

**Before the Office of Administrative Hearings  
600 North Robert Steet  
Saint Paul, Minnesota 55101**

**For the Minnesota Public Utilities Commission  
121 Seventh Place East, Suite 350  
Saint Paul, Minnesota 55101**

IN THE MATTER OF THE PETITIONS FOR RECOVERY OF CERTAIN GAS COSTS	OAH Docket No. 71-2500-37763
IN THE MATTER OF THE PETITION OF CENTERPOINT ENERGY FOR APPROVAL OF A RECOVERY PROCESS FOR COST IMPACTS DUE TO FEBRUARY EXTREME GAS MARKET CONDITIONS	MPUC Docket No. G008/M-21-138
IN THE MATTER OF THE PETITION BY GREAT PLAINS NATURAL GAS CO., A DIVISION OF MONTANA-DAKOTA UTILITIES CO., FOR APPROVAL OF RULE VARIANCES TO RECOVER HIGH NATURAL GAS COSTS FROM FEBRUARY 2021	MPUC Docket No. G004/M-21-235
IN THE MATTER OF A PETITION OF NORTHERN STATES POWER COMPANY D/B/A XCEL ENERGY TO RECOVER FEBRUARY 2021 NATURAL GAS COSTS	MPUC Docket No. G002/CI-21-610
IN THE MATTER OF THE PETITION OF MINNESOTA ENERGY RESOURCES CORPORATION FOR APPROVAL OF A RECOVERY PROCESS FOR COST IMPACTS DUE TO FEBRUARY EXTREME GAS MARKET CONDITIONS	MPUC Docket No. G011/CI-21-611

**SURREBUTTAL TESTIMONY  
OF BRADLEY CEBULKO  
ON BEHALF OF  
THE CITIZENS UTILITY BOARD OF MINNESOTA  
Exhibit \_\_\_\_ (BC-S)**

February 11, 2022

## Contents

I. Introduction .....	4
II. What the Utilities Knew and When .....	8
III. Load Forecasting .....	15
IV. Reserve Margin.....	33
V. Storage .....	36
VI. Peaking facilities.....	41
VII. Conclusion .....	59

**Exhibit List**

*See* exhibit list attachment

**SURREBUTTAL TESTIMONY OF  
BRADLEY CEBULKO  
ON BEHALF OF THE CITIZENS UTILITY BOARD OF MINNESOTA**

**I. Introduction**

1       **Q1.     Please state your name and position.**

2       A1. My name is Bradley Cebulko. I am a Senior Consultant at Strategen Consulting  
3       located at 2150 Allston Way Suite 400, Berkeley, California 94704.

4       **Q2.     On whose behalf are you testifying?**

5       A2. I am testifying on behalf of the Citizens Utility Board of Minnesota (“CUB”).

6       **Q3.     Have you previously filed testimony in this proceeding?**

7       A3. Yes. I filed Direct Testimony on behalf of the Citizen’s Utility Board of Minnesota.

8       **Q4.     Was this testimony prepared by you or under your direction?**

9       A4. Yes, as with my direct testimony, this testimony was prepared by me or under my  
10      direction.

11      **Q5.     What is the purpose of your testimony?**

12      A5. The purpose of my testimony is to respond to rebuttal testimony by CenterPoint,  
13      MERC, and Xcel. In this Surrebuttal testimony, I discuss what the utilities knew and  
14      when, load forecasts, reserve margins, and the use of storage and peaking resources  
15      during the Event.

1       **Q6.     Are you proposing any modifications to the range of disallowance**  
2       **recommendations that you made on Direct?**

3       A6. Yes, and I will address each instance in the appropriate section of my testimony. In  
4       summation, I accept one modification from Xcel, one from MERC, and five from  
5       CenterPoint.

- 6               1. I accept witness Levine's observation that I double counted penalties for  
7               Xcel on February 17 for releasing interruptible customers early.
- 8               2. Based on the revised load forecast numbers MERC provided on  
9               Rebuttal, the utility's load forecasting error was within my range of  
10              reasonableness for February 13 through 16, although I still find their  
11              load forecast for February 17 to be unreasonable.
- 12             3. I accept witness Reed's observation that CenterPoint should use a  
13              curtailment compliance percentage that could be counted on during an  
14              uncertain situation. However, I disagree that 50 percent is appropriate.  
15              Based on the Company's historical data, since 2013, CenterPoint has  
16              had 90 percent compliance with curtailment calls. As such, I modify my  
17              curtailment compliance from 95 to 90 percent.
- 18             4. I accept witness Reed's observation that, because spot gas supplies must  
19              be ratably purchased over the holiday weekend, the avoided spot gas  
20              purchases as a replacement should have been modeled as identical for  
21              each of the four days.
- 22             5. I also found that Witness Reed's observation regarding ratable spot  
23              purchases over the long weekend applied to curtailments. If CenterPoint

had planned to maximize curtailments over each day of the long weekend (as they should have), they would have been forced to withdraw less gas from storage on some days in order to meet the requirement for ratable purchases. I have adjusted my calculations to account for some curtailments being absorbed by decreased storage withdrawals, rather than avoided spot purchases.

6. I appreciate witness Reed identifying an unintended error in my spreadsheet, which inadvertently referenced the wrong fuel cost. The impact was de minimis.

**Q7. Do you have a revised disallowance calculation for CenterPoint, MERC, and Xcel?**

A7. Yes. I have updated my range of disallowances for each utility.

*Table 1: CenterPoint Disallowance Range Surrebuttal*

CenterPoint Disallowance Estimate Range		
Curtailment	100% called (90% responsive)	
2/13 – 2/17	\$48,020,615	
2/17 Only	\$16,508,066	
Load forecasting and storage optimization	None	
Peaking optimization	50% LNG, 25% Propane	100% LNG, 50% propane
2/13 – 2/17	\$34,452,670	\$96,922,489
2/17 Only	\$12,424,737	\$24,923,313
2/13 – 2/17 Total	\$82,473,285	\$144,943,104
2/17 Only Total	\$28,932,803	\$41,431,379

1 *Table 2: MERC Disallowance Range Surrebuttal*

MERC Disallowance Estimate Range		
Curtailment	50% Interrupted	
2/13 – 2/17	\$4,165,683	
2/17 Only	\$902,791	
Load Forecasting Error and Storage Optimization	5% Forecasting Error, Reserve Margin (2.85% - 10.44%)	10% Forecasting Error, Reserve Margin(2.85% - 10.44%)
2/13 – 2/17	\$3,903,233	\$1,649,837
2/17 Only	\$3,903,233	\$1,649,837
Peaking Facilities	N/A	N/A
2/13 – 2/17 Total	\$8,068,916	\$5,815,520
2/17 Only Total	\$4,806,025	\$2,552,628

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3 *Table 3: Xcel Disallowance Range Surrebuttal*

Xcel Disallowance Estimate Range						
Curtailment	Additional Curtailment 2/17					
2/13 – 2/17	N/A on Surrebuttal (Disallowance captured in load forecasting)					
2/17 Only	N/A on Surrebuttal (Disallowance captured in load forecasting)					
Load forecasting and storage optimization	5% Forecasting Error, Reserve Margin (1.57 – 1.76%)			10% Forecasting Error, Reserve Margin (1.57 – 1.76%)		
2/13 – 2/17	\$9,734,465			\$1,513,383		
2/17 Only	\$4,836,910			\$1,513,383		
Peaking Facilities	Propane 50%, only	LNG 50%, Propane 25%	LNG 100%, Propane 50%	Propane 50%, only	LNG 50%, Propane 25%	LNG 100%, Propane 50%

2/13 – 2/17	\$14,311,286	\$57,895,657	\$115,791,314	\$14,311,286	\$57,895,657	\$115,791,314
2/17 only	\$2,488,873	\$10,068,623	\$20,137,247	\$2,488,873	\$10,068,623	\$20,137,247
<b>2/13 – 2/17 Total</b>	\$24,045,751	\$67,630,122	\$125,525,779	\$15,824,669	\$59,409,040	\$117,304,697
<b>2/17 Only Total</b>	\$7,325,783	\$14,905,533	\$24,974,157	\$4,002,256	\$11,582,006	\$21,650,629

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## **II. What the Utilities Knew and When**

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**Q8. Did CenterPoint, MERC, and Xcel change what they said they knew and  
when from Direct to Rebuttal?**

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A8. I did not see too many factual changes; however, CenterPoint, MERC, and Xcel (the  
Utilities) collectively shifted their focus to the uncertainty of their planning  
environment, particularly on February 12, as they were building gas supply plans for  
February 13 – 16. Witness Ryan testified, “There was more uncertainty around  
whether our contracted supplies would be delivered than we have ever experienced in  
my 12 years at CenterPoint Energy.”<sup>1</sup> Witness Sexton of MERC testified that on gas  
day February 17, MERC NNG faced an unprecedented natural gas supply situation  
with significant production losses that were still growing in magnitude. Sexton wrote,  
“In hindsight, MERC-NNG did not suffer significant cuts to its supply arrangements.  
However, at the time that the supply purchasing plan for February 17 was developed  
on the morning of February 16, risk of supply cuts in MERC’s supply agreement was

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<sup>1</sup> Rebuttal Testimony and Schedules of Jason M. Ryan on Behalf of CenterPoint Energy, MPUC Docket No. G008/M-21-138, OAH Docket No. 71-2500-37763, (Jan 21, 2022) (“Ryan Rebuttal”), p. 5, lines 16-18.



1 very high...” Xcel witness Krug testifies that in the early morning hours of February  
2 12, when the Company was finalizing its supply plan for February 13-16, “there was  
3 significant uncertainty about weather, customer load, and the deliverability of gas to  
4 Minnesota.”<sup>2</sup> The utilities were clearly concerned that portions of their supply could  
5 disappear during the weekend.

6 **Q9. Does the shift in focus to the uncertainty of the planning environment change**  
7 **your opinion on if the utilities took prudent actions before and during the Event?**

8 A9. No. The narrative shift supports Witness Nelson’s and my arguments that we made on  
9 Direct. As I explained on Direct, and will again now, by February 11, the utilities  
10 understood that there was a significant weather event that was impacting most of the  
11 middle of the country, that pipelines had begun issuing warnings of supply constraints,  
12 there were wellhead freeze offs in Texas and Oklahoma, that natural gas prices were  
13 \$15/Dth – the 98<sup>th</sup> percentile over the previous five years, that natural gas prices would  
14 continue to climb into the weekend, and that the utilities had to purchase large  
15 volumes of natural gas for four-days without knowing the final price of the  
16 commodity. Given the substantial uncertainty of the situation, the utilities had to first  
17 ensure reliability and second mitigate the cost impact to customers. The utilities should  
18 have curtailed all interruptible customers to reduce their demand from a tightening  
19 market and planned to use their abundant peaking supply to mitigate the costs to  
20 customers.

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<sup>2</sup> Rebuttal Testimony and Schedules of Allen D. Krug on Behalf of Northern States Power Company, MPUC Docket No. G002/CI-021-610, OAH Docket No. 71-2500-37763, (Jan 21, 2022) (“Krug Rebuttal”), p. 5, lines 21-22.

1 For Xcel, the Company has still not demonstrated that it properly maintained its LNG  
2 and peaking facilities, nor has it explained the reason it pulled its peaking facilities out  
3 of use other than a blanket “safety” concern with no description or details.

4 **Q10. Will you please summarize your Direct testimony on the planning**  
5 **environment that utilities were experiencing on February 12 when they were**  
6 **building their supply plans for February 13 – 16?**

7 A10. Yes. Below is a summary of events leading up to the Event, as explained in more  
8 detail in my Direct testimony. Citations supporting each event are provided in my  
9 Direct testimony.

- 10 • On February 4, NNG first called a system overrun limitation (SOL) and  
11 continued to call SOLs daily through February 17.
- 12 • By February 5, the 8- to 10-day outlook forecasted the probability of a cold  
13 weather event affecting the entire Midwest over the Presidents’ Day weekend.
- 14 • On February 8, industry press was indicating an increase in natural gas prices.
- 15 • On February 11 at 11:46 p.m., NiGas issued a critical day notice for February  
16 13 beginning at 9 a.m., which was anticipated to continue through February 15.
- 17 • On February 10 and 11, potential production freeze-offs were being reported  
18 by the trade press.
- 19 • By February 10, the utilities were recognizing that supply was tightening and  
20 there was supplier hesitancy to sell at the Gas Daily Index or at a fixed price  
21 due because of price movements on February 10 and where the market was  
22 estimating prices would settle for Gas Day February 11.

- 1           • The February 12 edition of Gas Daily published on February 11 noted: “The  
2           Midcontinent led the surge in US gas prices in Feb. 11 trading as a sharp rise in  
3           heating demand met with regional production freeze-offs, significantly  
4           tightening balances across much of the Central US. In morning trading, cash  
5           prices at hubs in Kansas, Oklahoma and eastern Arkansas hit levels not seen  
6           since 2014, with select locations hitting record highs, Intercontinental  
7           Exchange data showed. At One Oak Gas Transmission, Southern Star and  
8           Enable Gas, spot prices reached record highs around \$85, \$45, and  
9           \$30/MMBtu, respectively. At other hubs, including ANR Oklahoma,  
10          Panhandle and NGPL Midcontinent, prices hit their highest in seven years,  
11          topping \$16, \$14, and \$12/MMBtu, respectively.”
- 12          • On February 12 at 10:10 a.m., NNG posted a critical day notice effective at 9  
13          a.m. on February 13 through 8:59 a.m. on February 14

14          **Q11. Will you please summarize your Direct testimony on the price of natural gas**  
15          **leading up to February 12?**

16          A11. Yes.

- 17          • The 5-year annual average gas price is \$2.433/MMBtu for delivery into  
18          Emerson, \$2.468/MMBtu for Demarc, and \$2.543/MMBtu Ventura.<sup>3</sup>
- 19          • At the end of February 10, for delivery on February 11, spot market prices  
20          settled at \$4.733/MMBtu at Emerson, \$6.900/MMBtu at Ventura, and \$7.245

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<sup>3</sup> Analysis based on S&P Capital IQ Pro data.

1 at Demarc, representing a 95 percent, 171 percent, and 194 increase over 5-  
2 year annual average prices.

- 3 • By the end of February 11, as the utilities were developing their supply plans  
4 for February 13 – 16, spot prices had more than doubled from the previous day  
5 at both Demarc and Ventura settling at \$14.109/MMBtu and \$15.613/MMBtu,  
6 respectively. These February 11 prices represent a 472 percent (Demarc), 514  
7 percent (Ventura), and 167 percent (Emerson) increase over 5-year annual  
8 average prices.
- 9 • In the past 10 years in Minnesota, natural gas spot prices had only exceeded  
10 \$14/MMBtu during the 2013/2014 Polar Vortex, the TransCanada Pipeline  
11 Explosion in 2014, and the extreme cold of New Year's 2017/2018.

12 **Q12. What should the utilities have deduced about the directionality of the price of**  
13 **natural gas as they developed supply plans for February 13 – 16 on the morning**  
14 **of February 12?**

15 A12. The utilities acknowledge on Rebuttal that there was significant uncertainty  
16 going into the holiday weekend as the worst of a winter storm was still to come. Based  
17 on my experience and understanding of markets, when demand is expected to increase,  
18 and supply will likely decline, the price of a commodity will increase, all else constant.  
19 For a commodity like natural gas, which has relatively inelastic demand as it is an  
20 essential fuel, the final price would be unknown but could be expected to rise  
21 considerably.

1       **Q13.   Were CenterPoint’s gas traders aware of the significant market volatility on**  
2               **February 11 and 12 as the Company was developing its supply plans for**  
3               **February 13 – 16?**

4       A13.   Yes. In CenterPoint ICE Log chats with suppliers on Thursday, February 11,  
5               CenterPoint demonstrates that it had an acute sense of market volatility.<sup>4</sup> Around  
6               seven in the morning, CenterPoint asked if there were any index-based deals and heard  
7               back from a potential gas supplier that “we are not likely to participate in this pricing  
8               environment” and that it was “probably the same” for “the weekend.” Around the  
9               same timeframe, CenterPoint asked “how are prices this morning” and affirmatively  
10              stated that “it[’]s scary.” Around two in the afternoon, CenterPoint heard from a  
11              purveyor that “the indications are a big premium to historical but [I] think this  
12              weekend may be in uncharted waters” given that there is “so much uncertainty out  
13              there as you know.” These communications demonstrate that CenterPoint employees  
14              responsible for procuring gas supplies were aware that prices would likely  
15              dramatically increase going into the weekend when prices were already historically  
16              high.

17       **Q14.   Were Xcel’s gas traders aware of the significant market volatility on**  
18               **February 11 and 12 as the Company was developing its supply plans for**  
19               **February 13 – 16?**

20       A14.   Xcel traders were equally aware. In Xcel’s ICE Log chats from the morning of  
21               February 11, the Company was discussing the price spikes at the Oklahoma Hub and

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<sup>4</sup> ICE Log (Attached as Exhibit \_\_ (BC-S), Schedule 1, Public).

1       stated, “I think it is freeze off related” and that “got our power guys asking me about  
2       it” and the “crazy thing is tomorrow is going to be even more nut[s].” Around five-  
3       thirty in the morning, Xcel stated that “I knew today would be expensive but this is  
4       ridiculous.” Around seven-thirty in the morning, Xcel’s representative stated he “will  
5       be in a ball crying if you need me” in response to hearing that “tomorrow will be  
6       worse.” Around eight-thirty in the morning, Xcel’s representative stated that he  
7       “d[id]n’t remember ever seeing a price response like that historically” regarding the  
8       ongoing market volatility.

9               The Company’s conversations on Friday, February 12, at the time the  
10       Company was developing its supply plan, continued to show that the company was  
11       aware of extreme market volatility. At five-thirty in the morning, Xcel said, “this is  
12       nuts” and that the Oklahoma Hub was “selling for 350 right now.” Around that same  
13       time Xcel remarked that “can you imaging [sic] what people [sic] bills will be.” At  
14       around six in the morning, Xcel said that due to the market volatility “I bet people  
15       really wait out the fixed today.” Around six-thirty in the morning, Xcel said that  
16       “today is worse than yesterday” and that there was “expensive gas for the weekend.”  
17       From around seven-thirty to eight-thirty in the morning, Xcel stated that “this is a  
18       joke” and that “the world is ending” and that the market is “craziness” and exclaiming  
19       that its fixed-price trade at \$75 was “trade of the year on your part” and that “who  
20       would think I would sell 75 and it be bad.”<sup>5</sup>

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<sup>5</sup> Ice Log Chats (Attached as Exhibit \_\_\_\_ (BC-S), Schedule 2, HCTS).

1 Yet, with traders discussing how prices would make them cry and comparing the  
2 situation to the world ending, Xcel did not fully interrupt customers that receive a  
3 discount in exchange for agreeing to interrupt their usage upon short notice from Xcel.

4 **Q15. What did the utilities know on February 16 as they were developing their**  
5 **supply plans for February 17?**

6 A15. On February 16, natural gas prices were at unprecedented levels with Demarc and  
7 Ventura settling at \$133.64 and \$188.32, respectively. The utilities knew they were  
8 purchasing natural gas at unprecedently high levels. Yet none of them chose to relieve  
9 cost pressure to customers by modifying their gas delivery plans.

### **III. Load Forecasting**

10 **Q16. On direct, you found that MERC and Xcel made unreasonable load forecasts**  
11 **during the Event. In general, how have those two utilities characterized your**  
12 **direct testimony regarding load forecasting?**

13 A16. MERC and Xcel have suggested that my arguments regarding load forecasts are  
14 inappropriately based on hindsight.<sup>6</sup> Xcel Witness Levine testifies that, “it is  
15 obvious that Xcel Energy did not know actual loads when making their purchase  
16 decisions.”<sup>7</sup> Similarly, MERC Witness Eidukas argues, “while it is easy to judge  
17 the Company’s load forecasts with the benefit of hindsight, knowing actual load,

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<sup>6</sup> See: Rebuttal Testimony and Schedules of Steven H. Levine on Behalf of Northern States Power Company, MPUC Docket No. G002/CI-021-610, OAH Docket No. 71-2500-37763, (Jan 21, 2022) (“Levine Rebuttal”), p. 39, lines 4-5; Rebuttal Testimony and Schedules of Theodore T. Eidukas on Behalf of Minnesota Energy Resources Corporation, MPUC Docket No. G011/M-21-611, OAH Docket No. 71-2500-37763, (Jan 21, 2022) (“Eidukas Rebuttal”), p. 11, lines 9-12

<sup>7</sup> Levine Rebuttal, p. 39, lines 4-5

1 transportation volumes, and temperatures, MERC did not know and could not  
2 have known actual load requirements at the time it needed to forecast customer  
3 requirements and procure gas supplies during the event.”<sup>8</sup> For this reason, the  
4 utilities appear to conclude that my assessment of load forecasting accuracy  
5 inappropriately incorporates a hindsight bias.

6 **Q17. Do you agree with this conclusion?**

7 A17. No. As I argued in my direct testimony:

8 Although my assessment relies on load actuals that were not  
9 known at the time, this is inherent in any assessment of accuracy. It  
10 would be unreasonable to claim that accuracy cannot be examined,  
11 or that utilities have no obligation to care about the accuracy of  
12 their forecasts, simply because assessing accuracy requires  
13 comparing forecasts to actuals. Moreover, the utilities had actuals  
14 during the Event when they forecasted load for February 17 on  
15 February 16.<sup>9</sup>

16  
17 As I demonstrated in direct and re-emphasize below, MERC and  
18 Xcel’s load forecasting errors during the Event appear to be abnormal –  
19 and they have not explained why. They have also neglected to articulate a  
20 “reasonable” forecasting error, which is problematic given that utilities  
21 forecast load routinely. If MERC and Xcel are neglecting to analyze their  
22 forecasting errors, they would be ignoring key data for improving their  
23 forecasts. I do not believe that the Commission intends to dismiss these  
24 arguments about forecasting accuracy simply because load forecasts are

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<sup>8</sup> Eidukas Rebuttal, p. 11, lines 9-12

<sup>9</sup> Direct Testimony and Schedules of Bradley Cebulko on Behalf of the Citizens Utility Board of Minnesota, MPUC Docket Nos. G008/M-21-138, G004/M-21-235, G002/CI-21-610, G011/CI-21-611, OAH Docket No. 71-2500-37763, (Dec. 22, 2021) (“Cebulko Direct”), p. 47, lines 10-15.



1 forward-looking by nature. Such a practice would implicitly authorize  
2 over-procurement due to inaccurate load forecasts, which would not lead  
3 to just and reasonable rates.

4 **Q18. Did the utilities otherwise accurately characterize your concerns regarding**  
5 **load forecasting?**

6 A18. Not always. In Witness Derryberry's response to my arguments regarding storage  
7 – which, given its function for daily balancing, is closely tied to load forecasting,  
8 as I demonstrate in my direct testimony – Derryberry claims: "Mr. Cebulko's  
9 argument, in simplified form, is that the Company should not purchase any more  
10 gas supply than it burns."<sup>10</sup>

11 **Q19. Does this accurately characterize your position?**

12 A19. No. I am perplexed by this mischaracterization, given that I included supply  
13 reserve margins and forecast errors in my disallowance calculations, and  
14 explicitly acknowledged it would not be reasonable to expect that utilities empty  
15 their storage inventories each day of the event – an acknowledgement also  
16 reflected in my calculations. In this proceeding, "reserve margin" has referred to  
17 the degree to which planned supply exceeds forecast load, while "forecast error"  
18 refers to the unplanned discrepancy between forecast and actual load. Obviously,  
19 it would be unreasonable to expect utilities to perfectly forecast load and would  
20 jeopardize reliability if utilities neglected to plan a reserve margin. It is worth

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<sup>10</sup> Rebuttal Testimony and Schedules of Richard L. Derryberry on Behalf of Northern States Power Company, MPUC Docket No. G002/CI-021-610, OAH Docket No. 71-2500-37763, (Jan 21, 2022) ("Derryberry Rebuttal"), p. 28, lines 17-18

1 repeating that the subject of this prudence review is not whether utilities perfectly  
2 forecast load, but whether their forecasts were reasonable, given what was known  
3 and knowable at the time.

4 **Q20. Why is it important to include a reserve margin?**

5 A20. As several utilities have noted, planning a reserve margin ensures that utilities  
6 have sufficient supply show load turn out to be higher than forecast. I have  
7 addressed this issue separately in Section IV, below. Here, I want to emphasize  
8 that my disallowance calculations included *both* the reserve margins stated by the  
9 utilities *and* accounted for conservative load forecasting errors on top of the  
10 reserve margin.

11 **Q21. Have MERC and Xcel demonstrated that their forecasts were reasonable?**

12 A21. As I explain below, MERC has introduced new information that justifies its load  
13 forecast on February 14. However, I continue to have concerns regarding  
14 MERC's forecasting error on February 17, as well Xcel's forecasting error on  
15 February 14 and 17. Particularly on February 17, MERC and Xcel each over-  
16 forecast load by a degree that appears to be highly unusual. As stated, neither  
17 utility has adequately explained why their apparently abnormal errors were  
18 reasonable, nor have they provided a metric for an "appropriate" load forecasting  
19 error.

20 **Q22. You mentioned that you included supply reserve margins and forecasting**  
21 **errors in your calculations. How did the utilities respond to this?**

1       A22.   Xcel Witness Levine has claimed that both the supply reserve margins and  
2       forecasting errors included in my calculations are “arbitrary.”<sup>11</sup>

3       **Q23.   Do you agree with this characterization?**

4       A23.   No. As stated, I used the exact same supply reserve margins provided by each  
5       utility and included forecasting errors on top of this. As I demonstrate below, my  
6       load forecasting errors were generous and to the benefit of the utility. It is worth  
7       repeating that the burden of proof during a prudence review is on the utility to  
8       demonstrate the prudence of a utility’s actions – not the intervenor to prove  
9       imprudence.<sup>12</sup> Witness Levine’s claim that the reserve margin and forecasting  
10      errors utilized in my calculations are arbitrary is ironic given that the utilities have  
11      not provided any information or supports for appropriate targets to justify their  
12      actions. We are essentially being told that whatever the utilities did was  
13      appropriate, which is not sufficient for a prudence review. Given that MERC and  
14      Xcel have not explained why the scale of their forecasting errors on February 17  
15      were so abnormal, an understanding of “reasonable” forecasting errors, or that  
16      such information is applied to improving forecasts, the Commission has broad  
17      latitude in determining potential cost disallowances. The fact that the utilities have  
18      not provided this information does not dismiss them from their burden of proof,  
19      nor does it alter the broad latitude granted to regulators in determining cost  
20      disallowances.

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<sup>11</sup> Levine Rebuttal, p. 23, lines 13-17

<sup>12</sup> Minn. Stat. § 216B.16, subd. 4

I discuss my remaining concerns for MERC and Xcel in turn, below.

MERC

**Q24. What concerns regarding MERC's load forecasting did you raise in your direct testimony?**

A24. In my direct testimony, based on the data provided by MERC, I estimated that the Company's forecasting error for Sales customers was 10 percent on February 14 and 34 percent on February 17. I demonstrated that, based on historical data provided by the Company, both error rates appeared anomalous.

**Q25. You mentioned that MERC's explanation of its load forecast on February 14 addressed your concerns. Can you describe how the Company was able to justify its load forecast on February 14?**

A25. Yes. My concerns regarding MERC's forecast error for Sales customers on February 14 were based on an estimate. However, Witness Mead clarified in her Rebuttal testimony that the forecast error for Sales customers was 5 percent,<sup>13</sup> which is lower than I estimated previously.<sup>14</sup>

In my direct testimony, I noted that MERC NNG provided historical forecasts and actuals for the Company's combined Sales and Transportation customers over January and February of 2018-2020. Based on that analysis,

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<sup>13</sup> Rebuttal Testimony and Schedules of Sarah R. Mead on Behalf of Minnesota Energy Resources Corporation, MPUC Docket No. G011/M-21-611, OAH Docket No. 71-2500-37763, (Jan 21, 2022) ("Mead Rebuttal"), p. 41.

<sup>14</sup> This discrepancy is attributable to the fact that MERC did not separate load actuals for Sales and Transportation customers in the original data provided by the Company. My estimate of actuals was based on Transportation nominations at the 23<sup>rd</sup> hour; however, the Company now claims that Transportation actuals were lower than 23<sup>rd</sup>-hour nominations, resulting in high actuals and a lower forecast error for Sales customers only.

1 MERC over-projected load by 5 percent or more on only 7 dates, or 4 percent of  
2 the time.<sup>15</sup> Thus, the scale of MERC's forecasting error on February 14 still  
3 appears to be abnormal, given the historical data provided by the Company.  
4 However, I will continue to quantify disallowances only for the portion of  
5 forecasting errors that *exceed* 5 percent (not including 5 percent), which is the  
6 approach I applied in my direct testimony.

7 ***Q26.* How did MERC explain its load forecasting error on February 17?**

8 *A26.* MERC has introduced several new, revised numbers for February 17. First,  
9 although the Company originally highlighted its "minimal" reserve margin of  
10 <2% on February 14 and claimed that it planned a slightly negative (-0.92  
11 percent) reserve margin on February 17,<sup>16</sup> the Company now claims that it  
12 actually planned a positive reserve margin of 10% on February 17.<sup>17</sup> Second,  
13 MERC now claims that the load forecast used to inform gas procurement  
14 decisions for February 17 (listed as 252,974 Dth in direct testimony)<sup>18</sup> was  
15 actually 225,786 Dth<sup>19</sup> – a reduction of 11 percent. Finally, the Company  
16 confirmed that its final load for Sales customers on February 17 was 198,649  
17 Dth,<sup>20</sup> which is higher than the figure I estimated in my direct testimony.

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<sup>15</sup> Minnesota Energy Resources Corporation, Response to CUB IR#31 (Attached in Cebulko Direct as: Exhibit \_\_ (BC-D), Schedule 25, MPUC Docket No. G002/CI-21-610/OAH Docket No. 71-2500-37763)

<sup>16</sup> Direct Testimony and Schedules of Sarah R. Mead on Behalf of Minnesota Energy Resources Corporation, MPUC Docket No. G011/M-21-611, OAH Docket No. 71-2500-37763 (Oct. 22, 2021) ("Mead Direct"), Exhibit \_\_ (SRM-D), Schedule 7.

<sup>17</sup> Mead Rebuttal, p. 25-26.

<sup>18</sup> Mead Direct, Exhibit \_\_ (SRM-D), Schedule 7.

<sup>19</sup> Mead Rebuttal, p. 32.

<sup>20</sup> *Ibid.*

1       **Q27. Do you object to MERC's use of a 10% reserve margin on February 17?**

2       A27. Although it surprises me that MERC waited until Rebuttal to introduce revised  
3       information that conflicts with the account provided in direct testimony, if it is  
4       true that the Company planned a 10 percent reserve margin on February 17, I do  
5       not pass judgment either for or against MERC. As I noted in my direct  
6       testimony<sup>21</sup> and as Witness Mead emphasized in rebuttal,<sup>22</sup> MERC does not have  
7       peaking plants, nor does the Company have the same level of interruptible  
8       customers as CenterPoint or Xcel. I understand why, under these circumstances, a  
9       utility would create a relatively conservative supply margin.

10       **Q28. Do you have remaining concerns regarding MERC's forecast error on**  
11       **February 17?**

12       A28. Yes. Although MERC's forecasting error on February 17 is lower than it appeared  
13       in direct testimony, given the revised figures introduced in the Company's  
14       rebuttal testimony, MERC's forecasting error for Sales customers on February 17  
15       remains quite high: 14 percent.<sup>23</sup> As I noted in my direct testimony, MERC's  
16       combined forecast for Sales and Transportation customers has exceeded actuals  
17       by over 10 percent on only one occasion over January and February of 2018-  
18       2020, and has not exceeded 12 percent on a single instance.<sup>24</sup> The Company  
19       claimed that it "does not have a separate load forecast for Sales and

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<sup>21</sup> Cebulko Direct, p. 76, lines 5-7.

<sup>22</sup> Mead Rebuttal, p. 30, line 17.

<sup>23</sup> *Id.*, p. 32.

<sup>24</sup> Analysis based on: Minnesota Energy Resources Corporation, Response to CUB IR#31 (Attached in Cebulko Direct as: Exhibit \_\_\_ (BC-D), Schedule 25), MPUC Docket No. G011/M-21-611/OAH Docket No. 71-2500-37763.

1 Transportation customers,” despite providing this information for dates occurring  
2 over the Event in Rebuttal.<sup>25</sup> Thus, based on the data provided by the Company,  
3 MERC’s forecasting error on February 17 appears to be an anomaly. It is worth  
4 highlighting that, because MERC’s forecasting error on February 17 was on top  
5 of the Company’s planned 10 percent reserve margin, the Company was 26  
6 percent over-supplied on February 17. As stated, I neither support nor oppose  
7 MERC’s 10 percent reserve margin on February 17; my disallowance calculations  
8 integrate MERC’s updated reserve margin and focus only on the Company’s  
9 anomalous forecasting miss.

10 **Q29. Was MERC’s explanation of its forecasting miss on February 17 satisfactory**  
11 **to you?**

12 A29. No. According to MERC Witness Mead, MERC’s substantial forecasting miss  
13 was due to “differences in actual weather experienced across MERC’s widely  
14 dispersed service area and significant variability in transportation customer load  
15 over the course of the event.”<sup>26</sup> In addition, Witness Mead claims that “historical  
16 actual load data under similar weather conditions clearly demonstrates the  
17 reasonableness of the Company’s overall forecast.”<sup>27</sup> However, the Company has  
18 not provided the information needed to justify these claims. Although MERC  
19 provided temperature data, the Company did not provide an analysis to

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<sup>25</sup> Minnesota Energy Resources Corporation, Response to CUB IR#65a (Attached as Exhibit \_\_\_\_ (BC-S), Schedule 3, Public), MPUC Docket No. G011/M-21-611/OAH Docket No. 71-2500-37763

<sup>26</sup> Mead Rebuttal, p. 3, lines 2-4

<sup>27</sup> *Id.*, p. 14, lines 11-13

1 demonstrate that temperature differences were any different than those  
2 encountered every winter.

3 **Q30. Can MERC's substantial forecasting miss on February 17 be explained by**  
4 **Transportation customers outside of the Company's control, as suggested by**  
5 **Witness Mead?**

6 A30. No. In fact, the forecast provided by MERC's Transportation customers was more  
7 accurate than MERC's forecast for Sales customers; thus, the Company's  
8 combined forecast error for all customers *decreases* when Transportation  
9 customers are added to the equation.<sup>28</sup> If forecasts from MERC's transportation  
10 customers somehow skewed MERC's planning for Sales customers, this is not  
11 reflected in the data, which indicates the opposite of this.

12 **Q31. Can MERC's substantial forecasting miss on February 17 be explained by**  
13 **the weather?**

14 A31. It is unlikely. As stated, MERC has not provided the analysis necessary to show  
15 that weather forecasting misses were any different than those experienced  
16 annually. In discovery, the Company clarified that its temperature forecasting on  
17 February 17, when weighted by customer, was off by 2 degrees – an amount  
18 unlikely to be responsible for the Company's 14 percent forecasting error. The  
19 data provided by MERC – average temperatures and actual load for Sales and  
20 Transportation customers combined, on recent dates with temperatures like that

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<sup>28</sup> Mead Rebuttal, p. 32.



1 experienced on February 17, 2017 – does not provide data on historic load or  
2 temperature forecasting errors, and selectively omits other winter dates relevant to  
3 this analysis. When CUB requested historic temperature data from January-  
4 February of 2018-2020, average temperature misses of 2 degrees did not appear to  
5 be particularly uncommon, nor were such errors typically associated with load  
6 over-projections above 5 percent for Sales and Transportation customers  
7 combined.<sup>29</sup> As stated, MERC has consistently refused to provide historic load  
8 forecasting data for Sales customers only,<sup>30</sup> despite demonstrating an ability to do  
9 so in Rebuttal.<sup>31</sup>

10 **Q32. Isn't it appropriate for MERC to have such a large forecasting error given**  
11 **the Company's concerns regarding supply cuts?**

12 A32. No. The Company's concerns regarding supply cuts are an argument for planning  
13 a comfortable (10%) supply reserve margin. This argument does not explain an  
14 abnormally high and unplanned forecasting miss.

15 **Q33. Did MERC include any additional explanations for their substantial**  
16 **forecasting miss in their rebuttal testimony?**

17 A33. Yes. According to Witness Mead, MERC Consolidated and MERC NNG utilize  
18 the same load forecasting methodology. Since MERC Consolidated produced a

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<sup>29</sup> Analysis based on: Minnesota Energy Resources Corporation, Response to CUB IR#65 (Table) (Attached as Exhibit \_\_ (BC-S), Schedule 3), MPUC Docket No. G011/M-21-611/OAH Docket No. 71-2500-37763

<sup>30</sup> Minnesota Energy Resources Corporation, Response to CUB IR#65a (Attached as Exhibit \_\_ (BC-S), Schedule 3, Public), MPUC Docket No. G011/M-21-611/OAH Docket No. 71-2500-37763; also see: Minnesota Energy Resources Corporation, Response to DOC IR #55d (Attached in Cebulko Direct as: Exhibit \_\_ (BC-D), Schedule 20), MPUC Docket No. G011/CI-21-611/OAH Docket No. 71-2500-37763.

<sup>31</sup> Mead Rebuttal, see p. 32 and p. 41.

1 relatively accurate forecast, according to Witness Mead, “it is not reasonable to  
2 conclude one is relatively accurate and the other not when utilizing the same  
3 methodology.”<sup>32</sup>

4 **Q34. Is this explanation satisfactory?**

5 A34. No. According to the data provided by the Company’s, MERC Consolidated over-  
6 projected load by 4 percent on February 17<sup>33</sup> while MERC NNG over-projected  
7 load by 14 percent. This substantial discrepancy in forecasting accuracy speaks  
8 for itself. The fact that MERC uses the same methodology for each forecast does  
9 not explain this large and conspicuous discrepancy.

10 Xcel

11 **Q35. What concerns regarding Xcel’s load forecasting did you raise in your direct**  
12 **testimony?**

13 A35. In my direct testimony, I identified that Xcel over-forecast load by 6.26 percent  
14 on February 14 and 12.28 percent on February 17.<sup>34</sup> Because Xcel refused to  
15 provide information on historical load forecasts,<sup>35</sup> I analyzed MERC’s historical  
16 data and found that, as argued above, an over-projection of over 5 percent appears  
17 to be quite anomalous, as it appeared on only 6 dates of 178 over January –

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<sup>32</sup> Mead Rebuttal, p. 38, lines 4-5.

<sup>33</sup> Minnesota Energy Resources Corporation, Response to DOC IR#16 (Table) (Attached as Exhibit \_\_\_ (BC-S), Schedule 4, HCTS), MPUC Docket No. G999/CI-21-135.

<sup>34</sup> Cebulko Direct, p. 42, lines 2-5.

<sup>35</sup> Xcel Energy, Response to CUB IR #52f (Attached in Cebulko Direct as: Exhibit \_\_\_ (BC-D), Schedule 27), MPUC Docket No. G002/CI-21-610/OAH Docket No. 71-2500-37763.

1 February of 2018-2020, or 3 percent of the time.<sup>36</sup> As noted, forecasting errors of  
2 over 10 percent occurred on a single instance (<1% of the time) and never  
3 exceeded 12 percent. In addition, I was concerned by Xcel's claim that the  
4 Company based its supply plans on load forecasts that included interruptible  
5 customers,<sup>37</sup> and by the data indicating that the Company procured duplicative  
6 supply on behalf of the customers that the utility would later interrupt. As I  
7 explained in my Direct testimony, while a 6 percent forecasting error on February  
8 14 might not seem as substantial at first glance, "Xcel maximized curtailments on  
9 February 14, while still planning a reserve margin based on an escalated load forecast  
10 that *included these curtailments*."<sup>38</sup> Had Xcel based its supply planning on a  
11 forecast for non-interruptible customers only, the Company would have seen that  
12 it was planning to substantially over-procure on February 14 and 17.<sup>39</sup> Although  
13 Xcel now claims that considerations of interruptible load played some role in the  
14 Company's supply planning, as I discuss below, the Company has not provided  
15 the transparency needed to demonstrate that this role was more than minimal.

16 **Q36. Why do you believe that Xcel's load forecasts during the Event included**  
17 **interruptible customers?**

18 A36. I believe that Xcel's load forecasts included interruptible customers because the  
19 Company has claimed this to be the case. CUB issued an information request

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<sup>36</sup> Analysis based on: Minnesota Energy Resources Corporation, Response to CUB IR#31 (Attached in Cebulko Direct as: Exhibit\_\_\_(BC-D), Schedule 25), MPUC Docket No. G011/M-21-611/OAH Docket No. 71-2500-37763.

<sup>37</sup> Xcel Energy, Response to CUB IR #60a (Attached in Cebulko Direct as: Exhibit\_\_\_(BC-D), Schedule 13), MPUC Docket No. G002/CI-21-610/OAH Docket No. 71-2500-37763.

<sup>38</sup> Cebulko Direct, p. 42, lines 12-13.

<sup>39</sup> Cebulko Direct, pp. 41-43.

1 asking Xcel whether the load forecasts provided in Witness Derryberry's direct  
2 testimony included interruptible customers. The Company responded, "the  
3 forecasted load as set forth on Line 12 of Corrected Attachment A<sup>40</sup> includes firm  
4 and interruptible customers."<sup>41</sup> In direct testimony, Xcel Witness Derryberry  
5 explained how the Company planned to procure supply that slightly exceeded this  
6 load forecast – which, according to Xcel, included interruptible customers – to  
7 maintain a slight reserve margin.<sup>42</sup> The data provided by Witness Derryberry  
8 indicate that planned supply indeed exceeded forecast load over each day of the  
9 Event, including February 14 and 17.

10 **Q37. On Rebuttal, how has Xcel explained interruptible load's influence on supply**  
11 **planning efforts?-**

12 A37. According to Witness Derryberry, interruptible load was factored into supply  
13 planning in two ways. First, the Company's load forecasting model ("TESLA  
14 model") "utilizes historic data, which includes actual data from previous  
15 curtailments."<sup>43</sup> Second, Witness Derryberry claims that the Company took  
16 "curtailment information into account in planning our purchases by not  
17 purchasing as much supply (and associated reserve) as we otherwise would  
18 have."<sup>44</sup>

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<sup>40</sup> The cited line item is identical to the load forecast provided in Table 3 of: Direct Testimony and Schedules of Richard L. Derryberry on Behalf of Northern States Power Company, MPUC Docket No. G002/CI-21-610, OAH Docket No. 71-2500-37763 (Oct. 22, 2021) ("Derryberry Direct"), Exhibit \_\_ (RLD-1), Schedule 2, p. 26.

<sup>41</sup> Xcel Energy, Response to CUB IR #60a (Attached in Cebulko Direct as: Exhibit \_\_ (BC-D), Schedule 13), MPUC Docket No. G002/CI-21-610/OAH Docket No. 71-2500-37763.

<sup>42</sup> Derryberry Direct, Exhibit \_\_ (RLD-1), Schedule 2, p. 26 and pp. 32-33.

<sup>43</sup> Derryberry Rebuttal, p. 17, lines 3-4.

<sup>44</sup> *Id.* p. 16, lines 23-25.

1       **Q38. Is this explanation satisfactory to you?**

2       A38. No. I believe that Xcel is attempting to thread a delicate needle by indicating that  
3       consideration of interruptions may not have been entirely excluded from supply  
4       planning – even if such considerations played a minimal role. Unlike MERC,  
5       which provided data in its rebuttal testimony documenting the Company’s claims,  
6       Xcel has not provided any data quantifying the degree to which historic  
7       curtailments informed TESLA load forecasts or demonstrating that the Company  
8       chose to reduce purchases given its planned curtailments.

9               According to Witness Derryberry, Xcel’s load forecasts include the most  
10       recent *five years* of data<sup>45</sup> – yet the Company rarely interrupts customers. In  
11       Discovery, Xcel added that the TESLA model, “incorporates historical data from  
12       January 2012 to the present, with more recent data more heavily weighted, in each  
13       day’s forecast,”<sup>46</sup> but did not explain the degree to which more recent information  
14       is more heavily weighted. When asked to quantify the degree to which planned  
15       curtailments informed Xcel’s stated decision to “not purchas[e] as much supply  
16       (and associated reserve) as we otherwise would have,”<sup>47</sup> Xcel responded that “the  
17       Company does not have a specific quantity ‘not purchased.’”<sup>48</sup> For these reasons,  
18       as well as the Company’s previous statements and data indicating that planned  
19       supply exceeded load forecasts that did not exclude interruptible customers, there

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<sup>45</sup> *Id.* p. 7.

<sup>46</sup> Xcel Energy, Response to CUB IR #89b (Attached as Exhibit \_\_\_\_ (BC-D), Schedule 6), MPUC Docket No. G002/CI-21-610/OAH Docket No. 71-2500-37763.

<sup>47</sup> Derryberry Rebuttal, p. 16, lines 24-25.

<sup>48</sup> Xcel Energy, Response to CUB IR #90 (Attached as Exhibit \_\_\_\_ (BC-D), Schedule 7), MPUC Docket No. G002/CI-21-610/OAH Docket No. 71-2500-37763.

1 is reason to believe that curtailments played a minimal role in influencing supply  
2 planning. If this is not the case, Xcel has not met its burden to demonstrate  
3 otherwise.

4 **Q39. If planned interruptions had played a major role in informing load**  
5 **forecasting and supply planning, would this impact your disallowance**  
6 **recommendations?**

7 A39. No. My disallowance recommendations reflect the fact that Xcel's forecasting  
8 errors, as I have argued, appear to be anomalous on February 14 and 17. Because  
9 Xcel has previously claimed that its forecasts included interruptible customers  
10 while its actuals did not, I proposed this as one explanation for the Company's  
11 large forecasting miss. However, even if consideration of interruptible customers  
12 played a major role in Xcel's forecasting, this does not change the reality of the  
13 Company's anomalous forecasting errors. It would simply mean that those  
14 forecasting errors have not yet been explained.

15 **Q40. Did Xcel's witnesses explain the Company's forecasting errors during**  
16 **Rebuttal?**

17 A40. Xcel's witnesses did not explain why the Company's forecasting error on  
18 February 14 was reasonable. Witness Derryberry claims that Xcel's forecasting  
19 error on February 17 was "likely due to the warming temperatures."<sup>49</sup>

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<sup>49</sup> Derryberry Rebuttal, p. 17, line 12.

1       **Q41. Is Xcel Witness Derryberry’s explanation that Xcel’s forecasting error was**  
2       **“likely due to warming temperatures” satisfactory to you?**

3       A41. No. The purpose of a temperature forecast is to predict the changes in  
4       temperature. Perhaps Xcel means to state that its load forecasts were inaccurate  
5       because its temperature forecasts were also inaccurate. According to Xcel Witness  
6       Derryberry, a 5-degree change in temperature is associated with a 40,000 Dth  
7       shift in customer demand, on average;<sup>50</sup> thus, we would expect Xcel’s 70,000 Dth  
8       load forecasting miss on February 17 to be associated with a substantial  
9       temperature forecasting error of approximately 9 degrees on this date. However,  
10      the Company has not provided the documentation necessary to demonstrate that  
11      the temperature forecast was responsible for its load forecasting miss, nor has the  
12      Company explained why it would be appropriate for temperature forecasting  
13      errors to be so substantial.

14      **Q42. Has Xcel provided any data to contextualize its forecasting errors?**

15      A42. I was surprised to see that, after refusing to provide the historical data on load  
16      forecasts requested by CUB, Xcel Witness Derryberry provided limited historical  
17      load forecast data in Rebuttal. According to Figure 1 in Witness Derryberry’s  
18      Rebuttal testimony, it appears that load over-projections of 10 percent or more are  
19      quite abnormal – well under 5 percent of observations.<sup>51</sup> However, it is  
20      challenging to draw conclusions because the data is provided for a limited date

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<sup>50</sup> Derryberry Direct, Exhibit \_\_\_ (RLD-1), Schedule 2, p. 33.

<sup>51</sup> Derryberry Rebuttal, p. 22.

1 range (March 15, 2021 – January 17, 2022) that is less than a year in length and  
2 excludes most of the winter season. We cannot explain why Xcel refuses to share  
3 its more relevant winter data with us.

4 **Q43. Did Xcel otherwise accurately characterize your concerns regarding load**  
5 **forecasting?**

6 A43. Not always. According to Xcel Witness Derryberry, I claimed that “Xcel Energy  
7 over-purchased supplies for February 17 due to the decision to release a portion of  
8 interruptible customers from curtailment that day,”<sup>52</sup> a position that Witness  
9 Derryberry claims has no merit.<sup>53</sup> In reality, I claimed the opposite: Xcel was able  
10 to release customers from curtailment because the Company over-procured on  
11 February 17.<sup>54</sup>

12 **Q44. Did Xcel make any additional arguments regarding load forecasting?**

13 A44. Yes. According to Xcel Witness Levine, “[m]y fundamental disagreement with  
14 the intervenor witnesses is that their claims do not properly consider the natural  
15 gas market conditions at the time these decisions were made and the substantial  
16 uncertainties facing Xcel Energy at the time it purchased spot market supplies  
17 during the February 12 through February 16 period.”<sup>55</sup>

18 **Q45. Do you agree with this argument?**

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<sup>52</sup> *Id.*, p. 26, lines 12-14.

<sup>53</sup> *Id.*, p. 26, lines 14-16.

<sup>54</sup> Cebulko Direct, p. 74, lines 10-14.

<sup>55</sup> Levine Rebuttal, p. 18, lines 8-13.



1       A45.    No. I used the same supply margins provided by the Company and created  
2           conservative load forecasting error allowances. I do not believe that it would be  
3           appropriate to increase the reserve margins, given that Xcel has more interruptible  
4           customers than MERC and also substantial access to peaking resources which,  
5           unfortunately for ratepayers, were offline during the Event. I specifically discuss  
6           reserve margins in greater detail below.

#### **IV. Reserve Margin**

7       **Q46.    On Direct, the Department witness King asked the utilities to provide**  
8           **information that details and supports the quantity of supply reserves they made**  
9           **during the Event. Can you please summarize the utilities responses?**

10      A46.    Yes. CenterPoint testifies that the Company does not plan for a specific amount of  
11           supply reserves; rather, on high demand days the company “aims to be slightly long in  
12           its gas supplies.”<sup>56</sup> CenterPoint justifies not identifying a supply reserve because it  
13           bases its gas plan on the interplay of a multitude of factors, including experience,  
14           expertise, and judgement. Witness Grizzle testifies that if the Company is aware of  
15           potential supply cuts, then it will purposefully try to be “slightly long” to ensure  
16           adequate supply.<sup>57</sup> Witness Reed concurs, testifying that there are a variety of  
17           approaches for arriving at a supply reserve margin but there is no simple formula.

18           Xcel witness Derryberry testifies that Minnesota has never established a supply  
19           reserve and applying a mathematical formula is not conducive as it depends upon the

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<sup>56</sup> Grizzle Rebuttal, p. 25-26, lines 16-1.

<sup>57</sup> Grizzle Rebuttal, p. 26, lines 14-17.

1 circumstances and judgment calls by the utility.<sup>58</sup> Derryberry continues that Public  
2 Service Company of Colorado uses a 12.5 percent margin, higher than King's  
3 recommended 5.5 percent, but that Minnesota experiences colder weather than  
4 Colorado.

5 MERC witness Sexton testifies that although the Company typically targets a  
6 supply reserve of about 7 – 9 percent, for February 17 MERC NNG planned for a 10  
7 percent supply reserve as the Company was concerned about supply cuts.<sup>59</sup>

8 **Q47. Did you testify on the reserve margin on direct?**

9 A47. No, not explicitly. To develop my range of disallowance recommendations in  
10 Direct testimony, I modeled each of the utilities reserve margin, where identified, and  
11 then modeled a 5 percent and 10 percent load forecasting error allowance on top.

12 **Q48. Do you have any comments on the utilities' explanation of their chosen**  
13 **reserve margins?**

14 A48. I am concerned that Xcel and CenterPoint will not put forth any criteria for which  
15 a regulator could use to judge the appropriateness of the utility's margin nor evaluate  
16 the Company's performance. Aiming to be "slightly long" does not tell us anything  
17 useful about the Company' methodology. All three utilities argue that the supply  
18 reserve margin should be based on the circumstances of the situation, and that is  
19 reasonable. In times of uncertainty, a reasonable utility would take a more  
20 conservative approach. However, the utility must be able to identify the criteria it uses,

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<sup>58</sup> Derryberry Rebuttal, p. 20, lines 17-26.

<sup>59</sup> Sexton Rebuttal, p. 10-11, lines 8-12.

1 and it is not unreasonable to assume that there is a target range that could be expressed  
2 as percentage of load. Only MERC identifies that it typically uses a 7 to 9 percent  
3 reserve margin but increased it to 10 percent for February 17 because it had supply  
4 concerns. I find it frustrating that Xcel and CenterPoint would not identify either a  
5 target range or any other criteria which could be used to evaluate their performance.  
6 Xcel's utility in Colorado has an identifiable target of 12.5 percent yet Witness  
7 Derryberry suggests that it is inappropriate to identify a similar target here in  
8 Minnesota. Xcel and CenterPoint's unwillingness to be transparent in this situation is a  
9 cause for concern and is another instance where they failed to meet their burden of  
10 proof.

11 **Q49. Does the reserve margin also include the utilities peaking facilities and**  
12 **curtailment load?**

13 A49. No. The reserve margin refers to additional gas purchases and does not include  
14 peaking facility supply or callable curtailment. These are important resources that  
15 would be called upon to limit load (i.e., curtailable load) or inject supply (i.e., peak  
16 facilities) after the reserve margin has been relied upon to inform load forecasts.  
17 CenterPoint and Xcel have an abundance of both resources, although Xcel was without  
18 its peaking facilities during the Event. Recall, all three utilities do not believe that they  
19 should curtail customers or use peaking resources to respond to extreme pricing  
20 events. As Table 1 below demonstrates, essentially CenterPoint and Xcel are arguing  
21 that they need 25-30% of their daily load obligation in reserve on top of their reserve

margin to ensure the reliability of their system. In my opinion, the level of reserve that the utilities claim they need is unreasonable.

*Table 4: Reserve Margin*

Utility	2/14 Load	Supply Reserve (2/14, 2/17)	Interruptible	Peaking Facilities	Interruptible + Peaking as Percentage of Load
CenterPoint	1,223,099	1.83%, 0.83%	109,000	221,000	26.98%
MERC	268,886	2.85%, 10.44%	9,146	0	3.40%
Xcel	754,477	1.57%, 1.76%	64,894	200,000	35.11%

Of course, Xcel's peaking facilities were not available during the Event. The Company purchased additional pipeline capacity to cover its position at the beginning of the year. It would have been helpful if Xcel explained how it considered the interactions of its ability to call on curtailment or peaking facilities when it decides to set its reserve margin. However, the Company chose not to provide that analysis.

## **V. Storage**

**Q50. What concerns regarding the utilities' use of storage did you raise in your direct testimony?**

A50. In direct, I demonstrated that, because MERC and Xcel substantially over-forecast load during the Event, they were unable to utilize storage to the maximum extent possible. Had MERC and Xcel more accurately forecasted load and been less over-supplied, this would have allowed the two utilities to continue pulling relatively cheap gas from storage to balance the system, thus decreasing the cost to customers.

1                   Given that CenterPoint’s load forecasting during the Event was relatively  
2 accurate, I did not recommend disallowances based on load forecasting or storage  
3 for CenterPoint in my direct testimony. However, as noted in the Introduction, I  
4 found that, if CenterPoint had planned to maximize curtailments over each day of  
5 the long weekend (as they should have), they would have been forced to withdraw  
6 less gas from storage on some days to meet the requirement for ratable purchases.  
7 I have adjusted my calculations to account for some curtailments being absorbed  
8 by decreased storage withdrawals, rather than avoided spot purchases.

9           **Q51. Have MERC and Xcel addressed your concerns?**

10          A51. No. MERC did not explicitly respond to my arguments regarding storage  
11 utilization. Xcel largely mischaracterized my arguments and suggested that my  
12 approach inappropriately reflected a hindsight bias.

13          **Q52. How did Xcel characterize your arguments regarding storage?**

14          A52. Xcel Witness Derryberry incorrectly summarized my position as, “Mr. Cebulko’s  
15 argument, in simplified form, is that the Company should not purchase any more  
16 gas supply than it burns.”<sup>60</sup> According to Witness Derryberry, my testimony,  
17 “implies that the Company should end the day having withdrawn all the gas  
18 possible from storage, with every dekatherm of that storage gas and any gas  
19 purchased that day burned – an impossible standard for any utility to meet.”<sup>61</sup>

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<sup>60</sup> Derryberry Rebuttal, p. 28, lines 17-18.

<sup>61</sup> *Id.*, p. 29, lines 3-6.

1       **Q53. Does this accurately characterize your position?**

2       A53. No. Although this position is easy to criticize as “backward-looking” – as Witness  
3       Derryberry does – it is not my position. It is puzzling that Witness Derryberry  
4       characterizes my argument in this manner, given that the workpapers  
5       documenting cost disallowances explicitly *did not* assume that all possible gas  
6       was withdrawn from storage on each day of the Event, as Witness Derryberry  
7       claims.<sup>62</sup> As I noted in Direct and reiterate here, storage plays an important intra-  
8       day balancing function.<sup>63</sup> This mischaracterization of my argument seems to rely  
9       on some utility witnesses’ repeated claim that I equate prudence with perfect  
10      forecasting – an “impossible standard” indeed. Again, my position is not that  
11      utilities must perfectly forecast load or empty their storage inventories every day.  
12      My position is that due to MERC and Xcel’s own failure to accurately forecast  
13      load during the event – failures that appear to be highly unusual – the utilities  
14      were not able to utilize storage to the degree that would have been possible with  
15      better forecasting. If forecasting errors had been within the bounds of historic  
16      error rates, Xcel and MERC still would not have emptied their storage inventories  
17      on each day of the Event. Witness Levine recognized this fact when he stated: “I  
18      note that even under the spot purchase scenarios advocated by Mr. Cebulko, Xcel  
19      Energy would have had excess natural gas supplies which would have been  
20      returned to its NNG storage inventory, thus resulting in storage utilization below

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<sup>62</sup> Cebulko Direct, Workpapers, CenterPoint HCTS, MERC HCTS, and Xcel HCTS.

<sup>63</sup> See: Cebulko Direct, p. 51, lines 7-10.

1 the maximum withdrawal capability.”<sup>64</sup> Given this fact, it is unclear why Xcel’s  
2 witnesses continue to claim that I think maximizing storage means that  
3 inventories should be emptied each day.

4 **Q54. Are there other reasons that Xcel claims that your analysis includes an**  
5 **inappropriate hindsight bias?**

6 A54. Yes. To support the claim that my analysis is backward-looking, Witness  
7 Derryberry argues that, “this is best exemplified by Mr. Cebulko’s claim...that  
8 the issue in this case on storage should not be whether the Company ‘maximized  
9 storage nominations, but rather [whether we maximized] storage utilization.”<sup>65</sup>  
10 Witness Levine repeats this argument, claiming that my focus on storage  
11 utilization rather than nominations is “misguided and reflect[s] how [my] opinions  
12 are improperly based on hindsight rather than considering the reasonableness of  
13 decisions at the time they were made.”<sup>66</sup> According to Witness Levine:

14 ...[W]hile after the fact it is true that Xcel Energy withdrew less  
15 than its maximum storage withdrawal rights on NNG, this just  
16 reflects the fact that the supply reserve margin resulted in excess  
17 supplies relative to actual load and these supplies were returned to  
18 NNG storage thereby lowering actual storage withdrawals below  
19 the maximum level.<sup>67</sup>

20 **Q55. Do you agree with this argument?**

21 A55. I do not. If it were my position that utilities must perfectly forecast load and  
22 empty their storage inventories every day, then it would be reasonable to suggest

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<sup>64</sup> Levine Rebuttal, p. 52, lines 10-14.

<sup>65</sup> Derryberry Rebuttal, p. 28-29, lines 25-3.

<sup>66</sup> Levine Rebuttal, p. 51, lines 12-14.

<sup>67</sup> *Id.*, p. 52, lines 4-8.

1 a hindsight bias. However, that was not the position I articulated in my Direct  
2 testimony, and it is not my position now. Again, by “maximizing storage,” I am  
3 not arguing that storage inventories should be emptied each day. While it is  
4 normal, as Witness Levine suggests, to return excess supplies to storage  
5 inventories, MERC and Xcel based their supply plans on forecasts that over-  
6 projected load by an abnormal degree and were thus unable to utilize as much  
7 storage as would have been possible even if their over-forecast had been reduced  
8 to even a still-unusual 10 percent. Given that MERC and Xcel have not explained  
9 why their anomalous forecasting errors were reasonable, they have also not  
10 explained why it is reasonable to utilize less storage than would have been  
11 possible with better forecasting – even assuming unchanged reserve margins and  
12 conservative load forecasting error rates.

13 **Q56. Did Xcel raise any additional objections to your arguments concerning**  
14 **storage?**

15 A56. Yes. According to Witness Levine, I engaged in “unwarranted hyperbole” when I  
16 claimed that “Xcel and MERC could over-project load by two or three or ten-fold,  
17 fail to withdraw any storage, but still claim optimal storage utilization because the  
18 utilities maximized storage nominations during the planning process.”<sup>68</sup>

19 **Q57. Were you suggesting that MERC and Xcel actually over-projected load by**  
20 **two or three or ten-fold?**

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<sup>68</sup> *Id.*, p. 53, lines 3-6.



1 A57. No.

2 **Q58. Was your statement unwarranted?**

3 A58. Apparently not. I raised this point to demonstrate the illogic of Witness  
4 Derryberry and Levine's suggestions that only storage nominations, and not  
5 utilization, are appropriate to consider during a prudence review. If utilities had  
6 no obligation to maximize storage utilization but only to "cover their bases" by  
7 maximizing storage nominations, this implicitly authorizes over-procurement,  
8 which would not lead to just and reasonable rates. This fact would apply in a  
9 hypothetical, extreme scenario in which a utility over-projected load by three-  
10 fold, and it applies in the current case, in which MERC and Xcel over-projected  
11 by a highly unusual degree. While I used the hypothetical example to demonstrate  
12 the utilities illogical position, the utilities have continued to use this illogical  
13 justification through rebuttal.

## **VI. Peaking facilities**

14 **Q59. Please summarize CenterPoint rebuttal testimony on its use of its peaking**  
15 **facilities during the Event.**

16 A59. CenterPoint testifies that peaking facilities are capacity tools used to reduce  
17 pipeline transportation requirements, and it would be inconsistent with the Company's  
18 Gas Procurement Plan to use the facilities to respond to extraordinarily high gas  
19 prices. Furthermore, peaking facilities are designed and located on the system to  
20 ensure reliability and flexibility to address daily or hourly load variations along the

1 distribution system.<sup>69</sup> The Company does not plan, through its Gas Procurement Plan,  
2 to use the peaking facilities unless forecasted load exceeds pipeline delivery capacity.  
3 Witness Grizzle testifies that the Company could not have reduced its daily spot gas  
4 purchases by planning to dispatch its peaking facilities February 13-16, because the  
5 Company had to make ratable purchases on February 12 for the four-day period.<sup>70</sup>

6 **Q60. Please reminded us of your Direct testimony on CenterPoint's use of peaking**  
7 **facilities during the Event.**

8 A60. In Direct testimony, I argued that CenterPoint could have and should have used its  
9 peaking facilities to relieve the costs to customers and could do this while ensuring  
10 sufficient peaking supplies to respond to subsequent events during the winter. By  
11 February 12, the Company knew that prices were in the 98<sup>th</sup> percentile (\$15/Dth), that  
12 the worst of the storm had yet to occur, that pipelines had issued warnings about  
13 possible supply cuts, that there were wellhead freeze offs, that the Company had to  
14 purchase ratable gas for four-days and would be subject to as-of-yet unknown prices,  
15 and their traders expected prices to increase over the four-day weekend. The Company  
16 should have used that information to determine that it needed to dispatch some of its  
17 peaking facilities to mitigate costs to customers and that it could do so while  
18 maintaining sufficient resources for future need. By February 16, when the Company  
19 created its supply plan for February 17, the Company absolutely knew that they were

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<sup>69</sup> Heer Rebuttal, p. 10-11, lines 17-6.

<sup>70</sup> Grizzle Rebuttal, p. 49-50, lines 14-3.

1 amidst an unprecedented price spike yet continued to ignore the cost impact to  
2 customers.

3 **Q61. CenterPoint states that it does not plan, through its Gas Procurement Plan,**  
4 **to use the peaking facilities unless forecasted load exceeds pipeline delivery**  
5 **capacity. Does the Gas Procurement plan discuss price spikes?**

6 A61. I did not see an explicit contemplation of a price spike in its Gas Procurement  
7 Plan or how the utility would respond to a pricing event.

8 **Q62. If the Gas Procurement Plan does not discuss price spikes, does that alleviate**  
9 **the Company from the duty to act prudently when purchasing gas during a price**  
10 **spike event?**

11 A62. No. It would be unreasonable to expect a Gas Procurement Plan to account for  
12 every possible scenario impacting gas procurement. However, it is reasonable to  
13 expect a utility to act prudently, even under unusual or uncommon circumstances that  
14 may not be explicitly addressed in the Plan, based on information known or knowable  
15 at the time.

16 **Q63. Witness Heer continues to testify that peaking resources are not designed to**  
17 **be dispatched in response to high market prices. Does Heer provide any evidence**  
18 **as to the limitations of the facilities?**

19 A63. No. Witness Heer testifies that “there certainly are technical considerations that  
20 affect dispatch of the peaking facilities, as I have discussed in my Direct and Rebuttal

1           Testimony.”<sup>71</sup> However, after spending many hours reviewing the Company’s  
2           testimony, I don’t see where witness Heer explains the technical limitations of the  
3           plants for responding to high gas prices. Heer testifies peaking facilities are not  
4           designed nor planned to be used to respond to pricing events.<sup>72</sup> Witness Heer’s claim  
5           that peaking facilities are not “designed” to be dispatched in response high market  
6           prices implies that something about the physical structure or technical capabilities of  
7           the facilities makes it unreasonable, or impossible, for them to be dispatched in  
8           response to high market prices. I see no evidence presented that supports this assertion.  
9           I understand that mitigating price spikes is not the primary purpose of the location of a  
10          peaking facility nor is it the primary benefit to the utility, but that does not preclude  
11          the Company from using the facility to respond to extraordinary prices in a safe and  
12          reasonable manner. Maintaining reliability and responding to price signals are not two  
13          mutually exclusive actions. In fact, that is a basic competency of a reasonable utility.

14          **Q64.   Witness Heer testifies that it is only with the benefit of hindsight can you**  
15          **conclude that using the peaking facilities during the Event would not jeopardize**  
16          **the availability of those resources for the remainder of the season. Do you agree?**

17          A64.   No. On Direct, I testified that “[o]f course, it would be imprudent for a utility to  
18          completely deplete their peaking resources in responding to the Event, however, that  
19          was not the circumstance that CenterPoint was facing.”<sup>73</sup> My Direct testimony analysis

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<sup>71</sup> Heer Rebuttal, p. 19, lines 10-12.

<sup>72</sup> Heer Rebuttal, p. 10, lines 20-2.

<sup>73</sup> Cebulko Direct, p. 85-86, lines 19-2.

1 clearly relied on what the utility knew and should have known at the time. To briefly  
2 summarize my Direct testimony, I testified to the following:

- 3 • At the time of the Event in mid-February, CenterPoint had near full capacity  
4 of its LNG facilities (95%) and more than two-thirds capacity of its propane  
5 (70%) facilities.<sup>74</sup>
- 6 • Even if the utility had dispatched the daily maximum throughput of the LNG  
7 facility for the entirety of the Event, it would still have 52 percent of its  
8 maximum LNG capacity on February 18.<sup>75</sup>
- 9 • It would not have been reasonable for the Company to fully dispatch its  
10 peaking facilities throughout the duration of the Event, but the utility could  
11 have dispatched a reasonable amount of propane that could have made a  
12 material difference to customers.<sup>76</sup>
- 13 • Since 1900, there were only 79 instances from mid-February through April  
14 where temperatures had been below 0F after February 19.<sup>77</sup>
- 15 • Since 2010, CenterPoint's maximum annual dispatch from its LNG facility  
16 was 237,000 Dth in 2014, which is less than one quarter the LNG's annual  
17 capacity of 1,000,000 Dth.<sup>78</sup>
- 18 • Since 2010, CenterPoint had only called upon its LNG facility 9 times after  
19 February 14, and 5 times after March 1.<sup>79</sup>

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<sup>74</sup> Cebulko Direct, p. 86, lines 3-8. It is worth noting that the utility only fills its propane facilities up to 75 percent for the year. The Company had not used 30 percent of its propane supply by the time of the Event.

<sup>75</sup> Cebulko Direct, p. 86, lines 3-8.

<sup>76</sup> Cebulko Direct, p. 86, lines 9-15.

<sup>77</sup> Cebulko Direct, p. 87, lines 4-12.

<sup>78</sup> Cebulko Direct, p. 87, lines 18-19.

<sup>79</sup> Cebulko Direct, p. 88, lines 1-2.

- CenterPoint's highest utilization in a year since 2010 was 65,309 Dth, or less than 7 percent of its annual inventory. The Company had only dispatched 11,000 Dth of gas from its propane facilities after February 14 and 6,500 Dth after March 1.<sup>80</sup>

In summary, Witness Heer is misrepresenting the risk to the utility from dispatching its peaking facilities to respond to an extraordinary event in Mid-February. I did not advocate exhausting the Company's peaking supplies to respond to one pricing event, only that the Company could both use its facilities to respond to the Event and maintain sufficient peaking resources for use later in the cold season.

**Q65. Witness Reed argues that the avoided spot gas purchases related to the dispatch of peaking facilities must be identical for each day from February 13 – 16.<sup>81</sup> Do you agree?**

A65. Yes. I agree with Witness Reed. I updated my proposed range of disallowances accordingly.

**Q66. Witness Reed testifies that you used the wrong cost of LNG and propane in your calculation for the cost of dispatching the additional peaking supplies. How do you respond?**

A66. I used the costs the utility provided me in Discovery. CenterPoint has had ample opportunity – Direct, Discovery, Rebuttal – to transparently share its LNG and

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<sup>80</sup> Cebulko Direct, p. 88, lines 3-6.

<sup>81</sup> Reed Rebuttal, Schedule 1, p. 3, lines 15-19.

1 propane costs. If CenterPoint believes that I should use a different cost in my  
2 calculations, then they should present that information for consideration and review.

3 **Q67. Please summarize Xcel's rebuttal testimony on the prudence of their use of**  
4 **peaking facilities during the Event.**

5 A67. Witness Martz appropriately summarizes the two pertinent questions before the  
6 Commission on this issue.

- 7 1. Did Xcel properly maintain and operate its LNG facility, Wescott, and  
8 propane facilities, Sibley and Maplewood, or were the plants  
9 unavailability due to imprudent actions of the utility?
- 10 2. If the outages were the result of imprudent action on behalf of the utility,  
11 did it have a financial impact on customers?

12 Xcel argues that the plants' unavailability was not caused by imprudent  
13 maintenance and operation. Witness Martz defends the utility's maintenance and  
14 subsequent actions of the Wescott facility and its unplanned release of gas.

15 Xcel then argues that, even if the Company imprudently maintained and operated  
16 its facilities, the Company claims that it did not have an economic impact on  
17 customers. Witness Derryberry testifies that the peaking facilities are a capacity  
18 resource to be called upon near design day conditions or to address emergent  
19 reliability issues.<sup>82</sup> Thus, the absence of the facilities did not have an impact on  
20 customers during the Event because the Company was not near design day conditions  
21 and the Company did not have reliability issues. Derryberry continues that the utility

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<sup>82</sup> Derryberry, p. 31, lines 22-24.

1 does not plan to use the peaking facilities to respond to natural gas prices, regardless  
2 of the cost, so long as there isn't reliability issue. Witnesses Derryberry and Yehle  
3 contend that it is impossible for the Company or an intervenor to say if the Company  
4 would have used the facilities during the Event, nor how the facilities would have been  
5 used, therefore CUB's and the Department's analysis are unreasonable.

6 **Q68. Will you please summarize your Direct testimony on Xcel's use of peaking**  
7 **resources?**

8 A68. Yes. With regards to the LNG facility, I indicated in Direct that I was uncertain  
9 whether Xcel's actions were prudent. Because the burden to prove its case is on Xcel,  
10 Xcel needed to make a reasonable case that it prudently maintained and operated its  
11 peaking facilities, and I did not see that on Direct.

12 With regards to the propane facilities, I was frustrated that Xcel did not even  
13 attempt to explain why it took the facilities out of use.<sup>83</sup> Xcel did not present the most  
14 basic information, such as, what "additional investments" needed to be made at the  
15 propane facilities nor estimates or alternatives considered.

16 I also disagreed with Xcel that the unavailability of all of the peaking facilities did  
17 not have an impact on its customers. Had the facilities been available (and based on  
18 what the utilities knew when it made its supply plan decisions on February 12 and 16),  
19 it would have been prudent for Xcel to use some of their peaking supply to mitigate  
20 the financial impact to customers. On February 12, Xcel knew that prices were in the  
21 98th percentile for the past five years, their traders understood future prices would be

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<sup>83</sup> Cebulko Direct, p. 95, lines 5-10.



1 considerably higher, the worst of the storm had yet to arrive, the Company was  
2 procuring gas for the next four days, and the pipelines had issues warnings. Xcel  
3 should have had known the Directionality of the price of natural gas. I do not expect  
4 clairvoyance, as suggested by Derryberry,<sup>84</sup> just general awareness of the planning  
5 environment and the multitude of incoming warnings rather than dogmatic adherence  
6 to a general Company plan.

7 Second, by February 16, Xcel would have absolutely known the price of natural  
8 gas and should have utilized its peaking facilities to relieve the cost to ratepayers. Like  
9 CenterPoint, based on data since 2011, Xcel traditionally has an abundance of peaking  
10 facilities available and could have responsibly used them while also ensuring that the  
11 Company had an adequate supply for the rest of the year.<sup>85</sup>

12 **Q69. After reading the Department's testimony, and Xcel's rebuttal, do you**  
13 **believe that Xcel has properly demonstrated that it prudently managed and**  
14 **operated its LNG facility?**

15 A69. I do not know. I do not have the technical expertise and credentials of Department  
16 Witness Polich. On Direct, I argued that the Company had not provided sufficient  
17 documentation that it prudently maintained the facility. On Rebuttal, Xcel provided  
18 additional information including a technical discussion of the LNG facility. This is  
19 another example of the Company withholding information until Rebuttal. However, I  
20 do not have the technical expertise of Witness Polich and will defer judgment on the

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<sup>84</sup> Derryberry Rebuttal, page 35-36, lines 16-2.

<sup>85</sup> Xcel Energy, Response to DOC IR #10 (Attached as Exhibit \_\_\_\_ (BC-S), Schedule 5, Public), MPUC Docket No. G002/CI-21-610/OAH Docket No. 71-2500-37763.

1 matter. Should the Commission find that the Company did not prudently maintain and  
2 operate the facility, I believe that a reasonable utility should have responsibly used the  
3 peaking facilities to maintain reliability and mitigate the cost impact to customers.

4 **Q70. You said that you were frustrated that on Direct Xcel did not attempt to**  
5 **explain why it took the propane facilities out of use. On Rebuttal, the Company**  
6 **criticized you and Department Witness King for not recognizing the seriousness**  
7 **of the situation facing Xcel.<sup>86</sup> How do you respond?**

8 A70. Safety should be the paramount concern for the utility. I do not dispute that, if the  
9 plant and the people who work at the plant, or live near the plant, are in danger, then it  
10 is reasonable for Company to pull the facilities out of use. But vaguely arguing that the  
11 plant was unavailable due to “safety” concerns without support is not a sufficient  
12 response in a prudence determination. It is worth remembering the lack of any  
13 discussion of the utility’s testimony on the propane facilities on Direct. Witness  
14 Yehle’s Direct testimony on the propane facilities was about 1/2 of a page of  
15 testimony. Yehle testified that after the unplanned release at Wescott, the Company  
16 determined it should investigate the propane facilities as well. Then, “[w]e similarly  
17 discovered that additional investments needed to be made at Sibley and Maplewood,  
18 which also were nearing the end of their life expectancies, so we can safely operate  
19 them for many more years.”<sup>87</sup> The Company did not identify why the release at  
20 Wescott could also indicate a problem at the propane facilities, what “additional

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<sup>86</sup> Martz Rebuttal, p. 31, lines 14-18, 24-25.

<sup>87</sup> Yehle Direct, p. 18-19, lines 22-2.

1 investments” needed to be made at the propane facilities, if those investments were  
2 necessary for the safety of the plant operators or if they were to extend the life of the  
3 plant, a cost or time estimate of the repairs, or any other information that is necessary  
4 for a prudence review.

5 **Q71. Did Xcel provide more information on why it removed the propane facilities**  
6 **from use on Rebuttal?**

7 A71. Yes. Witness Martz testifies that taking Sibley and Maplewood out of service was  
8 following the American Petroleum Institute recommended practice 1173 and the  
9 application of the pipeline safety management systems (PSMS).<sup>88</sup> Martz testifies that  
10 the PSMS requires operators to perform incident evaluation and root cause analysis  
11 after an abnormal incident. Martz continues that the seriousness of the situation was  
12 exacerbated by the proximity of the suburbs to the facilities.

13 **Q72. In Direct testimony, you asked the Company for contemporaneous analysis**  
14 **that demonstrates why the Company pulled the propane facilities from use. Did**  
15 **they provide that information on Rebuttal?**

16 A72. No. The Company did not provide information, such as what additional  
17 investments needed to be made at the facilities, an estimate for the time for  
18 investigation, the estimate for time to repair, a cost estimate, a cost-benefit analysis of  
19 alternative resources to replace the facilities, or any other critical information that is  
20 needed to determine if the Company took prudent actions. Witness Martz defends not

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<sup>88</sup> Martz Rebuttal, p. 32, lines 8-20.

1 providing this information by citing a colleague's testimony in a different proceeding  
2 but providing no information in this record.<sup>89</sup>

3 **Q73. Does Xcel give any detail about why the issue at Wescott caused them**  
4 **concern with the propane facilities?**

5 A73. Not in sufficient detail. Witness Martz testified that pulling the propane facilities  
6 out of use when there is an incident at the LNG facility is industry standard. Martz  
7 continues that the Company ceased operations at all peaking facilities because  
8 engineering and operations personnel had not adequately identified the root cause of  
9 the Wescott plant events.<sup>90</sup> Although the propane facilities vaporize a different fuel,  
10 according to Martz, the Company had to take a broad view, safety-first view of all of  
11 their peaking facilities, including looking at their personal operations and procedures.

12 **Q74. Why did you say that this is not sufficient detail?**

13 A74. I understand the safety-first approach as safety is the paramount concern. But the  
14 Company's answers do not Directly answer fundamental questions on why it pulled  
15 the propane facilities after the releases at Wescott. Did the Company test to determine  
16 if the same operating conditions existed at the propane facilities as the LNG plant? Did  
17 the Company take steps to identify pathways to continue operating the propane  
18 facilities for that winter season? Did the Company have prior concerns about its  
19 procedures that would impact both the LNG and propane facilities? At what point –  
20 specifically what day – did the Company determine that the Wescott plant release

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<sup>89</sup> Matz Rebuttal, p. 35, lines 15-19.

<sup>90</sup> Martz Rebuttal, p. 32, lines 8-20.

1 would not have an impact on the propane facilities? Then, once the Company  
2 understood the root cause analysis, were the investments necessary for the safety of  
3 the plant, or did Xcel electively choose to make those additional investments then  
4 rather than bringing them back? Were the investments to extend the life of the plant or  
5 to rectify an immediate safety issue?

6 **Q75. Witness Martz testified that Xcel didn't provide additional information on**  
7 **the investments needed at the propane facilities in this case because Xcel**  
8 **colleagues described the investments in another regulatory proceeding. Did you**  
9 **review that testimony? If yes, what did you find?**

10 A75. First, I think it is important to note that Xcel had pertinent information about the  
11 unavailability of the propane facilities for this proceeding that it did not file in Direct  
12 and held until Rebuttal. That is highly problematic.

13 I did briefly review Xcel Witness Palkovich's testimony in Natural Gas Rate  
14 Case, Docket NO. G002/GR-21-678. In it, Palkovich testifies that "[t]he vaporization  
15 work at Sibley and Maplewood is primarily related to replacement of equipment that is  
16 near the end of its life expectancy, which includes core components of the  
17 vaporization process."<sup>91</sup> Later Palkovich testifies when investigating the vaporization  
18 process at the LNG and propane facilities, "the Company also identified work that  
19 would be needed at Sibley and Maplewood, as the vaporization systems at both plants  
20 are nearing the end of their life expectancy."<sup>92</sup> Based on that testimony, it appears that

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<sup>91</sup> Palkovich Direct, p. 3, lines 18-20. Docket No. G002/GR-21-678.

<sup>92</sup> Palkovich Direct, p. 6, lines 21-26. Docket No. G002/GR-21-678.

1 Xcel may have voluntarily chosen not to bring the propane facilities back into service  
2 during the middle of the winter season.

3 **Q76. Should the Commission find that Xcel did not prudently maintain and**  
4 **operate its peaking facilities, or imprudently pulled the peaking facilities out of**  
5 **use, do you still believe that a reasonable utility would have used the facilities**  
6 **during the Event?**

7 A76. Yes, I do. On February 12, Xcel knew that gas prices were at \$15/Dth, as I  
8 demonstrated earlier in my testimony, their traders knew prices would increase over  
9 the weekend, the worst of the storm had yet to occur, and pipelines had issued  
10 warnings of possible constraints. The utility did not need to predict that prices were  
11 going to rise to unprecedented levels, but it should have known the Directionality of  
12 prices. The utility would also know the level of its peaking supply reserves. Under  
13 those conditions a reasonable utility would have dispatched a reasonable amount from  
14 its peaking facilities to mitigate costs to ratepayers while ensuring that it had sufficient  
15 supplies for future use. Moreover, by February 16, the utility would have known about  
16 the unprecedented prices and could have been used to mitigate the price impact to  
17 customers.

18 **Q77. Witness Yehle disagrees that peaking facilities can be economically**  
19 **dispatched and testifies that it is your responsibility to demonstrate that it is**  
20 **possible.<sup>93</sup> How do you respond?**

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<sup>93</sup> Yehle Rebuttal, p. 12, lines 3-11.

1       A77.   Xcel witness Yehle's assertion are puzzling. First, Yehle testifies that my position  
2       is in contradiction to Witness King's, yet Witness King also concludes that Xcel can  
3       and has economically dispatched its peaking facilities.<sup>94</sup> Moreover, Yehle's assertion  
4       is in Direct contrast to Xcel Witness Derryberry's testimony. Witness Derryberry  
5       testifies that it is operationally possible to use peaking facilities for economic dispatch  
6       during extreme pricing events.<sup>95</sup> Derryberry believes that the Company would need to  
7       carry additional inventory in that situation and that the Company is open to discussing  
8       this concept with the Commission and stakeholders for future operations. Finally, by  
9       suggesting it is my responsibility to demonstrate it is possible to economically  
10      dispatch Xcel's peaking facilities, Witness Yehle unreasonably shifts the burden to me  
11      to demonstrate Xcel acted imprudently by not taking this action. As I have noted  
12      repeatedly, Xcel bears the burden of demonstrating it acted prudently despite not  
13      economically dispatching its peaking facilities (had they been available) under these  
14      circumstances.

15      **Q78.   Is it necessary for Xcel to seek permission from the Commission for how it**  
16      **uses it peaking facilities as suggested by witness Derryberry?**

17      A78.   No. As stated above, Witness Derryberry testifies that it is operationally possible  
18      to use Xcel's peaking facilities for economic dispatch during pricing events if  
19      additional inventory is carried, but believes it is important to have this conversation  
20      with the Commission and stakeholders first.<sup>96</sup> It would be inappropriate for the

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<sup>94</sup> King Direct, p. 94-95, lines 17-4.

<sup>95</sup> Derryberry Rebuttal, p. 43, lines 14-23.

<sup>96</sup> Derryberry Rebuttal, p. 43, lines 14-23.

1 Commission to micromanage the utility as it responds to changing conditions,  
2 particularly an extreme weather event. If Xcel believes that it is necessary to modify  
3 its cost-of-service allocation, then it should engage stakeholders and the Commission  
4 in the appropriate venue.

5 **Q79. Witness Yehle testifies that you are “engaging in speculation” as to how the**  
6 **utility would have used the facilities had they been available. Do you agree?**

7 A79. No. To be of use to the Commission I must identify reasonable alternatives for  
8 prudent utility actions. Furthermore, I did not presume how the utility *would* have used  
9 the facilities had they been available – Xcel has made it clear they would not have  
10 considered using their peaking facilities to mitigate the price impact to customers  
11 absent a reliability issue. I created alternative analysis that shows a range of reasonable  
12 actions a prudent utility could have made, had it acted upon the information it had at  
13 the time that it developed its supply plans, to both ensure sufficient peaking supply for  
14 the future and mitigate the financial impact of the pricing event to customers.

15 **Q80. Witness Yehle testifies that your dispatch assumptions are not reasonable**  
16 **because the Company has not historically fully utilized its peaking facilities. Do**  
17 **you agree?**

18 A80. Witness Yehle is arguing that because historically the Company seldomly uses  
19 peaking resources, and when they are used the utility dispatches only a small fraction  
20 of its daily maximum, it is inappropriate to expect fuller utilization of its resources.  
21 Data is only useful if the data is correlated to the subject being analyzed. You don't use  
22 historical data to make operational decisions for events, such as this one, where utility



1 employees are saying "the world is ending."<sup>97</sup> The utility may use historical data as a  
2 reference point but it needs to take appropriate action given the circumstances it is  
3 facing.

4 In my analysis I am looking at what the utility knew at the time that it made its  
5 supply plans – the price of gas, the uncertainty of the weekend, the level of peaking  
6 supply available, the likelihood of cold weather events after mid-February – and  
7 offering analysis on how a reasonable utility could have responded. That the utility has  
8 not historically more fully utilized its available resources in the past is not an excuse  
9 for why it didn't under these circumstances.

10 Each of my scenarios would have left the utility with sufficient peaking supplies  
11 for the rest of the season and would have saved customers millions of dollars. This  
12 isn't hindsight – this was based on information the Company knew at the time it made  
13 its decisions. It is concerning to me that Xcel is leaving so much customer value on the  
14 table based on how little it utilizes its peaking facilities.

15 **Q81. You testify that CenterPoint and Xcel should have used their peaking**  
16 **facilities during the entirety of the Event. What did Department Witness King**  
17 **testify on the issue?**

18 A81. On Direct, Department witness King also found that CenterPoint and Xcel should  
19 have used their peaking facilities to respond to the pricing event. However, Witness  
20 King comes to two different conclusions for the two companies. For CenterPoint, King  
21 finds that, although it would have been possible, it was reasonable for CenterPoint not

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<sup>97</sup> Ice Log Chats (Attached as Exhibit \_\_\_ (BC-S), Schedule 2).

1 to plan on using its peaking plants from February 13 – 16.<sup>98</sup> King determined that  
2 operating based on the economics of a gas price spike was outside how CenterPoint  
3 planned or had used its peaking plants in the past. King did find that CenterPoint  
4 should have used its daily maximum from its LNG on February 17 in response to the  
5 known unprecedented pricing event.

6 For Xcel, King recommended a disallowance for the entirety of the Event.<sup>99</sup> In  
7 King's review of Xcel's historical practices, King found that the Company had used its  
8 peaking facilities to respond to a similar recent pricing event, had used peaking plants  
9 for economic purposes in the past, and the Company speculated it may have done so  
10 during this Event had the peaking plants been available.<sup>100</sup> King concluded that it  
11 would have been consistent with Xcel's past practices to dispatch its peaking facilities  
12 throughout the entirety of the Event.

13 **Q82. Do you agree with King's analysis?**

14 A82. I thought Witness King's overall testimony was compelling and strong. In this  
15 instance, we both find that the utilities should have used their peaking resources to  
16 respond to the extreme pricing event, although we disagree to the extent for  
17 CenterPoint. On this point I think King places a bit too much emphasis on determining  
18 prudence based on the consistency of a utility's actions with its past practices. I  
19 understand the reasoning for King's position, and I don't think it is illogical. However,  
20 my concern with this approach is it does not consider the reasonableness of the

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<sup>98</sup> King Direct, p. 92, lines 11-18.

<sup>99</sup> King Direct, p. 94-95, lines 17-4.

<sup>100</sup> King Direct, P. 94-95, lines 17-4.

1 utility's plans or past practices, and it does not hold the utility responsible for reacting  
2 to the circumstances of the present situation. That said, I think the points we agree  
3 upon – that a reasonable utility would have, at some point during the Event,  
4 economically dispatched its peaking resources to mitigate the economic effects of a  
5 price spike – are more significant than our disagreements about recommended  
6 disallowance amounts related to this issue.

7 **Q83. Will you please provide a breakdown of your range of disallowances for each**  
8 **type of peaking facility on each day of the Event?**

9 A83. Yes, I filed my workpapers for each utility with my testimony. The Commission  
10 can see my range of disallowances for each type of peaking facility on each day.

## **VII. Conclusion**

11 **Q84. Does this conclude your testimony?**

12 **A84.** Yes.