

BEFORE THE MINNESOTA OFFICE OF ADMINISTRATIVE HEARINGS  
600 North Robert Street  
St. Paul, MN 55101

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION  
121 7<sup>th</sup> Place East, Suite 350  
St. Paul, MN 55101-2147

IN THE MATTER OF THE PETITION OF  
NORTHERN STATES POWER COMPANY  
D/B/A XCEL ENERGY FOR APPROVAL OF  
COMPETITIVE RESOURCE ACQUISITION  
PROPOSAL AND CERTIFICATE OF NEED

Docket No. E002/CN-12-1240  
OAH Docket No. 8-2500-30760

**DIRECT TESTIMONY OF CHRISTOPHER J. SHAW**

**ON BEHALF OF**

**THE DIVISION OF ENERGY RESOURCES OF  
THE MINNESOTA DEPARTMENT OF COMMERCE**

**SEPTEMBER 27, 2013**

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1     **I.    QUALIFICATIONS**

2     **Q.    Please state your name, occupation, and business address.**

3     A.    My name is Christopher J. Shaw. I am a Public Utilities Rates Analyst with the  
4           Minnesota Department of Commerce, Division of Energy Resources (Department or  
5           DOC). My business address is: 85 7th Place East, Suite 500, St. Paul, Minnesota 55101-  
6           2198.

7  
8     **Q.    What is your educational and professional background?**

9     A.    My educational and professional background is summarized in DOC Ex. \_\_\_\_ CJS-1  
10          (Shaw Direct).

11  
12    **II.   PURPOSE OF TESTIMONY**

13    **Q.    What are your responsibilities in this proceeding?**

14    A.    My responsibilities are to review the costs associated with interconnecting the proposed  
15          projects to the transmission system. The purpose of this review is to ensure that the cost  
16          for each bid used by DOC Witness Dr. Steve Rakow includes all costs -- in particular  
17          transmission interconnection costs -- that may be borne by ratepayers of Northern States  
18          Power, d/b/a Xcel Energy (NSP or Xcel). My focus regarding interconnection costs are  
19          those costs needed to connect a proposed generation project to the electric transmission  
20          grid that is operated by the Midcontinent Independent System Operator, Inc. (MISO), as  
21          well as associated network upgrade costs. I also discuss the potential for curtailment of  
22          the projects proposed in this proceeding as well as possible congestion charges, provide a  
23          review of bidder qualifications and recommend that the Commission include in its

1 consideration of this matter the 750 MW in 2015 of additional wind generation resources  
2 that the Department recommended for approval in two dockets currently pending dockets  
3 (Docket Nos. E002/M-13-603 and E002/M-13-716). Dr. Rakow provides the DOC's  
4 recommendations in this proceeding.

### 6 **III. INTERCONNECTION COSTS**

7 **Q.** Please describe how you began your review of the interconnection costs associated with  
8 each proposed project.

9 **A.** After reviewing the bid proposals submitted in response to Xcel's Commission-approved  
10 Request for Proposals (RFP), I issued additional information requests (IRs) to Geronimo  
11 Energy (Geronimo),<sup>1</sup> Calpine Corporation (Calpine),<sup>2</sup> Invenergy Thermal Development,  
12 LLC (Invenergy),<sup>3</sup> and Xcel.<sup>4</sup> I did not issue any IRs to Great River Energy (GRE) as  
13 GRE's bid is for capacity from existing generation and the questions would not have been  
14 relevant.

16 **Q. What did you discover when you received the responses?**

17 **A.** I discovered that the bids proposed to treat interconnection costs including potential  
18 network upgrade costs in different ways, which could make a fair comparison of the bids  
19 difficult. Specifically, Geronimo indicated that "[a]ll interconnection costs, including  
20 reimbursable costs to the utility, are included in the proposal."<sup>5</sup> Calpine stated that "[p]er  
21 Calpine's April 15th bid submission, Calpine expects that Xcel will bear the costs of any

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<sup>1</sup> DOC IRs 43-46, Responses Attached as DOC Ex. No. \_\_\_ CJS-2 (Shaw Direct).

<sup>2</sup> DOC IRs 47-52, Responses Attached as DOC Ex. No. \_\_\_ CJS-3 (Shaw Direct).

<sup>3</sup> DOC IRs 53-58, Responses Attached as DOC Ex. No. \_\_\_ CJS-4 (Shaw Direct).

<sup>4</sup> DOC IRs 59-63, Responses Attached as DOC Ex. No. \_\_\_ CJS-5 (Shaw Direct).

<sup>5</sup> Response to DOC IR 43, DOC Ex. \_\_\_ CJS-2 (Shaw Direct).

1 required network and interconnection upgrades” and that Calpine would provide  
2 additional information on interconnection and network upgrade costs once MISO  
3 completed a restudy.<sup>6</sup> Invenergy indicated that \$7 million for interconnection costs was  
4 embedded in its Cannon Falls proposal and \$4 million for interconnections costs was  
5 embedded in its Hampton Corners proposal. For its Cannon Falls proposal, Invenergy  
6 stated that, “[f]or every million dollar variance from the \$7 million budget, the price will  
7 increase or decrease by \$0.05/kw-month.”<sup>7</sup> Xcel indicated that the Strategist inputs  
8 included estimates of all interconnection costs and any network upgrades.<sup>8</sup> However, in  
9 its initial proposal, Xcel proposed to “update transmission and gas pipeline estimates  
10 after a site and routes have been permitted and interconnection agreements achieved, and  
11 submit those updated support infrastructure estimates for Commission review to establish  
12 the baseline against which to compare costs.”<sup>9</sup>

13  
14 **Q. How did you propose to reconcile the bidders’ different treatment of transmission**  
15 **interconnection costs?**

16 A. On July 29, 2013, I sent a letter to the bidders notifying them that there was different  
17 treatment of interconnection costs in the bids. This letter was filed in eDockets and sent  
18 to the service list in this docket. The letter stated the Department’s intention of holding  
19 each of the bidders to the prices included in their bids for ratemaking purposes;  
20 specifically, the Department stated that “Parties should not expect that ratepayers will pay  
21 for any additional costs that are specific to a particular project beyond those included in

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<sup>6</sup> Response to DOC IR 48, DOC Ex. \_\_\_ CJS-3 (Shaw Direct).

<sup>7</sup> Response to DOC IR 54, DOC Ex. \_\_\_ CJS-4 (Shaw Direct).

<sup>8</sup> Response to DOC IR 60, DOC Ex. \_\_\_ CJS-5 (Shaw Direct).

<sup>9</sup> Xcel Initial Proposal at p. 4-15, dated April 15, 2013.

1 each bid.” The letter noted that this approach best ensures the integrity of the competitive  
2 process.

3  
4 **Q. How did parties respond to the July 29, 2013 letter?**

5 A. The Department did not receive any objections, formal or otherwise, to its proposed  
6 treatment and evaluation of costs. However, in response to IR 3, Calpine indicated that,  
7 for its Mankato Energy Center proposal, “MISO has estimated the cost of necessary  
8 upgrades at \$650,000 to \$1,500,000 with a final cost to be confirmed upon completion of  
9 the facilities study.”<sup>10</sup> Thus, I advised Dr. Rakow to include an adjustment to Calpine’s  
10 bid of an additional \$1,500,000 of potential network upgrade costs that would be passed  
11 on to Xcel and eventually to ratepayers. Dr. Rakow includes a discussion in his  
12 testimony which explains how the adjustment was calculated.

13  
14 **Q. Why is it fair to allow an adjustment to Calpine’s bid?**

15 A. Typically, once the bids are received in response to an RFP, bidders cannot later amend  
16 the bid price. However, in this case, Calpine is not amending its bid price; rather, the  
17 cost of potential network upgrade costs are being added based on the completion of a  
18 MISO study, and Calpine had indicated that it would provide those results once they were  
19 received. Thus, it is reasonable to include the updated costs from MISO for evaluation of  
20 Calpine’s bid.

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<sup>10</sup> Calpine Response to Xcel IR 3 Attached as DOC Exhibit No. \_\_\_\_ (CJS-6).

1 **Q. What other transmission related issues did you analyze?**

2 A. I also sent IRs to the bidders, requesting information on the potential for curtailment and  
3 congestion charges associated with each bid.<sup>11</sup> Based on the IR responses from the  
4 bidders, I conclude that the risk of curtailment for each proposal is low. Regarding the  
5 potential for congestion charges, Xcel and its ratepayers will be responsible for  
6 congestion charges associated with its own proposal, the proposals of Calpine, Invenergy,  
7 and any portion of the Geronimo Energy proposal that interconnects to the MISO  
8 transmission grid.<sup>12</sup> Xcel stated that it does not believe that any of the proposals will  
9 have significant congestion charges and provided an analysis that supports that  
10 conclusion.<sup>13</sup> Therefore, I did not recommend that Dr. Rakow make any adjustment to  
11 the bids based on the potential for congestion or curtailment.

12  
13 **IV. BIDDER QUALIFICATIONS**

14 Q. How did you evaluate bidder qualifications?

15 A. First, I noted that Xcel had existing business relationships with Calpine, Invenergy, and  
16 Geronimo. Specifically, NSP—Minnesota purchases the output of:<sup>14</sup>

- 17 • the Mankato Energy Center under a Commission-approved power purchase  
18 agreement (PPA) with Calpine,
- 19 • the Cannon Falls plant under a Commission-approved PPA with Invenergy,  
20 and
- 21 • the Prairie Rose wind farm which was developed by Geronimo.

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<sup>11</sup> Responses to DOC IRs 44, 49, 55, and 61 , DOC Ex. \_\_\_ CJS-2, DOC Ex. \_\_\_ CJS-3, DOC Ex. \_\_\_ CJS-4, and DOC Ex. \_\_\_ CJS-5, respectively, (Shaw Direct).

<sup>12</sup> Response to DOC IR 62, DOC Ex. \_\_\_ CJS-5 (Shaw Direct).

<sup>13</sup> *Id.*

<sup>14</sup> NSP-Minnesota is the Xcel subsidiary that operates in Minnesota.

1 In addition, Xcel's affiliate Public Service Company of Colorado (PSCo)<sup>15</sup> purchases the  
2 output of generation facilities operated by Invenergy and Calpine, and its affiliate  
3 Southwestern Public Service Company (SPS)<sup>16</sup> purchases the output of a facility operated by  
4 Calpine. As Xcel had engaged in business relationships with three of the bidders, I requested  
5 that Xcel explain whether the bidders had complied with their existing agreements with Xcel  
6 and Xcel's subsidiaries, and, if not, how any breach was resolved. Xcel's response is  
7 included as DOC Exhibit No. \_\_\_\_ (CJS-7).

8  
9 **Q. What did you conclude based on Xcel's response?**

10 A. Xcel's response indicates that Xcel either had no issues with the bidders or the parties  
11 have worked collaboratively to resolve any issues. Further, the remaining bidder, GRE,  
12 is a public utility that provides electric service to its member cooperatives in Minnesota.  
13 Thus, I conclude that all bidders are qualified to provide capacity as requested in Xcel's  
14 RFP. I did not recommend that Dr. Rakow make any adjustment in his analysis of the  
15 bids based on bidder qualifications.

16  
17 **IV. WIND ACQUISITION**

18 **Q. Did you provide Dr. Rakow with a recommendation for the amount of additional**  
19 **wind to be considered in his analysis?**

20 A. Yes. In two currently pending dockets, Docket Nos. E002/M-13-603 and E002/M-13-  
21 716, I provided the Department's recommendation to the Commission to approve Xcel's

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<sup>15</sup> PSCo is the regulated Xcel subsidiary that operates in Colorado.

<sup>16</sup> SPS is the regulated Xcel subsidiary that operates in the Southwest.



1 request to add 750 MW of wind generation in 2015. I recommended that Dr. Rakow  
2 consider this potential wind addition in his analysis in the present docket.

3

4 **Q. Does this conclude your testimony?**

5 A. Yes.