from these requirements in connection with proposed property acquisitions. There, the Commission found that Minn. R. 7825.1400 is applicable to capital structure filings and, therefore, the information identified is not relevant to petitions to acquire property. The Company respectfully requests a similar variance in this case pursuant to Minn. R. 7829.3200. The information required by Minn. R. 7825.1400 is not relevant to the current filing; compliance with the rule would impose an excessive burden on the Company; a variance is not in conflict with any statutory provisions; and a variance is consistent with the public interest.

The Company notes that the purchase price and terms for payment, including the description of the property, costs, and terms are outlined in our March 15, 2017 filing and accompanying attachments. We also confirm that the Company does not intend to issue, sell, or transfer any stock in connection with these projects. And, as discussed in our October and March filings, these projects will help the Company meet or exceed our statutory compliance obligations, achieve environmental benefits, and save money for customers. Accordingly, we believe our proposal is in the public interest.

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<sup>&</sup>lt;sup>1</sup> We note here that the final sentence of Minn. Stat. 216B.50 states that "This section does not apply to the purchase of property to replace or add to the plant of the public utility by construction." We believe this sentence may lead the Commission to conclude that Minn. Stat. 216B.50 does not apply to the Company's Self-Build projects (*i.e.*, the Freeborn, Foxtail, Blazing Star I, and Blazing Star II projects).

<sup>&</sup>lt;sup>2</sup> In the Matter of Northern States Power Company and ITC Midwest LLC for Approval of a Transfer of Transmission Assets and Route Permit, Docket No. E002/PA-10-685, Order Approving Sale AS Conditioned, Granting Variance and Requiring Filing (December 28, 2010).

<sup>&</sup>lt;sup>3</sup> In the Matter of Xcel Energy's Petition for Approval of a Transfer and Exchange of Transmission Assets with Great River Energy and Member Cooperatives, Docket No. E002/PA-06-932, Order (October 16, 2006).

# 2. Policy Consideration for Smaller Proposals

The Department recommends that to resolve issues in multiple dockets, the Commission should 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. The Comments go on to suggest that in addition to the criteria used in this docket, Xcel should also be required to use two more criteria (1) that the repowered project has a lower overall LCOE than the existing PPA—supplemented by a generic replacement if necessary; and (2) that the repowered project has an LCOE that is equal to or less than the highest LCOE approved by the Commission in this proceeding.

The Company does not oppose this proposal and can see the merits in pursuing such a process. However, we also note that in some circumstances smaller projects have additional merits beyond pricing that the Commission may want to consider. In this way, an RFP for smaller projects based solely on pricing may lose sight of additional benefits that are not accounted for in calculations of LCOE alone.

## 3. Contractual Provision Clarifications Regarding Curtailment

In its review of our PPAs, the Department pointed out contractual compensation clauses and requested clarification regarding the differences of those provisions and to address specifically whether, for example, curtailments due to insufficient transmission outlet from Midcontinent Independent System Operator's (MISO) Zone 1 would be compensable or non-compensable.

To clarify, section 8.3(A) of the PPAs gives the Company, or Transmission Authority, the right to curtail the delivery of renewable energy from the facility for any reason and in their sole discretion regardless of whether or not such a curtailment would be considered compensable or non-compensable.

The intent of the language in section 8.3(B)(1)(a) is to specify that if the Company or Transmission Authority curtails deliveries of renewable energy for any reason that would not constitute a Non-Compensable Curtailment, as defined in Section 8.3(B)(2) of the PPAs, such a curtailment would be compensable under the agreements.

Section 8.3(B)(2) of the PPAs further provides that any curtailment of deliveries of renewable energy, other than a compensable curtailment by the Company, would be considered non-compensable. This section of the PPAs also includes a non-exhaustive list of examples of Non-Compensable Curtailment.

Next, the Department asked whether curtailments due to insufficient transmission outlet from MISO's Zone 1 would be compensable or not. Because the outlet from MISO's Zone 1 is beyond the point of delivery for both Clean Energy #1 and Crowned Ridge, such curtailments of renewable energy would be considered compensable unless the Transmission Authority were to declare an Emergency Condition or Force Majeure, or otherwise restrict or reduce the maximum permissible output in connection with the facility's Interconnection Agreement(s).

## 4. Rate Impact

The Department also notes the potential for an increase in rates in 2030 and 2031 due to the expiration of the Production Tax Credits. The Department does not make any specific recommendations regarding this issue, but rather sought to bring it to the Commission's attention.

We agree with the Department's analysis regarding the annual change in the revenue requirement of the proposed portfolio. The changes in the revenue requirement by year are typical for the recovery of wind project costs under traditional ratemaking. The decline in the annual revenue requirements in the early years is largely driven by the reduction in rate base due to accumulated annual depreciation. Annual revenue requirements increase following the expiration of the PTC as noted by the Department. Further details regarding the annual revenue requirements for each project were provided in Attachment M of the initial filing and in response to Department Information Request No. 10.

We also note that our Supplement included estimates of the annual cost of the projects net of the expected savings in Figure 4, which we reproduce below:

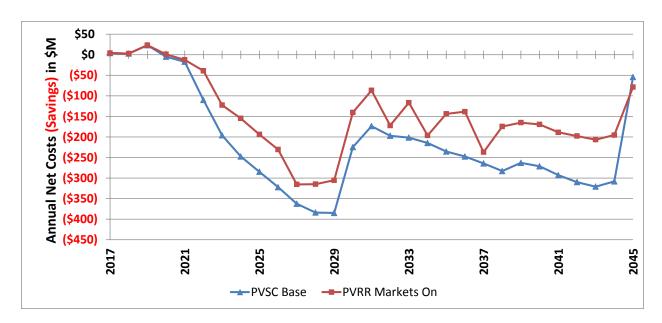


Figure 4: Annual Costs (Savings) Compared to Reference Case

Figure 4 shows that, while the savings are reduced in 2030 and 2031 due the expiration of the PTC, we still expect customers to see savings from the additions of the wind beginning in 2021 and continuing through the life of the projects, including both 2030 and 2031.

# Reporting

The Department recommended that the Company report in its monthly fuel clause filings and annual automatic adjustment filings (AAA) the amount of any curtailment payments. Consistent with current practice, we confirm we will continue to report the amount of any curtailment payments in our monthly fuel clause filings and AAA filings.

The Department also noted that throughout the collective lives of the self-build and Build-Own-Transfer (BOT) projects, the Company would need to account for all costs of these projects separately from all other projects and maintain full documentation as to how any joint costs, overhead, etc. are allocated to these projects. We confirm that consistent with our current accounting and tracking processes, these projects will all be tracked separately and their joint costs will be allocated consistent with our approved cost allocation methodology.

## B. CEOs

We appreciate the comments from the Clean Energy Organizations and thank them for their support and recommendation that the Commission approve our 1,550 MW portfolio.

The CEOs encouraged the Commission to consider a finding that Xcel Energy could, at its discretion, petition for approval of additional projects from this RFP. The CEOs also requested additional information on whether there are any additional remaining projects that could be "next in line."

With respect to both of these comments, we note that the Company is not opposed to pursuing additional projects should the Commission be interested in this path. In fact, we have been contacted recently by bidders from the RFP process who still have viable projects and remain interested in doing business with Xcel Energy. Of course, their availability could change at any time since we have not secured any sort of retention agreement or participated in detailed conversations.

The CEOs also request that we notify the Commission if any projects fall through and concurrently provide the Commission with a list of alternative projects that could be pursued in lieu of any canceled project. As discussed in our October and March filings, we committed to filing a project progress report with the Commission in January 2018 that would raise any viability concerns that arise with any of the projects. From that point on, we propose to bring forward any viability concerns on an asneeded basis in this docket so the Commission can continue its oversight. With regard to an alternative project list, this would likely depend on the available projects remaining from our RFP list at that time.

#### C. OAG

The OAG's comments focus solely on cost recovery and recommend that the Commission reject our proposal to have a symmetrical capital cost cap for our self-build portfolio. In support of its recommendation, the OAG points to what it characterizes as (1) a lack of record support for cost recovery in this docket; (2) the inappropriate allocation of risks and benefits between the Company's customers and shareholders; (3) the inappropriateness of fixed price contracts in the regulatory context; and (4) the informational asymmetries between the Company and its regulators.

Below, we summarize the benefits to managing the individual self-build projects as a portfolio, then we summarize our competitive acquisition process along with the

Department's comments on that process as we believe the modified Track 2 process worked well and proved successful at allaying the concerns now raised by the OAG. Next, we address the specific concerns raised by the OAG, along with its attempt to distinguish this docket from the Commission's April 16, 2015 Order, which we cited in our October Petition. Finally, we discuss the OAG's own proposal for a cost recovery mechanism.

## 1. Advantages of Managing Projects as a Portfolio

There are several advantages to managing the four projects as a single portfolio and limiting cost recovery to an aggregate capital cap (including AFUDC). First, we will be able to leverage economies of scale in our contract negotiations with, for example, BOP contractors. Similarly, we expect to realize a number of efficiencies in project planning and execution. Our multi-year project plan, for instance, will allow us to optimize the use of both internal and external resources and also reduce the schedule-related risks typically associated with individual projects. Finally, managing to an aggregate capital cap will allow the Company to spread risk among the four projects. For instance, a construction issue with one project can likely be offset or balanced by efficiencies achieved across the portfolio. Or, as another example, a portfolio approach allows us to manage highly variable transmission costs and balance the risk that a higher than expected interconnection cost at one facility can be offset by a lower than expected interconnection cost at another. As a result, the Company was able to reduce the overall cost of its self-build wind porfolio, which benefits our customers.

# 2. Our Competitive Acquisition Process & the Department's Comments on that Process

Next we discuss the competitive bidding process the Company used to select projects for its Wind Portfolio as we believe this addresses all of the OAG's concerns. In fact, we proposed a modified Track 2 process precisely because it relied on competition to solve for problems such as information asymmetry and risk/benefit allocation by requiring that the Company compete with third-party bidders at the project selection stage without knowing what bids would be returned in the RFP. We further believe the modified Track 2 process worked well and proved successful at allaying the concerns now raised by the OAG, which is further confirmed by the Department's comments in this docket.

As discussed in our March Supplement, our wind acquisition process involved two efforts: (1) an RFP for PPAs and BOT projects; and (2) a Company-built 750 MW Wind Portfolio. To ensure transparency during our acquisition process, we submitted our self-build proposal *in advance* of receiving the incoming RFP bids from developers,

and we committed to firm capital costs for those projects *before* receiving any information in response to our RFP. This sequencing was critical to our competitive process because it required the Company to develop its self-build proposal without the benefit of knowing any information about the bids that would submitted in response to the RFP. Additionally, a conflicts "wall" was established to segregate internal personnel working on the RFP and self-build efforts, and our RFP process was confirmed appropriate by an independent auditor. Once the RFP process was concluded, the conflicts "wall" between the RFP and self-build teams was eliminated, and only then were we able to compare terms and inputs used to evaluate the two sets of projects and arrive at our total Wind Portfolio.

We note that this acquisition process was the subject of significant discussion during our IRP. It was endorsed by the Department during the IRP and approved by the Commission's January 11, 2017 Order. We further note that the Department concluded in this docket that our project evaluation process was reasonable and free from bias. Specifically, the Department reached the following conclusions with respect to the short-list and backup list of projects emerging from the RFP as well as our self-build projects:

- "In summary, the Department agrees with the independent auditor that the Company selected appropriate bids for the shortlist."
- "Based upon the above analysis, the Department concludes that Xcel's selection of bids for the back-up lists was reasonable."
- "The Department concludes that all four self-build projects (BS I, BSII, Foxtail, and Freeborn) should be considered as being similar in cost to the projects placed on the short list."

The Department went on to find that the Company's proposal to use a symmetrical, aggregate capital cap for cost recovery was reasonable and to recommend approval of the Company's 1,550 MW wind portfolio.<sup>4</sup> We believe these conclusions confirm that our process was successful at addressing the concerns raised by the OAG, and we discuss those concerns in greater detail below.

# 3. Response to Concerns Raised by the OAG

As already discussed, the OAG raises a number of concerns with the Company's proposal for a symmetrical capital cap for its self-build Portfolio, including what the

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<sup>&</sup>lt;sup>4</sup> Department Comments at 38.

OAG characterizes as a (1) a lack of record support for cost recovery in this docket; (2) the inappropriate allocation of risks and benefits between the Company's customers and shareholders; (3) the inappropriateness of fixed price contracts in the regulatory context; (4) the informational asymmetries between the Company and its regulators. We address each below.

As an initial matter, we respectfully disagree with the OAG's contention that the record does not support cost recovery in this proceeding. Our self-build portfolio is supported by considerable record support, including a robust competitive bidding process that returned 95 proposals associated with 38 projects from 17 separate bidders across six states. The record also includes the Company's response to Department Information Request No. 1 (among others), in which the Company provided the same highly detailed information for its self-build portfolio that it requested from all of the bidders in the RFP. The Company's response to Department Information Request No. 1 is included as Attachment A. In this way, the record is identical with respect to PPA, BOT, and self-build projects. Finally, we note that the Company routinely recovers project costs on the basis of forecasts, including forecasted test years. As such, our request in this docket is not materially different from other Company investments.

We further believe the Company's commitment to a fixed price bid was a critical component of the competitive bidding process that ensured fairness, transparency, and an appropriate allocation of risks and benefits between the Company and its customers. Bidders of BOT and PPA projects committed themselves to firm pricing as part of RFP—meaning that they will bear any overages and retain any savings associated with project execution. This structure benefits customers in two ways. First, competitive bidding ensures that bidders are incentivized to reduce unnecessary costs and submit low-cost bids with the aim of having their projects selected from among the numerous projects that were bid into the RFP. Second, firm-price bids protect customers from capital overruns by holding bidders to their cost projections while also allowing the Department and Commission to evaluate projects with certainty as to initial capital costs.

In our October petition, the Company asked to apply these same basic rules, such that our bid was also subject to firm pricing and an apples-to-apples comparison to competitive bids received in response to the RFP. Again, we see this as benefitting customers because the Company was strongly incentivized to submit low-cost projects in advance of the RFP bids being received. Indeed, if the costs of its self-build projects were too high, the Company ran the risk that they would be passed over by the Commission in favor of lower-cost bids in the RFP. At the same time, however, the Company—not customers—will bear the costs of any capital overruns

in project execution. In this way, we believe our proposed structure actually protects customers from undue execution risk rather than shifting risks to customers, as claimed by the OAG.

We note here that the Department also recognized the importance of our firm-price commitment:

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 are 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. (Department Comments at 33 (emphasis added).)

We agree. Without firm pricing on the part of all bidders and the Company, competition would not have been fair, and the Commission and Department could not adequately compare the Company's Self-Build Portfolio to the RFP bids because one or more of the projects would be subject to uncertainty with respect to ultimate project costs.

The competitive bidding process also addressed any potential informational asymmetries between the Company and its regulators by requiring the Company to submit its projects *before* bids were received in response to the RFP. Again, this process ensured that the Company was competing with dozens bids on an even playing field. Moreover, as already noted, the Company provided the same information for each of our self-build projects that we required from bidders as part of the RFP.

In short, we believe the competitive process used to develop these projects—including the Company's commitment to fixed pricing for the self-build Portfolio—should give the Commission considerable confidence that the Company's projects are low cost and highly competitive. In fact, we proposed to manage our self-build

projects as a portfolio for the very reason that it allowed us to spread risk among the projects, realize efficiencies in project execution, and reduce as much as possible the firm pricing we committed to in our October petition. This approach is not dissimilar from that taken by other RFP bidders. As the Department noted in its Comments:

[E]ach 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 (BOT/PPA) proposal, which actually is three separate projects in MISO's transmission study, was instead presented to Xcel as two projects. (Department Comments at 33.)

Again, we agree and note that the Company's petition requested only to play by the same rules as those that applied to bidders in the RFP. We believe this level playing field is critical to ensuring that our process was fair and transparent and to ensuring that the best and most beneficial projects move forward for the benefit of our customers.

# 4. The Commission's Black Dog Order

Next, we turn to the OAG's comments regarding the reference in our October Petition to the Commission's April 16, 2015 Order in Docket No. E002/CN-12-1240 in connection with the construction of a combustion turbine generator at our Black Dog Facility. We noted in October that our request to use a symmetrical capital cap for our self-build portfolio was consistent with the Commission's order in the 2012 docket. The OAG contends, however, that material differences between this and the 2012 docket prevent the Company from relying on the 2012 Order as precedent. We respectfully disagree.

To be clear, we were not suggesting in our October Petition that the Commission was required by precedent to approve our proposal to use a symmetrical capital cap for our self-build portfolio. We simply referenced the 2012 docket to note that our proposal was consistent with prior Commission action. We continue to believe that is the case. While the OAG points to a number of differences between this and the 2012 docket (such as the number of projects at issue and the use of a contested case in the 2012 docket), we believe the controlling similarity is the use of a competitive bidding process in both dockets. Those processes ensured that the Company's bids were genuinely competitive when compared to market data, and the use of a symmetrical

capital cap allowed for an apples-to-apples comparison between the Company's proposal and third-party bids. As already discussed, we believe it is reasonable and appropriate for the Company to be held to the same rules as bidders in the RFP and we believe our proposed recovery mechanism is consistent with that principle as well as the 2012 Commission Order.

# 5. The OAG's Alternative Proposal

Finally, the OAG recommends that—in lieu of the Company's proposal—the Commission should adopt a hard cap on individual projects with a 95/5 percent sharing mechanism. That is, the Company would bear the full risk of any overages in individual project execution and would retain only 5 percent of any savings

We do not believe this cap and sharing mechanism is reasonable. First, it proposes to treat the Company differently from any of the bidders in the RFP. Second, the Company priced its self-build portfolio on the assumption that it would be treated similarly to other bidders and would operate under a symmetrical capital cap. This—along with our proposal to share project risks across our portfolio—contributed to the highly competitive pricing proposed in our Petition. Finally, we believe our participation in this acquisition process resulted in additional competition that drove all project costs down for the benefit of our customers. Given this, we do not think it is reasonable to penalize the Company or limit its ability to compete in the market for these kinds of projects in the future.

Again, we proposed the modified Track 2 acquisition process with the aim of competing on a level playing field with third-party developers. That process has been successful, as evidenced by the low-cost projects we have proposed and by the Department's comments finding that both our process and 1,550 MW portfolio are reasonable and merit approval. We respectfully request that the Commission continue to treat the Company consistently with bidders in the RFP and, in so doing, approve our proposal to limit our recovery for the self-build portfolio to a symmetrical capital cap.

## D. The Chamber

Next, we turn to the Chamber's concerns regarding our proposal, which can be categorized into four main areas. Each is discussed below.

## 1. Curtailment

The Chamber suggested that actual curtailment may exceed the Company's assumptions and that the Commission should consider requesting additional analysis.

As we stated in our March Supplement, we expect that some level of wind curtailment will occur during the life of all wind projects. We provided analysis regarding our overall assessment of curtailment risk as well as a project-by-project analysis. Based on our experience and analysis, we expect wind curtailments to be approximately four percent over the life of the projects. This estimate is consistent with historical curtailment levels as we discussed in our Supplement. To analyze the potential level of curtailment, we performed simulations of the transmission operations using the PROMOD model, used historical curtailment data along with knowledge of the transmission system, and Wind RFP Bidder transmission studies. Finally, we examined studies performed under the Minnesota Renewable Energy Integration and Transmission Study.<sup>5</sup> In summary, we believe we have provided a reasonable estimate of expected wind curtailment based on several comprehensive and detailed studies, historical curtailments levels, and the expertise of our transmission engineers. We do not believe additional studies will provide further insight into future wind curtailments at this time.

We acknowledge, however, that forecasting wind curtailment is difficult. Therefore, the sensitives included in the economic analysis section of our Supplement analyze excess energy from the proposed wind additions under different assumptions. We included expected curtailments consistent with our expectation of approximately four percent curtailment in the "markets on" sensitivities included in our economic analysis.

However, our base case and much of our economic analysis was conducted without market interactions. Under these scenarios a higher percentage of the wind production is in excess of our native load (or dumped) as compared to the curtailment assumptions used in the "markets on" sensitivity. In our base case, we assumed that generation in excess of load was credited revenue at one-half of the forecasted average LMP pricing. We also included an extreme case, the "No Dump Energy Credit" sensitivity that assumed any energy production in excess of our load requirements would receive no revenue. Under all cases, the wind additions provide substantial

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<sup>&</sup>lt;sup>5</sup> Minnesota Renewable Energy Integration and Transmission Study Final Report dated October 31, 2014 included curtailment estimates for 40% and 50% wind penetration in the Minnesota area.

<sup>&</sup>lt;sup>6</sup> Approximately 14 percent of wind generation is "dump" energy through 2030 with the addition of the proposed wind portfolio under base assumptions.

<sup>&</sup>lt;sup>7</sup> See Table 10 of the Supplement.

cost savings for our customers. In addition, our analysis included sensitivities around the level of production from each project. We continued to see significant benefits, even when we reduced the amount of energy from the proposed project by five percent.<sup>8</sup>

In summary, the proposed wind additions provide significant benefits under a wide variety of assumptions, including very conservative assumptions regarding excess energy and market interactions.

## 2. Generation versus Native Load

In its Comments, the Chamber raises concerns that Xcel's forecast of market energy prices may be overstated. As noted in Attachment L of our March Supplement, electric power market prices were developed using a blend of market information for near-term prices and long-term fundamentally-based forecasts from Wood Mackenzie, CERA, and PIRA. We believe that these assumptions regarding market prices are reasonable.

As stated in our Supplement, the market prices at the wind generator nodes were adjusted downward to incorporate congestion costs. In the Strategist modeling, we relied on the PROMOD LMP databases published by MISO in the 2016 MISO Transmission Expansion Planning (MTEP) studies. Xcel Transmission Planning prepared PROMOD LMP simulations for years 2020 and 2025 using the MTEP 16 database. Based on those simulations, we included congestion cost of \$2.71 per MWh in 2020, escalating at 2% thereafter, for the proposed wind additions.

Finally, as discussed above, our base case and several sensitives do not include market interactions and therefore are not dependent on market prices or revenues. And again, under all sensitivities included in our economic analysis, the wind portfolio provided significant benefits to our customers. Therefore, the reasonableness of the acquisition of the proposed wind portfolio does not depend on assumptions regarding the MISO energy market.

# 3. Impact on Other Resource Acquisitions

The Chamber states that it would be helpful if the Company explained in reply comments whether the proposed wind portfolio impacts the need for additional resources. We note that the analysis included in our Supplement provides an assessment of the impacts on wind if all the renewables we included our last IRP are

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<sup>&</sup>lt;sup>8</sup> See Tables 11 and 12 of the Supplement.

acquired. In addition, tables of expansion plans were included in Appendix L that compare the resource additions through 2030 with and without the proposed wind portfolio.

## 4. Cost Recovery

The Chamber proposes that the Commission consider cost caps for ongoing O&M and capital costs. The Chamber also asks the Commission to consider setting cost recovery based on the assumed capacity factors rather than actual production. According to the Chamber, these cost recovery schemes will "level the playing field" between owned projects and PPAs. We respectfully disagree. PPAs and utility-owned projects each come with distinct bundles of risks and benefits, such that there is already a level playing field between the two structures.

First, a PPA is for a specific term that is generally shorter than the useful life of the facility. After the expiration of a PPA, the Company must return to the marketplace to procure replacement renewable energy at a price that will be based on a number of factors such as future capital costs, transmission upgrade costs, market prices for electricity, and PTC values, among others. With utility ownership, by contrast, the asset remains in the utility portfolio until it is retired. Customers benefit when the actual useful life of the asset exceeds a comparable PPA's term, as they will continue to receive the capacity and energy for a longer period of time, lowering lifecycle costs. While utility-owned assets may require refurbishment to extend their useful life, life extension options for utility assets have traditionally offered cost-savings benefits for customers. In addition, ownership affords the utility generator interconnection rights which give it the option to repower at end of life with minimum transmission risks whereas PPAs do not provide that option.

Second, owned wind delivers the PTC benefit to Customers in the early years when they are generated, resulting in lower overall net costs in the first 10 years of ownership. PPAs, conversely, typically are executed with either a flat or increasing payment per MWh, with the PTC benefits being leveled over the life of the contract.

Third, PPAs are obligations the utility must pay and are therefore viewed by creditors and rating agencies as additional debt on the utility's balance sheets. The cost of debt is highly dependent on the credit profile of the utility, and companies with higher percentages of debt in their capital structure are considered riskier and pay higher

<sup>&</sup>lt;sup>9</sup> While wind and solar PPAs are viewed more favorably than more traditional PPAs due to their energy-based payment structure, they nonetheless have imputed debt implications for the utility.

rates for debt. These costs are then passed on to customers. <sup>10</sup> Owned projects, by contrast, are financed through both equity and debt, which allows the Company to maintain its balanced capital structure.

In short, we believe the benefits of utility ownership already result in a level playing field between BOT, self-build, and PPA projects. For this reason, we believe a mix of ownership structures is the best way of balancing project risks and ensuring that our customers realize optimal short- and long-term benefits from the additions. Moreover, our Supplement included detailed support for our assumptions regarding ongoing costs and capacity factors, allowing the Commission, the Department, and our stakeholders to evaluate those assumptions for reasonableness and transparency. We also tested those same assumptions through our economic modeling and sensitivity analysis.

With respect to ongoing O&M and capital cost estimates, we relied on previous wind projects currently operating in the NSP region to develop our base case assumptions. These estimates took into account varying turbine models and technology and also scaled the costs based on turbine quantity. The sensitivities we conducted as part of our economic modeling evaluated the impacts of a variation in O&M of 10% and ongoing capital costs of 30%. Again, all sensitivities resulted in substantial customer benefits.

With respect to capacity factors, we retained a third-party consulting firm, AWS True Power (AWS), for an independent wind energy resource assessment of the proposed projects in order to confirm capacity factors. We have attached Energy Production Summaries prepared by AWS for each of the proposed self-build projects as Attachment B. Each Energy Production Summary further details the independent analysis conducted by AWS to ensure we relied on an accurate estimate of the capacity factor for each project. We note that this information was included in response to Department Information Request No. 1, which we have included in its entirety as Attachment A.

Regarding the bids received in response to the RFP, we retained AWS to review information provided by the bidders and provide an opinion as to the reasonableness of each project's projected NCF for the top 25% of projects that were bid into the RFP. Additionally, once we identified a short-list of projects, we requested that AWS

infrastructure requirements are higher than they otherwise would be.

<sup>&</sup>lt;sup>10</sup> Imputed debt has the potential to raise costs for customers in one of two ways: (1) through higher debt costs, as already described; and (2) through additional equity costs, as the utility may require additional equity in its capital structure to compensate for the additional debt-like obligations associated with the PPAs. Because these impacts affect the overall capital structure and capital costs, the costs of financing other utility

perform a more detailed evaluation of NCFs for projects under consideration for selection, which accounted for on-site wind speed, turbine design, turbine layout, and wake loss, among other factors. Additional information regarding the analysis performed by AWS for the RFP responses is included as Attachment C.

In addition to work conducted to develop accurate estimates, we also evaluated the impact of variations in the expected capacity factor and the economic benefit of the proposed projects. The sensitivities we conducted evaluated the impact of a variation in the capacity factors of five percent. The results of this analysis are shown in Tables 11 and Table 12 of the Supplement and show the increase or decrease in benefit under each scenario. While the Chamber accurately notes that benefits could be reduced if actual capacity factors are lower, we note that—under our proposal—the benefits of a higher capacity factor will accrue to our customers. We believe these analyses are reasonable and fully address the concerns raised by the Chamber related to our capacity factor calculations.

That said, to the extent that the Commission or other stakeholders continue to have concerns regarding our cost recovery for owned projects, we would propose to provide status reports regarding the capital costs and construction status for our Self-Build Portfolio. We believe these reports will provide additional transparency throughout the construction phase, so that the Commission and our stakeholders can have confidence that the Company developing the projects—both from a timing and cost perspective—consistent with our proposal.

Finally, we note that our proposal is consistent with past treatment of resources acquired by the Company and that any request we make for recovery of costs will be subject to later review by the Commission. We therefore believe that the proposal we have set forth in our Supplement is reasonable and in the public interest.

#### E. Laborer's Union

The Laborer's Union raised concerns about the potential use of non-responsible contractors in building the proposed wind projects.

First, we appreciate the Laborer's Union conclusion that the Company has established a high standard in building power plants. We believe that the Company demonstrated its ability to carry those high standards into renewable generation when we successfully completed the self-build Courtenay wind farm at the end of last year.

With regard to the Company's approach to building these projects, we note that our contractor selection process is consistent with other major projects we have

successfully delivered in the past, and it enables the Company to provide renewable energy service to our customers at a competitive cost.

While the Company has a long history of success working with union workforce, the firm price RFP was issued to three construction firms for our balance of plant (BOP) construction contracts without preference for a union or non-union workforce. These three firms are considered qualified as a result of Xcel Energy's review of their contractor safety statistics and safety programs, their ability to perform the work and technical competence, ability to meet project schedules, previous Xcel Energy and industry experience, financial health and risk assessment, resource capacity, management oversight, construction quality assurance and quality control programs, and present and future availability commitments.

All three contractors have extensive experience constructing wind farms. Each contractor has worked extensively in Minnesota and the Upper Midwest and has installed between 1,200-3,000 MWs of wind generation in 2016 alone.

With regard to safety, Xcel Energy uses a third party administrator to assist with prequalification of contractors. The pre-qualification process considers factors such as OSHA recordable injury rates, Experience Modification Rate (EMR), written safety program, OSHA citation history and past fatalities. The selected contractor will also have to renew this information on an annual basis. Xcel Energy's basic criteria for approval of contractors includes an EMR of 1 or less, OSHA incident rates at or below Bureau of Labor Statistics industry averages, and 5-year OSHA inspection and citation history. All three bidders meet or exceed the safety criteria for approval.

Contractor's programs for quality assurance and control are important factors in our selection of qualified bidders because they help ensure good construction quality which, in turn, maximize the value of the wind generation assets for our customers. All three BOP bidders have strong quality assurance programs, examples of which include:

- On-site quality control coordinator for each project site.
- Implementation of a specific project quality plan that corresponds to our project specifications.
- Use of third party testing company to perform quality assurance testing.

While our BOP selection efforts are still ongoing, due to our rigorous standards and previous experiences with these companies, we believe any of these three companies

is capable of executing the construction of these projects safely, efficiently and with good quality.

## F. Geronimo

We thank Geronimo for their comments and continued support of our partnership to move the Blazing Star I and II projects forward. We echo their comments on the local benefits of these projects.

#### **CONCLUSION**

We appreciate the opportunity to provide this Reply. We are enthusiastic about the support our wind portfolio has generated and the opportunity to offer customers such significant benefits. We respectfully request that the Commission:

- Approve 1,550 MW portfolio of wind resource additions to the NSP system;
- Approve the agreements supporting Lake Benton Project, Blazing Star I, Blazing Star II, Foxtail, Freeborn, and Crowned Ridge under Minn. Stat. § 216B.50 and approve a variance from Minnesota R. 7825.1400 (A)-(J) (as required by Minn. R. 7825.1800, subp. B).
- Approve an aggregate, symmetrical capital cap for the four self-build project portfolio; and
- 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.

Dated: May 15, 2017

Northern States Power Company

## **CERTIFICATE OF SERVICE**

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

- <u>xx</u> by depositing a true and correct copy thereof, properly enveloped with postage paid in the United States mail at Minneapolis, Minnesota
- xx electronic filing

Docket No. E002/M-16-777

Dated this 15th day of May 2017

/s/

Lynnette Sweet Regulatory Administrator

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