

Rebuttal Testimony  
Allen D. Krug

**BEFORE THE OFFICE OF ADMINISTRATIVE HEARINGS  
FOR THE  
MINNESOTA PUBLIC UTILITIES COMMISSION  
STATE OF MINNESOTA**

IN THE MATTER OF AN APPLICATION  
OF NORTHERN STATES POWER  
COMPANY FOR AUTHORITY TO  
INCREASE RATES FOR ELECTRIC  
SERVICE IN THE STATE OF MINNESOTA

MPUC Docket Nos. E002/GR-12-961  
E002/GR-13-868

IN THE MATTER OF THE REVIEW OF  
THE ANNUAL AUTOMATIC  
ADJUSTMENT REPORTS FOR ALL  
ELECTRIC UTILITIES

E999/AA-13-599  
E999/AA-14-579  
E999/AA-16-523  
E999/AA-17-492  
E999/AA-18-373

OAH Docket No. 65-2500-38476

REBUTTAL TESTIMONY OF

ALLEN D. KRUG

On Behalf of

NORTHERN STATES POWER COMPANY

September 22, 2023

Exhibit\_\_\_\_(ADK-2)

**Policy and Rebuttal Overview**

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1 **I. INTRODUCTION**

2  
3 Q. PLEASE STATE YOUR NAME AND EMPLOYER.

4 A. My name is Allen D. Krug. I am employed by Xcel Energy Services, Inc. as the  
5 Associate Vice President, State Regulatory Policy.  
6

7 Q. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY IN THIS PROCEEDING?

8 A. Yes. On June 16, 2023, I filed my Direct Testimony on behalf of Northern  
9 States Power Company (Xcel Energy or the Company), providing a discussion  
10 of: (1) the prudence standard and policy considerations that should guide the  
11 resolution of this matter; (2) general background on the November 2011 event  
12 (Event) at the Sherco generating plant, the Company’s insurance and other  
13 recoveries after the Event and the regulatory history related to it; and (3) an  
14 overview of the Company’s case.  
15

16 Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

17 A. My Rebuttal Testimony responds to testimony provided by Richard Polich and  
18 Matthew King of GDS Associates, Inc., on behalf of the Department of  
19 Commerce (Department) – the only two Intervenor witnesses to file testimony.  
20 I provide the Company’s overall response to this testimony, address a few  
21 specific issues raised by this testimony, and specifically discuss a number of  
22 important matters ignored by Mr. Polich and Mr. King. I also identify the  
23 Company’s Rebuttal witnesses, who provide more detailed expert testimony on  
24 some of the matters raised by Mr. Polich and Mr. King.

1           **II. OVERALL RESPONSE TO MR. POLICH AND MR. KING**

2  
3    Q.   CAN YOU SUMMARIZE THE COMPANY’S RESPONSE TO THE TESTIMONY  
4       PROVIDED BY MR. POLICH AND MR. KING?

5    A.   Yes. The Company’s Direct Testimony in this proceeding and the Rebuttal  
6       Testimony being filed today demonstrate that Xcel Energy acted prudently in  
7       its operation and maintenance of Sherco Unit 3 prior to the Event. That is, the  
8       Company’s actions operating and maintaining Sherco Unit 3 fell well within the  
9       range of reasonable utility actions, based on the information available to the  
10      Company at the time.

11  
12     Mr. Polich offers an opinion that Xcel Energy “failed to operate and maintain  
13     Sherco 3 in a manner that was consistent with good utility practice” and makes  
14     several assertions to attempt to support that opinion. However, as the  
15     Company’s subject matter experts discuss in detail, that opinion is not  
16     supportable based on the information reasonably known and knowable to the  
17     Company leading up to the Event. Rather, Mr. Polich uses 20/20 hindsight,  
18     combined with misunderstandings and misstatements of the industry practices  
19     at the time, to make a number of conclusory assertions that lack objective  
20     support. In addition, the Company’s subject matter experts explain that there is  
21     not some specific “good utility practice” standard on the issues Mr. Polich  
22     discusses. Again, the relevant question here is: Did the Company’s actions  
23     operating and maintaining Sherco Unit 3 prior to the November 2011 Event  
24     fall well within the range of reasonable utility actions, based on the information  
25     available to the Company at the time? As our subject matter experts explain, the  
26     answer to that question is yes.

1 Moreover, the Company’s testimony demonstrates that it also acted prudently  
2 *following* the Event and that, because of those reasonable and prudent actions,  
3 customers have not paid more for power than they would have had the Event  
4 not occurred. Neither Mr. Polich nor Mr. King consider this aspect of the net  
5 impact on customers at all. Similarly, they fail to recognize the substantial  
6 disallowance the Commission already ordered due to the November 2011 Event  
7 – effectively treating the Company’s system as though Sherco 3 did not exist.  
8 The end result is that, even if the Commission found imprudence prior to the  
9 Event – which the Company vigorously disputes – customers have not been  
10 harmed and no refund is appropriate or necessary now, nearly twelve years later.

11  
12 Q. YOU MENTIONED THE VARIOUS ASSERTIONS MADE BY MR. POLICH THAT HE  
13 BELIEVES SUPPORT HIS OPINION REGARDING WHETHER OR NOT XCEL ENERGY  
14 OPERATED AND MAINTAINED SHERCO UNIT 3 “CONSISTENT WITH GOOD  
15 UTILITY PRACTICE.” HOW HAS THE COMPANY ORGANIZED ITS RESPONSE?

16 A. The Company’s subject matter experts provide the Company’s substantive  
17 responses to Mr. Polich. Collectively, witnesses Murray, Kolb, Sirois, Tipton  
18 and Daniels have over 200 years of directly relevant experience. That experience  
19 includes: Mr. Murray and Mr. Kolb who were both stationed at the Sherco  
20 facilities for 20 plus years, with Mr. Murray actually officed on the turbine deck;  
21 Mr. Sirois’ five decades of industry experience, with the last 30 years focused on  
22 failure investigations of steam and gas turbines for both power generation plants  
23 and insurance companies; Mr. Tipton’s 40 years of metallurgical engineering  
24 experience with respect to gas and steam turbines, including performing over  
25 300 failure analyses and root cause analyses of such turbines; and Mr. Daniels’  
26 40 years of experience on water and steam chemistry issues, with the past 25  
27 years focused on evaluating and investigating water and steam chemistry

1 corrosion events and failures, including visiting nearly 100 different power  
2 plants as part of his work. These witnesses bring specific subject matter  
3 expertise and provide a detailed discussion of the relevant issues regarding Xcel  
4 Energy's operation and maintenance of Sherco Unit 3 that directly refutes the  
5 general allegations made by Mr. Polich.

6  
7 First, these subject matter experts will explain some of the fundamental  
8 misstatements or misunderstandings evident in Mr. Polich's testimony. Then,  
9 they will provide more specific responses to some of the sweeping and general  
10 assertions made by Mr. Polich and demonstrate that the "sources" he cites to  
11 fail to support those conclusions.

12  
13 Mr. Polich makes twelve bullet point claims that he says form the basis of his  
14 overall opinion that the Company did not act consistent with good utility  
15 practice prior to the Event.<sup>1</sup> However, a review of these claims shows that they  
16 overlap and fall in the following general categories:

- 17
- 18 • Mr. Polich's characterizations of the operation and maintenance of  
19 Sherco Unit 3 prior to the Event (Mr. Polich's first and sixth bullet  
20 points);
  - 21 • Mr. Polich's claims of the state of Xcel Energy's knowledge, general  
22 industry knowledge and recommended practices prior to the Event (Mr.  
23 Polich's third, fourth, fifth, seventh, eighth, ninth, tenth and eleventh  
24 bullet points); and

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<sup>1</sup> Polich Direct at 56-58.

- 1 • Mr. Polich’s claim of the “cause” of the failure and his characterization  
2 of the Company’s decision-making regarding the 2011 inspection of  
3 Sherco Unit 3 (Mr. Polich’s second and twelfth bullet points).

4  
5 The Company’s subject matter experts address each of these claims and  
6 demonstrate the fundamental flaws in Mr. Polich’s testimony.

7  
8 Q. HOW IS THE REMAINDER OF YOUR REBUTTAL TESTIMONY ORGANIZED?

9 A. I first provide brief responses to Mr. Polich and Mr. King on issues that I  
10 addressed in my Direct Testimony. I then discuss some critical omissions in  
11 their testimonies that result in an inaccurate picture of the impact of the Event  
12 on customers. Finally, I introduce the Company’s Rebuttal witnesses and  
13 describe the general topics they address.

14  
15 **III. RESPONSE TO MR. POLICH**

16  
17 Q. MR. POLICH PROVIDES A DISCUSSION OF THE “PROCEDURAL HISTORY” OF THIS  
18 MATTER. IS HIS DISCUSSION A FULL AND COMPLETE PICTURE OF THE  
19 COMMISSION’S HANDLING OF THE EVENT AND PARTIES’ POSITIONS?

20 A. No, it is not. Mr. Polich is wrong at times and incomplete at times, presenting  
21 an inaccurate view of the relevant history.

22  
23 Q. MR. POLICH BEGINS HIS PROCEDURAL HISTORY DISCUSSION BY STATING THAT  
24 THE EVENT FIRST CAME BEFORE THE COMMISSION IN THE COMPANY’S  
25 NOVEMBER 2013 RATE CASE.<sup>2</sup> IS HE CORRECT ABOUT THAT?

26 A. No. As I discussed in my Direct Testimony, the Commission first addressed the

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<sup>2</sup> Polich Direct at 15-16.

1 Event and its potential impact on customers in the Company’s 2012 rate case,  
2 where the Commission found that Sherco Unit 3 was not “used and useful”  
3 during the test year and imposed a substantial disallowance on the Company.  
4 Neither Mr. Polich nor Mr. King even mention the 2012 rate case Order or its  
5 implications for this proceeding, as I discuss more in Section V, below.

6  
7 Q. MR. POLICH ALSO DISCUSSES THE COMPANY’S AAA DOCKETS AND NOTES THAT  
8 ON JUNE 2, 2016, THE COMMISSION ISSUED AN ORDER IN THE 2013-2014  
9 ANNUAL FUEL ADJUSTMENT FILING, DECIDING “TO WAIT UNTIL THE  
10 CONCLUSION OF THE LITIGATION REGARDING LEGAL LIABILITY FOR THE  
11 ACCIDENT BEFORE DECIDING WHETHER XCEL [ENERGY]’S ENERGY  
12 REPLACEMENT COSTS WERE PRUDENTLY INCURRED AND RECOVERABLE FROM  
13 RATEPAYERS.” DOES THIS PRESENT A FULL PICTURE OF THAT 2016 ORDER AND  
14 WHY THIS MATTER IS NOW BEFORE THE COMMISSION IN 2023?

15 A. No. While it is correct that the Commission deferred making a decision at that  
16 time, it did so at the request of the Department and the Office of the Attorney  
17 General (OAG) and over the objection of the Company. The Commission’s  
18 Order states:

19  
20 The Department and OAG recommend that the Commission refrain from  
21 making any judgments about the prudence of Xcel [Energy’s] conduct in  
22 this matter until the litigation between Xcel and General Electric has  
23 concluded. These parties reason that the Commission *may* benefit from  
24 seeing the record developed in the litigation before the Commission rules  
25 on Xcel’s prudence. . . . In contrast, Xcel [Energy] argues that the  
26 Commission has a sufficient record to evaluate the prudence of the  
27 company’s conduct regarding the Sherco 3 outage. [The Company]



1 acknowledges that the Commission could revise its evaluation if future  
2 information contradicted the evidence currently in the record.<sup>3</sup>  
3

4 The lapse of time – it has now been nearly twelve years since the Event –  
5 presents challenges with which all parties and the Commission must now  
6 contend.  
7

8 Q. MR. POLICH ALSO DISCUSSES A LAWSUIT AGAINST GENERAL ELECTRIC (GE) BY  
9 THE COMPANY’S INSURERS. HAS HE PRESENTED A FAIR CHARACTERIZATION OF  
10 THAT LAWSUIT AND ITS 2019 OUTCOME?

11 A. He has not. First, Mr. Polich does not even note that Xcel Energy was not a  
12 party to that lawsuit when it was decided; the Company had settled with GE in  
13 2018, and had returned all the proceeds from the settlement to customers.  
14 Therefore, the Company had no ability to present its own evidence, cross-  
15 examine witnesses or present its arguments to the court. Second, because Xcel  
16 Energy was not a party, and the suit was against GE, the case focused primarily  
17 on GE’s actions, not on the Company’s actions. I understand from counsel that  
18 the insurers had to prove that GE committed willful and wanton negligence  
19 and/or gross negligence in order to prevail – far different issues than being  
20 discussed in this case. I also understand from counsel that due to pre-trial  
21 rulings, certain issues were excluded from consideration, such as GE’s design  
22 of the particular turbine used at Sherco Unit 3, so no evidence about that design  
23 was allowed to be presented. Third, Mr. Polich highlights the finding of a jury  
24 of laypersons that Xcel Energy, a non-party, was 48 percent at fault for the  
25 Event, while GE was 52 percent at fault. However, he fails to also state that

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<sup>3</sup> *In the Matter of the Review of the 2013-2014 Annual Automatic Adjustment Reports for All Electric Utilities*,  
Docket No. E999/AA-14-579 ORDER ACTING ON ELECTRIC UTILITIES’ ANNUAL REPORTS AND  
REQUIRING ADDITIONAL FILINGS at 5 (June 2, 2016).

1 because the jury had already found that GE “did not act with gross negligence,”  
2 the Judge noted that this fault comparison was not legally relevant.<sup>4</sup> Finally, Mr.  
3 Polich did not mention certain jury findings related to GE – whose actions were  
4 the focus of the trial. Specifically, the jury in that litigation answered “Yes” to  
5 each of the following questions:  
6

- 7 • Did GE undertake an obligation after the sale of Unit 3 to render  
8 technical information, advice, and recommendations to [Xcel Energy]?
- 9 • Should GE have recognized that such provision of technical  
10 information, advice, and recommendations was necessary for the  
11 protection of Xcel Energy’s property and employees?
- 12 • Did GE fail to exercise reasonable care in that provision of technical  
13 information, advice, and recommendations because (a) GE increased the  
14 risk of harm, or (b) [Xcel Energy] relied on the undertaking?  
15

16 Other Company witnesses discuss GE’s technical information, advice and  
17 recommendations in more detail, and how the Company’s reliance on them was  
18 reasonable and part of the Company’s overall prudent operation of the plant.  
19 But, Mr. Polich’s myopic reliance on a portion of the jury’s decision while failing  
20 to note these findings certainly does not provide a full picture of the jury’s  
21 overall determinations in that trial.

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<sup>4</sup> Polich Direct, Schedule 9 at 3.

1 **IV. RESPONSE TO MR. KING**

2  
3 Q. DID MR. KING ADDRESS ANY MATTERS YOU DISCUSSED IN YOUR DIRECT  
4 TESTIMONY?

5 A. Yes. Mr. King discussed the Company’s settlement with GE and indicated that  
6 he believes “only some portion” of the settlement amount should be treated as  
7 an “offset” to any net replacement power costs.<sup>5</sup>

8  
9 Q. IS IT REASONABLE TO “APPORTION” THE GE SETTLEMENT FUNDS IN THE  
10 MANNER SUGGESTED BY MR. KING?

11 A. I do not believe so. The GE Settlement provided a lump sum payment that the  
12 Company returned in full to customers. The settlement did not in any way  
13 attempt to break this overall settlement amount into specific categories or  
14 components. More importantly, the record of this proceeding demonstrates  
15 that the Company acted prudently throughout the relevant time period –  
16 including by securing significant insurance proceeds for the reconstruction of  
17 the unit and settlement proceeds from the litigation with GE – and that any net  
18 energy replacement costs at issue were therefore prudently incurred. However,  
19 should the Commission determine Xcel Energy acted imprudently in any  
20 respect with regard to the costs at issue, the Commission must still determine  
21 whether customers bore any net costs due to such imprudence, considering  
22 both costs and savings due to the Company’s actions. The GE Settlement is just  
23 one part of that equation and should not be looked at in the piecemeal fashion  
24 suggested by Mr. King.

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<sup>5</sup> King Direct at 19-20.

1 **V. OMISSIONS IN MR. POLICH'S AND MR. KING'S TESTIMONY**

2  
3 Q. YOU MENTIONED EARLIER THAT THERE WERE A NUMBER OF IMPORTANT  
4 MATTERS IGNORED BY MR. POLICH AND MR. KING IN THEIR DIRECT  
5 TESTIMONY. PLEASE ELABORATE.

6 A. I have already discussed one of those matters – the substantial disallowance of  
7 Sherco Unit 3 from rate base in the Company's 2012 rate case. The Commission  
8 Order in that case resulted in a total disallowance of over \$21 million, as I  
9 discussed in my Direct Testimony.

10  
11 Q. WHY IS THAT DISALLOWANCE RELEVANT TO THE COMMISSION'S  
12 CONSIDERATION OF THIS CASE?

13 A. As I discussed in my Direct Testimony, by disallowing both O&M expenses  
14 and any return on the Company's investment in Unit 3 in that case, the  
15 Commission effectively determined that customers would not pay to have Unit  
16 3 as part of the Company's portfolio of generating assets coming out of that  
17 rate case. In essence, the Commission decision reflected a view that – while it  
18 was out of service – Unit 3 should not be considered a part of the Company's  
19 system. That decision lowered costs for customers and disallowed recovery to  
20 the Company. It would be unreasonable, after removing Unit 3 from rates, to  
21 then *also* require the Company to refund the costs of purchased power incurred  
22 in Unit 3's absence. At minimum, these lower customer costs must be  
23 accounted for in any determination of net harm to customers as a result of the  
24 Event.

25  
26 Q. CAN YOU PROVIDE OTHER EXAMPLES OF OMISSIONS IN MR. POLICH'S OR MR.  
27 KING'S TESTIMONY?

1 A. Yes. First, as Company witness Mr. Nicholas J. Detmer discusses, Mr. Polich  
2 and Mr. King do not account for the additional outage time for Unit 3 that  
3 would have been required had the Company followed the course of conduct  
4 now suggested by Mr. Polich. As I understand Mr. Polich's testimony, he  
5 believes Xcel Energy should have engaged in a particular kind of inspection of  
6 Sherco Unit 3 back in 2011 and that, had the Company done so, it would have  
7 discovered the issue that led to the Event and been able to take corrective  
8 action. However, Company witness Mr. Herbert J. Sirois explained in his Direct  
9 Testimony that the particular inspection Mr. Polich now claims should have  
10 been done could have led to a longer planned outage and would have added \$1  
11 to \$2 million to the cost of that outage. Neither Mr. Polich nor Mr. King  
12 accounted for those costs in their analyses.

13  
14 Further, assuming the Company had conducted that particular inspection and  
15 uncovered the issue that led to the failure of Unit 3, Company witness Mr.  
16 Timothy P. Murray estimates that Unit 3 would have been out of service for a  
17 total of two to three months beyond the time it was out of service prior to the  
18 Event. Mr. Detmer estimates that the net cost of replacement power for such  
19 an extended outage would have been approximately \$160,000. Moreover, this  
20 additional inspection and repair could have cost as much as \$5 million and, as  
21 our experts have testified, would have shortened the life of Unit 3. Neither the  
22 additional replacement power costs nor the cost of any repairs not recoverable  
23 through insurance or from GE have been considered by Mr. Polich or Mr. King.

24  
25 Second, in their Direct Testimony, neither Mr. Polich nor Mr. King considered  
26 the Company's prudent actions *following* the Event – actions that, as Company  
27 witness Mr. Darin W. Schottler explained in his Direct Testimony, led to

1 considerable customer savings that would not have been realized absent the  
2 Event. However, such customer savings must be considered, along with  
3 customer costs and other relevant factors such as the Commission’s prior  
4 disallowance, to determine whether the Event imposed net costs on customers.

5  
6 Finally, neither Mr. Polich nor Mr. King provide any discussion or justification  
7 of their pivot away from their client, the Department’s, prior recommendation  
8 in this proceeding. In its January 2021 Comments, the Department  
9 recommended that the Commission conclude this matter by ordering the  
10 Company “to refund \$17 million to leave ratepayers unharmed from the Sherco  
11 3 outage.”<sup>6</sup> However, Mr. King now appears to recommend that, if the  
12 Commission finds the Company to have been imprudent in its operation and  
13 maintenance of Sherco 3 prior to the Event, the Commission should order the  
14 refund of either approximately \$58.2 million or \$71.5 million. He provides no  
15 justification for such a markedly higher number other than inclusion of interest,  
16 which only accounts for a portion of his higher recommendations.

17  
18 **VI. REBUTTAL WITNESSES**

19  
20 Q. PLEASE INTRODUCE THE COMPANY’S REBUTTAL WITNESSES.

21 A. In addition to my testimony, Xcel Energy presents Rebuttal Testimony from  
22 the following witnesses, each of whom also provided Direct Testimony:

- 23  
24 • *Mark Kolb, Timothy Murray and Herbert Sirois* address a number of  
25 misstatements and misunderstandings in Mr. Polich’s testimony and

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<sup>6</sup> Department Comments at pp. 19-21, January 15, 2021 (eDocket No. 20211-169851-10).

1 specifically address the Company's operations and maintenance practices  
2 at Sherco Unit 3 prior to the Event, as well as the state of industry  
3 knowledge and recommended practices during that time;

4 • *David Daniels* also addresses misstatements and misunderstandings in Mr.  
5 Polich's testimony and specifically addresses the Company's water and  
6 steam chemistry practices and explains that those practices were  
7 reasonable and consistent with, if not exceeding, other turbine operators'  
8 practices at the time;

9 • *Anthony Tipton* explains that Mr. Polich has fundamentally misstated the  
10 conclusion of the Thielsch Report (the root cause analysis Mr. Tipton  
11 co-authored), and never even mentioned its actual conclusion – that  
12 GE's turbine design was the primary causal factor of the Event, not any  
13 action or inaction on the part of Xcel Energy;

14 • *Nicholas Detmer* addresses the cost of replacement power after the Event,  
15 and estimates the replacement power costs the Company would have  
16 incurred, had it performed the extended outage and maintenance work  
17 Mr. Polich apparently believes the Company should have done in late  
18 2011 and 2012; and

19 • *Darin W. Schottler* notes that neither Department witness has considered  
20 or attempted to estimate the value of certain benefits customers received  
21 due to the Company's work during the restoration of Sherco Unit 3.  
22

23 Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

24 A. Yes, it does.