

**STATE OF MINNESOTA  
BEFORE THE  
MINNESOTA PUBLIC UTILITIES COMMISSION**

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*In the Matter of Petition of Northern States Power Company to  
Initiate a Competitive Resources Acquisition Process*

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MPUC Docket No.: E-002/CN-12-1240  
OAH Docket No.: 8-2500-30760

Exhibit No.: \_\_\_\_ (TT-2)

**REBUTTAL TESTIMONY OF  
TODD THORNTON  
ON BEHALF OF CALPINE CORPORATION**

October 18, 2013

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1 **I. INTRODUCTION**

2 **Q. Would you please state your name?**

3 A. My name is Todd Thornton.

4 **Q. Are you the same Todd Thornton who previously submitted Direct Testimony in**  
5 **this proceeding?**

6 A. Yes. I am the witness sponsoring Calpine's April 15, 2013 Proposal to supply a portion  
7 of Xcel Energy's forecasted resource need for the 2017 to 2019 timeframe.

8 **II. PURPOSE OF TESTIMONY**

9 **Q. What is the purpose of your Rebuttal Testimony?**

10 A. The purpose of my Rebuttal Testimony is to briefly respond to portions of the  
11 Direct Testimonies of Xcel Energy, Inc. ("Xcel") witness Steven W. Wishart,  
12 Department of Commerce ("Department") Witness Christopher J. Shaw, and Department  
13 Witness Dr. Steve Rakow. In particular, I respond to Mr. Wishart's discussion with  
14 respect to future Power Purchase Agreement ("PPA") negotiations with Xcel and Dr.  
15 Rakow's and Mr. Shaw's discussion and recommendations related to the treatment of  
16 electric interconnection costs.

1 **III. PPA NEGOTIATIONS**

2 **Q. Mr. Wishart notes in his Direct Testimony at p. 51 that “Calpine has indicated in**  
3 **response to an information request that it would not use the Company’s model PPA**  
4 **in the negotiating process.” Is Mr. Wishart’s understanding of Calpine’s position**  
5 **accurate?**

6 A. No. I believe Mr. Wishart misconstrued Calpine’s response to an Xcel  
7 Information Request. Calpine’s objection to Xcel Information Request No. 15 was not  
8 intended to suggest that Calpine would be unwilling to consider the Model PPA during  
9 PPA negotiations. Calpine’s concern was that the Model PPA had not been provided to  
10 bidders prior to the April 15, 2013 bidding deadline and that it was unreasonable for Xcel  
11 to ask Calpine to revise its bid to conform to the Model PPA at this stage of the contested  
12 case.

13 In its response to Xcel, Calpine confirmed that it “is prepared to engage in good-  
14 faith negotiations regarding the specific terms of a PPA with Xcel that would be suitable  
15 for Commission review and approval” and that “[a]ny issues related to reconciling the  
16 terms of Calpine’s bid and the Model PPA could be resolved during those discussions.”  
17 Calpine remains open to negotiating a PPA with Xcel irrespective of whether the starting  
18 point is Calpine’s existing PPA, a new form PPA or Xcel’s Model PPA. And ultimately,  
19 the Commission will need to approve any PPA, which ensures that any agreement  
20 reached appropriately balances the interests of both parties and is in the long-term  
21 interests of Xcel’s customers.

1 **IV. INTERCONNECTION COSTS**

2 **Q. How has the Department factored in interconnection costs in modeling Calpine’s**  
3 **proposed Expansion in Strategist?**

4 A. In his Direct Testimony at page 7, Dr. Rakow notes that MISO has preliminarily  
5 estimated the costs of necessary network upgrades to support the interconnection of  
6 Calpine’s proposed Expansion at \$650,000 to \$1,500,000. On this basis, Dr. Rakow  
7 indicates that a “\$1.55 million cost is included in a post-model PVRR adjustment for all  
8 scenarios and contingencies evaluating Calpine’s Proposal.” *Id.*

9 **Q. Do you have any concerns with Dr. Rakow’s approach?**

10 A. Yes. Calpine appreciates Dr. Rakow’s acknowledgment on pages 7-8 that the  
11 addition of \$1.55 million in costs to Calpine’s proposal did not bias the selection process.  
12 However, Calpine cautions that this is a preliminary estimate that remains subject to  
13 ongoing analysis, and that the Commission should recognize that there is also uncertainty  
14 with respect to the interconnection cost for a number of the other bids.

15 **Q. Why do you consider MISO’s cost estimate preliminary?**

16 A. MISO agreed to perform a restudy of the existing interconnection agreement for  
17 the Mankato Energy Center rather than requiring Calpine to submit a new interconnection  
18 request for the incremental MWs related to the Expansion Proposal. Calpine provided the  
19 draft restudy results to the Department but the restudy is not yet final.

20 In addition, Calpine’s existing interconnection agreement was executed prior to  
21 the implementation of the current MISO market structure and capacity accreditation  
22 processes. Among other changes that have occurred in the intervening years, MISO’s

1 capacity accreditation process no longer applies to winter output but only applies to the  
2 summer delivery period.

3 Calpine has recently discussed the draft restudy with MISO and MISO confirmed  
4 that its analysis was performed based on summer output of 667 MW, even though the  
5 Mankato interconnection agreement notes that the plant's full winter net rating is 740  
6 MW (20 MWs more than the planned expanded plant's winter capacity of 720 MW).  
7 While the 667 MW limitation in the MISO restudy will not impact the accredited  
8 capacity of Calpine's bid, additional analysis and discussion may be required pertaining  
9 to the plant's full 720 MW capability during winter operations, and to reconcile  
10 Mankato's legacy interconnection agreement with MISO's current study processes and  
11 Xcel's operational requirements. Calpine is confident this issue can be appropriately  
12 resolved in due course but recognizes that it does create some additional level of  
13 uncertainty – although it should be noted that Mankato is at a much more mature phase of  
14 the interconnection process than its competitors (because of its ability to use an existing  
15 interconnection agreement) and, therefore, faces significantly less uncertainty compared  
16 with those bids.

17 For these reasons, while Calpine does not object to Dr. Rakow's approach of  
18 including \$1.55 million as a preliminary estimate of the Expansion's interconnection  
19 costs, it is important to recognize that the respective bids include varying degrees of  
20 uncertainty with respect to interconnection costs. However, if MISO's preliminary  
21 estimate is confirmed, the interconnection cost related to the injection of Mankato's full  
22 output during peak summer conditions is extremely nominal and supports the overall  
23 cost-effectiveness of Calpine's proposal.

1 **Q. How has the Department proposed to treat the uncertainty with respect to**  
2 **interconnection costs?**

3 In his Direct Testimony at p. 3, Mr. Shaw reiterates his statement from a letter  
4 dated July 29, 2013 that, with respect to interconnection costs, "parties should not expect  
5 that ratepayers will pay for any additional costs that are specific to a particular project  
6 beyond those included in each bid." Mr. Shaw indicated that this position is consistent  
7 with the Department's view that parties should be held to the cost set forth in their  
8 respective bids.

9 **Q. Do you agree with Mr. Shaw's position?**

10 A. Yes and no. I agree with the general principle that parties should be held to the  
11 costs set forth *in* their respective bids but Calpine believes the assertion that parties  
12 should be held to costs "*beyond* those included in each bid" is not reasonable. [Emphasis  
13 added].

14 Calpine's bid complies to the maximum extent possible with the Commission's  
15 requirement that bidders are to be held to their costs. As I stated in my Direct Testimony,  
16 Calpine's bid assumes responsibility for a wide range of cost and performance risk related  
17 to the construction and operation of its Proposal. However, Calpine's bid specifically  
18 states and is premised upon the assumption that Xcel will be responsible for costs related  
19 to electrical interconnection upgrades. Calpine is absolutely willing to be held to the costs  
20 that form the basis of its bid, but Calpine fully disclosed that its bid does not assume  
21 responsibility for electric interconnection costs.

22 **Q. Is Calpine's proposed treatment of interconnection and fuel costs novel or unique?**

23 No. In my experience, the pass-through of such costs is common for a proposed

1 “tolling agreement” between an independent power producer (“IPP”) and a regulated  
2 utility and is consistent with the treatment of interconnection costs under the existing  
3 tolling agreement between Mankato and Xcel. Under a tolling agreement the IPP’s  
4 responsibilities are generally limited to the facilities within the fence line of the plant  
5 (e.g., ownership; permitting; construction; operation; maintenance; and performance).

6 In my experience, most tolling agreements do not assign responsibility to IPPs for  
7 “upstream” fuel supply and transportation or “downstream” electric transmission. If those  
8 requirements had been clearly specified in the initial RFP, which in this proceeding was  
9 not the case, Calpine would have been able to assess that level of risk in deciding how to  
10 formulate its bid.

11 **Q. Do you feel that IPPs are in an appropriate position to accurately estimate**  
12 **interconnection costs?**

13 A. No. In his July 29 letter, Mr. Shaw states that, “While the Department is aware  
14 that some costs, particularly costs related to the facilities necessary to interconnect to the  
15 transmission system, can be difficult to estimate, *bidders are in the best position to*  
16 *estimate those costs*” [emphasis added]. In my view this is not correct. Identifying  
17 interconnection costs is a lengthy, highly technical and complex process. In this instance,  
18 only MISO can confirm electrical interconnection costs after going through its formal  
19 review procedures in collaboration with regional transmission owners. MISO’s final  
20 studies related to some of the pending bids likely will not be completed until well after  
21 the Commission makes its decision in this case.

22 Unfortunately, Calpine does not believe the Department’s position is reasonable  
23 under these circumstances and Calpine cannot accept what essentially would represent a

1 substantial and unilateral amendment to Calpine's bid. However, if confirmed by MISO,  
2 the relatively nominal level of expected interconnection costs could be fairly easily  
3 addressed during PPA negotiations via mutually agreeable cost- or risk-sharing  
4 mechanisms. Similarly, parties could discuss PPA mechanisms to appropriately manage  
5 the risk that a project's interconnection costs may turn out to be higher than expected.

## 6 V. CONCLUSION

7 **Q. Does the Direct Testimony submitted in this proceeding confirm your view that the**  
8 **Commission should choose Calpine's Expansion as part of the solution to filling**  
9 **Xcel's resource needs?**

10 A. Yes. Three parties submitted comprehensive economic analyses outlining the  
11 objective merits of the proposed resources submitted in this proceeding – all of which  
12 support the selection of Calpine's Mankato Proposal. However, Calpine believes that the  
13 Strategist modeling performed by Xcel and the Department actually tends to understate  
14 the value of the Mankato Proposal. In my view, the Strategist modeling fails to ascribe  
15 certain fuel costs and costs related to environmental control technology to other bids, the  
16 effect of which is to undervalue the relative cost-effectiveness of Calpine's bid.  
17 Calpine's bid likely would compare even more favorably if these costs were properly  
18 addressed in the analysis.

19 In addition, and perhaps most importantly, the Strategist results fail to fully reflect  
20 the significant "non-price" benefits related to the operation of combined-cycle generation  
21 compared with simple-cycle generation with respect to environmental performance and  
22 the ability to serve as a hedge against future market uncertainty (*e.g.*, carbon regulation,  
23 retirements, higher-than-expected gas costs, etc.). These are important attributes from a

1 public policy perspective that we hope the Commission will take into consideration in its  
2 evaluation of the bids.

3 Both combined-cycle and combustion turbine peaking units provide capacity to  
4 the system, but combined-cycle facilities provide far greater value in terms of energy  
5 production, fuel efficiency, environmental performance and long-term system operations.  
6 However, even without taking the above factors into consideration, all of the analysis that  
7 has been filed strongly supports approval of Calpine's Mankato Proposal. The Strategist  
8 modeling presented by Xcel and the Department closely correlates with Calpine's own  
9 analysis, and all three analytical approaches consistently agree that Mankato is a cost-  
10 effective proposal across a broad range of assumptions and scenarios.

11 The Direct Testimony filed by Xcel and the Department confirms Calpine's  
12 contention, as I articulated in my Direct Testimony, that the inherent economies of scale  
13 associated with the Mankato Expansion provides a substantial economic advantage for  
14 our project that is being passed through to Xcel's ratepayers. Indeed, Mr. Hibbard's  
15 analysis and the Strategist modeling demonstrate that Xcel now has a unique opportunity  
16 to acquire higher-value combined-cycle generating capacity at a price that is at least  
17 equal to and probably significantly less than the cost of simple-cycle capacity.

18 **Q. Does this conclude your Rebuttal Testimony?**

19 **A.** Yes it does.