

✓ Relevant Documents

	Date
Xcel Energy – Krug Direct (Public and Trade Secret)	June 16, 2023
Xcel Energy – Miller Direct	June 16, 2023
Xcel Energy – Murray Direct	June 16, 2023
Xcel Energy – Schottler Direct	June 16, 2023
Xcel Energy – Sirois Direct	June 16, 2023
Xcel Energy – Tipton Direct	June 16, 2023
Department of Commerce – King Direct (Public and Trade Secret)	June 16, 2023
Department of Commerce – Polich Direct (Public and Trade Secret)	June 16, 2023

Rebuttal Testimony

Xcel Energy – Daniels Rebuttal (Public and Trade Secret)	September 22, 2023
Xcel Energy – Detmer Rebuttal	September 22, 2023
Xcel Energy – Kolb Rebuttal	September 22, 2023
Xcel Energy – Krug Rebuttal	September 22, 2023
Xcel Energy – Murray Rebuttal (Public and Trade Secret)	September 22, 2023
Xcel Energy – Schottler Rebuttal	September 22, 2023
Xcel Energy – Sirois Rebuttal (Public and Trade Secret)	September 22, 2023
Xcel Energy – Tipton Rebuttal	September 22, 2023
Department of Commerce – King Rebuttal (Public and Trade Secret)	September 22, 2023
Department of Commerce – Klotz Rebuttal (Public and Trade Secret)	September 22, 2023
Department of Commerce – Polich Rebuttal (Public and Trade Secret)	September 22, 2023
Office of the Attorney General – Lee Rebuttal (Public and Trade Secret)	September 22, 2023

Testimony Corrections

Department of Commerce – King Direct (Public and Trade Secret)	October 24, 2023
Department of Commerce – Polich Direct (Public and Trade Secret)	October 24, 2023
Department of Commerce – King Rebuttal (Public and Trade Secret)	October 24, 2023
Department of Commerce – Klotz Rebuttal (Public and Trade Secret)	October 24, 2023
Department of Commerce – Polich Rebuttal (Public and Trade Secret)	October 24, 2023

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Date

Surrebuttal Testimony

Xcel Energy – Daniels Surrebuttal	October 30, 2023
Xcel Energy – Kolb Surrebuttal	October 30, 2023
Xcel Energy – Murray Surrebuttal	October 30, 2023

Errata's

Department of Commerce – Polich Direct, Page 45 (Public and Trade Secret)	November 3, 2023
Department of Commerce – Klotz Rebuttal, Pages 4 and 7 (Public and Trade Secret)	November 3, 2023
Department of Commerce – Polich Rebuttal, Page 2 (Public and Trade Secret)	November 3, 2023

Post Hearing Initial Briefs

Xcel Energy	December 22, 2023
Department of Commerce (Public and Trade Secret)	December 22, 2023
Office of the Attorney General (Public and Trade Secret)	December 22, 2023
Xcel Large Industrials (Public and Trade Secret)	December 22, 2023

Post Hearing Reply Briefs

Xcel Energy (Public and Trade Secret)	February 14, 2024
Department of Commerce (Public and Trade Secret)	February 14, 2024
Office of the Attorney General (Public and Trade Secret)	February 14, 2024
Xcel Large Industrials (Public and Trade Secret)	February 14, 2024
Xcel Energy - Errata	February 23, 2024

ALJ Report

Findings of Fact, Conclusions of Law, and Recommendation	May 17, 2024
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✓ **Relevant Documents**

Date

ALJ Report Exceptions

Xcel Energy	June 6, 2024
Department of Commerce	June 6, 2024
Office of the Attorney General	June 6, 2024
Xcel Large Industrials	June 6, 2024

Replies to Exceptions

Xcel Energy	June 17, 2024
Department of Commerce	June 17, 2024
Office of the Attorney General	June 17, 2024
Xcel Large Industrials	June 17, 2024

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I. BACKGROUND AND INTRODUCTION

A. Background

On November 19, 2011, at the Northern States Power Company d/b/a Xcel Energy (Xcel, or the Company) Sherburne County Generating Station (Sherco), a catastrophic failure of a turbine (the Event) forced the shutdown of generating unit 3 (Sherco Unit 3, or Sherco 3) until October 28, 2013. In response to the prolonged outage, Xcel purchased replacement power and additional fuel from other sources, which the Company's customers paid for through the automatic fuel-clause adjustment (FCA).

In November 2013, Xcel, Southern Minnesota Municipal Power Agency (SMMPA), Sherco 3's co-owner, and their insurers initiated a lawsuit for damages associated with the turbine failure and outage against Sherco 3's turbine manufacturer, General Electric Company (GE).¹ They asserted five tort claims based on allegations that GE improperly designed and manufactured the turbine and failed to warn Xcel of certain risks.

On May 8, 2015, the Minnesota Public Utilities Commission (Commission) referred questions of Xcel's prudence in managing the circumstances surrounding the Sherco 3 outage, and the recoverability and ratemaking treatment of replacement power and additional fuel costs, to the Annual Automatic Adjustment (AAA) dockets.²

On June 2, 2016, the Commission decided to wait until the conclusion of the litigation regarding legal liability for the incident before deciding whether Xcel's energy replacement costs were prudently incurred and recoverable from ratepayers.

On November 2, 2018, Xcel filed a litigation update stating that it had reached a settlement with GE resulting in a payment to Xcel, which would be credited to ratepayers, in exchange for the dismissal of Xcel's claims against GE in the lawsuit.³

On April 11, 2019, the Commission authorized Xcel to refund the GE settlement proceeds as a credit to customers through the monthly FCA beginning February 1, 2019. The Commission also ordered Xcel, at the conclusion of the litigation, to file information about the costs arising from the Sherco 3 incident; which of those costs have been recovered, approved for recovery,

¹ Xcel owns a 59 percent interest in the Sherco facility, and the SMMPA owns the remaining 41 percent interest.

² *In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota*, Docket No. E-002/GR-13-868, FINDINGS OF FACT, CONCLUSIONS, AND ORDER, at 47 (May 8, 2015).

³ Settlement of Lawsuit Against GE Compliance Filing, Docket No. E-002/GR-12-961 et, al (November 2, 2018).

denied, or deferred; and any proceeds from insurance or third-party settlements.⁴

Following Xcel's settlement with GE, the trial proceeded on Xcel's insurers' claims against GE, with GE asserting as a defense that Xcel's own negligence caused the loss. The jury found that Xcel was negligent in its operation and maintenance of Sherco 3, and that this negligence was a direct cause of the loss. The jury found Xcel 48 percent at fault and GE 52 percent at fault. However, Xcel and its insurers did not plead a negligence claim against GE, and GE was not found liable on any claim. Accordingly, GE was not required to pay damages, and the district court entered judgment in favor of GE.

Xcel's insurers appealed, and the Minnesota Court of Appeals affirmed the district court's judgment in favor of GE. On April 28, 2020, the Minnesota Supreme Court denied Xcel's insurers' petition for further review, concluding litigation.

B. Introduction

On August 24, 2020, Xcel Energy filed the post-litigation information required by the Commission, summarizing the costs and litigation recoveries related to the Sherco Unit 3 event.⁵

On September 30, 2020, the Commission requested comments on whether Xcel provided all the required information; whether all issues relating to the outage are resolved; whether to discontinue the requirement that Xcel file quarterly litigation updates; and how to proceed regarding issues of prudence, cost recoverability, and ratemaking treatment of replacement power and additional fuel costs associated with the Sherco 3 outage.⁶

On January 15, 2021, the Minnesota Department of Commerce, Division of Energy Resources (Department) and the Minnesota Office of the Attorney General—Residential Utilities Division (OAG) filed comments recommending that the Commission require Xcel to reimburse ratepayers for all out-of-pocket energy replacement costs associated with the outage.⁷

⁴ *In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota*, Docket No. E-002/GR-13-868, ORDER AUTHORIZING SHERCO UNIT 3 RATEPAYER REFUND AMOUNT AND METHOD AND REQUIRING COMPLIANCE FILING at 4 (April 11, 2019).

⁵ Compliance Filing, Sherco Unit 3, Docket No. E-002/GR-12-961 et. al. (August 24, 2020).

⁶ Notice of Comment Period, Docket No. E-002/GR-12-961 et. al. (September 30, 2020).

⁷ *In the Matter of Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota, et al. (Sherco 3 outage-related issues)*, Docket No. E-002/GR-12-961, et. al., (January 15, 2021). The OAG comments were inadvertently electronically filed only in Docket No. E-002/GR-13-868. The comments were refiled in the other relevant dockets on February 18, 2021, and are the same Comments that were previously filed pursuant to the deadline in the Public Utilities Commission's Notice of Extended Comment Period of November 10, 2020, and were resubmitted only to ensure that they are included in the electronic record for the other relevant dockets. The OAG noted that it informed counsel for Xcel and the Department of this submission,

On January 27, 2021, in reply comments, Xcel argued that a ratepayer refund was not warranted or, in the alternative, requested a contested-case proceeding.⁸

On June 23, 2022, the Commission met to consider the matter.

On July 13, 2022, the Commission referred this matter to the Office of Administrative Hearings (OAH) for contested case proceedings to determine whether Xcel's Sherco 3 energy replacement costs for the period November 2011 to October 2013 were reasonable and prudent and, if not, the amount of overcharges, plus interest, that should be returned to ratepayers.

On September 16, 2022, Xcel Large Industrials (XLI) filed its petition to intervene in the proceeding.⁹

On May 17, 2024, Administrative Law Judge (ALJ) Ann C. O'Reilly issued her ALJ Report.

II. DISCUSSION

A. Prudency

1. Introduction

Xcel bears the burden of proof that its operation and maintenance of Sherco Unit 3 was prudent, and it is reasonable for the Company to recover the energy replacement costs incurred as a result of the catastrophic failure at Sherco Unit 3 from Minnesota ratepayers. In its Notice and Order of Hearing, the Commission established the legal standard of review:

Every rate made, demanded, or received by a public utility must be just and reasonable. In incurring costs necessary to provide service, utilities are expected to act prudently to protect ratepayers from unreasonable risks. The burden to prove a rate is just and reasonable is on the utility, and any doubt as to reasonableness will be resolved in favor of the consumer.¹⁰

and neither party objected. Additionally, the OAG noted that Xcel's Reply Comments were filed on January 27, 2021, in the above matters and responded to the OAG's Comments.

⁸ *Id.*

⁹ XLI is an *ad hoc* consortium of C&I Demand class customer served by Xcel. The ALJ granted XLI's petition for intervention on September 26, 2022.

¹⁰ *In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota, et al.*, Docket No. E-002/GR-12-961, et. al., NOTICE OF AND ORDER FOR HEARING at 4, (July 13, 2022); Minn. Stat. §§ 216B.03, 216B.16, subd. 4.

The ALJ reviewed this matter as part of a contested case proceeding to determine whether Xcel's Sherco 3 energy replacement costs for the period of November 2011 to October 2013 were reasonable and prudent and, if not, the amount of overcharges, plus interest, that should be returned to ratepayers.¹¹

2. The Event

Xcel has three turbine generator trains known as Units 1, 2 and 3 at the Sherco facility that were manufactured by GE. Sherco Unit 3 was purchased in 1977 and put into service in 1987. It has a generating capacity of 900 megawatts. All three units are operated and maintained by Xcel staff.

On November 19, 2011, Xcel took Sherco Unit 3 offline for a planned outage to perform tests. The ALJ summarized the event by stating:

One of those tests included a test of the overspeed trip system, a safety measure that should shut down the turbine if rotor speeds exceed a certain revolutions per minute (RPM) threshold. During this test, a group of blades from the L-1 row of one of the [low pressure] LP turbines in Unit 3 broke loose from the rotor. The resulting imbalance caused the LP turbine to essentially self-destruct. The imbalance shook the turbine generator to the point that the bearings, seals, and many securing components tore loose from their attachments. Lubricating oil, in contact with hot steam surfaces, erupted in a fire. As large volumes of hydrogen escaped the generator and were sparked by flames, an explosion-like event occurred. The generator shaft and exciter shaft fractured, hurling a 200-pound part of the generator across the turbine floor and into the operator's room. The explosion substantially destroyed the [high pressure] HP turbine, the [intermediate pressure] IP turbine, both LP turbines, and the generator of Unit 3. Flying debris and fire caused significant damage to the control room and other plant facilities.¹²

Fortunately, no one was injured during this event. For the Minnesota jurisdiction, the cost for restoring Sherco Unit 3 was \$104.3 million and the cost for excess fuel oil that was consumed during the initial startup following repairs was \$0.4 million.¹³ Xcel recovered virtually all restoration and excess fuel oil costs from the insurance companies.¹⁴ The insurance proceeds were returned to customers through a direct refund for the fuel oil costs and as an offset to rate base for the restoration costs. The replacement power for nearly two years cost

¹¹ *Id.* at 10.

¹² ALJ Report Findings of Fact ¶ 59.

¹³ Ex. Xcel-1 at 11 - 12 (Krug Direct); Xcel Compliance Filing at 5 (Aug. 24, 2020).

¹⁴ *Id.*

approximately \$33.7 million and was charged to Minnesota ratepayers via the monthly FCA.¹⁵

Xcel, SMMPA and their insurers filed a joint complaint on November 15, 2013, against GE which lasted nearly five years. Xcel reached a settlement with GE which resulted in a refund to customers in 2019.

3. GE Litigation

Xcel's, SMMPA's and their insurers' complaint alleged "fraudulent concealment, willful and wanton negligence, gross negligence, professional negligence, and post-sale failure to warn."¹⁶ Prior to trial, the district court dismissed the fraudulent concealment claim finding no evidence to support the claim and, due to a settlement with GE, Xcel withdrew its professional negligence claim. The case proceeded to trial on October 15, 2018, for the insurers remaining claims of willful and wanton negligence, gross negligence, and post-sale failure to warn. At the end of the two-week jury trial, the judge granted a judgment in favor of GE on the failure to warn claim finding that there was no evidence that Xcel was unaware of the risk of harm related to stress corrosion cracking (SCC) cracking in LP turbines.¹⁷ The ALJ summarized the jury decision in her report as follows:

83. In issuing its decision, the jury completed a Special Verdict form, which addressed the two remaining counts: count 2 (willful and wanton negligence) and count 3 (gross negligence). The jury found that that GE did not act with willful and wanton negligence. The jury further found that although GE assumed a duty to provide technical information, advice, and recommendations to Xcel about Unit 3, GE was not grossly negligent in its provision of that information. Instead, the jury found that GE failed "to exercise reasonable care in th[e] provision of technical information, advice, and recommendations because (a) GE increased the risk of harm, or (b) [Xcel] relied on the undertaking."

84. In comparing fault, the jury found that Xcel was "negligent in its operation and maintenance of Unit 3" and that Xcel's "negligence [was] a direct cause of the property loss at Sherco."

85. The jury apportioned fault as follows: GE 52% at fault; Xcel 48% at fault.

86. Because the insurers did not plead ordinary negligence (only wonton and willful and gross negligence), GE was not liable for any damages to the insurers, despite GE's comparative negligence. In other words, GE's

¹⁵ Ex. Xcel-1 at 12 - 13 (Krug Direct).

¹⁶ ALJ Report Findings of Fact ¶ 79.

¹⁷ *Id.* ¶ 82.

negligence, while greater than Xcel's, did not arise to willful and wanton or gross negligence, a higher standard than ordinary negligence. As a result, the insurers were awarded nothing on their claims and GE prevailed.

87. After trial, the insurers moved for judgment as a matter of law on its claims or, alternatively, for a new trial. Both motions were denied. In denying the insurers' post-trial motions, the district court reasoned:

Here, there was no way a jury could find that [Xcel] was unaware of the risk of harm. The jury heard substantial amounts of evidence regarding [Xcel's] operation of Unit 3 and knowledge of the risk of stress corrosion cracking ("SCC"). [Xcel] knew SCC could cause failure to the Wilson Line, resulting in wheel failure and buckets departing from the rotor. [Xcel] also knew the importance of proper steam chemistry to minimize the risk of SCC and how to inspect for SCC. [Xcel] also knew there was an industry-wide problem with SCC. [Xcel] could not reasonably be assumed to be unaware of the risk of harm, because the risk was disclosed in the manual that came with the turbine when it was purchased, because [Xcel] employees had attended numerous seminars where GE discussed the risk, and because [Xcel's] own employees had advised other [Xcel] employees about the risks of SCC. . . . The evidence establishes that [Xcel] chose not to involve GE in inspecting the turbine because it believed GE would recommend the expensive 'buckets off' inspection that was necessary to find SCC. [Xcel] seems to want to hold GE to a standard of predicting exactly when a failure catastrophic failure would occur without providing GE with the data and access that would have allowed such a prediction. [Xcel's] motion for a new trial related to the Court's legal determination under Products Liability § 10 is therefore denied.¹⁸

The insurers appealed the case to the Minnesota Court of Appeals, arguing that they were entitled to judgment in their favor because GE acted with ordinary negligence. The Court of Appeals rejected this argument because the insurers intentionally did not plead ordinary negligence, and such claim was not submitted to the jury. The court also denied the insurers' request to amend their complaint post-verdict to include an unpled ordinary negligence claim and denied the insurers' request for a new trial. The appellate court denied the new trial request by ruling that the district court properly determined that no reasonable jury could find that Xcel was unaware of the general SCC risk on Sherco Unit 3 that materialized. The appellate court decision concluded the litigation.

¹⁸ ALJ Report Findings of Fact ¶¶ 83 – 87, Order Denying Plaintiff's Motion for Judgment as a Matter of Law or Alternatively for New Trial (Mar. 11, 2019) at 14-15, *Aegis Insurance Services, LTD, et al. vs. General Electric Company, et al.*, Sherburne County District Court file no. 71-CV-13-1472. The order was partially quoted in *Aegis*, 2020 WL 614775 at 4.

4. Stress Corrosion Cracking

The parties agreed that SCC¹⁹ caused the L-1 blades, also known as buckets, to separate from the rotor which resulted in the Sherco Unit 3's destruction.

To determine the underlying cause and identify solutions to prevent a similar event, Xcel retained Thielsch Engineering (Thielsch) to investigate the event. Thielsch's Root Cause Report concluded that SCC caused the fracture in low-pressure disk which resulted in the Sherco Unit 3's destruction. The corrosive material responsible for the cracking was not identified but sodium hydroxide was suspected. The SCC's exact age was unknown, but a few years old was suspected. Water chemistry controls was not a contributing factor and evidence of abnormal operating or maintenance practices were not found. Additionally, the material of the low-pressure turbine rotors conformed to the mechanical and chemical requirements of ASTM A470 Grade C, Class 7 low alloy steel and no apparent material or processing anomalies were observed in the disk sections examined.²⁰

The Department retained Richard Polich of GDS Associates, Inc. to evaluate Xcel's Sherco Unit 3 operation related to the event. Polich agreed that SCC contributed to the catastrophic failure but "Xcel's failure to timely inspect the LP turbine rotor disk dovetails, in accordance with good industry practice for the maintenance and operation of the Sherco 3 steam turbine, was the root cause of the accident."²¹ Polich added that Xcel did not maintain proper water chemistry from 1999 through 2011 and Xcel failed to recognize the potential for SCC to occur in the LP turbine despite widespread industry knowledge of the risk.²²

a. Sherco Unit 3 Inspection History

GE provided General Electric Knowledge (GEK) documents to all purchasers of its steam turbines. The documents give information and recommendations for maintenance which include regular inspections. Major inspections include disassembly, visual inspection and testing while minor inspections primarily involve visual inspection. GE recommended minor inspection every 3 years and major inspection every 6 years. However, unit specific age, performance, and operation factors may influence the timing of inspections.²³ GE also provided technical information letters (TILs) notifying owners of problems and provided recommendations to manage issues. The inspection history for Sherco Unit 3 is shown in Table 1.

¹⁹ SCC is material cracking that occurs in a corrosive environment when placed under stress.

²⁰ Ex. Xcel-26, Schedule 2 at 4 (Tipton Direct).

²¹ Ex. DOC-1 at 21 (Polich Direct).

²² *Id.* at 53, ALJ Report Findings of Fact ¶ 71.

²³ Ex. Xcel-25, Sched. 4 at 15 (Sirois Rebuttal).

Table 1: Sherco Unit 3 Inspection History²⁴

Year	Event	Description
1977	Unit Purchased	
1979	GE Steam Purity Recommendations Issued	General Electric GE GEK 72281 issued defining recommendations for steam purity limits and monitoring.
1987	Commercial Operation	Unit was started up using an all volatile boiler water treatment AVT? Only main steam purity monitored for cation conductivity.
1989	Warranty Inspection	Rotors out blast cleaned standard non-destructive examination NDE performed periphery magnetic particle testing MT. No indications. Ultrasonic testing UT performed on 2nd to last L-1 and last stage L-0 dovetail pins. None cracked. Loose L-1 blade tie wires, re-soldered by GE.
1992	TIL 1121 Issued	GE issued this technical information letter TIL for inspection of rotor wheel finger dovetails. Bucket removal is required for this inspection however the TIL does not require bucket removal. GE indicates that these inspections are to be performed only if bucket removal is performed for another reason.
1993	Major Unit Inspection	Rotors out, blast cleaned, standard NDE performed, periphery MT. No indications. UT performed on L-1 and L-0 dovetail pins. Several cracked L-0 pins replaced by GE. No L-1 pins cracked. Several LPA L-1 buckets and covers replaced by GE due to tenon failures.
1996	L-1 Blade Inspection	Rotors out, no blast cleaning or NDE other than on blades removed for inspection. A group of 5 blades were removed by GE from each L-1 wheel for thorough inspection of tie wire holes and tenons for cracking.
1999	Major Unit Inspection	Rotors out, blast cleaned, extensive rotor NDE performed by GE. All L-1 blades on both rotors were replaced by GE with new upgraded GE design 20.5" blades. All new dovetail pins. No modifications to wheel attachment only blade airfoil changes. GE performed boresonic exams, head shot mag exams, and LP blade finger inspections on L-1 rows. Some of the GE NDE reports are not available at this time. GE also performed phased array UT on L-2 and L-3 rows.
1999	TIL 1277-2 Issued	GE issued this TIL for inspection of LP rotor wheel dovetails on fossil fueled once through boilers. It was not issued to Xcel and technically does not apply to any Xcel units. This TIL requires removal of finger dovetail blades for inspection on periodic basis.
2000	Oxygenated Boiler Water Treatment Started	Boiler water treatment switched from AVT to oxygenated?
2004	Updated GE Steam Purity Recommendations Issued	GE issued revised steam purity limits and monitoring recommendations GEK 72281c. This GEK Includes recommendation for monitoring reheat steam purity.
2005	Oxygenated Boiler Water Treatment Terminated	Boiler water treatment switched back to AVT?
2005	Major Unit Inspection	Rotors out, blast cleaned, standard NDE performed, periphery MT. No defects noted. MD&A sub Midwest Turbine performed NDE work. UT performed on L-0 pins, many found cracked and replaced. Does not appear that L-1 pins were UT tested. MD&A sub Wesdyne performed L-2 and L-3 wheel dovetail phased array UT. Heavy L-1 and L-2 deposits noted. Deposit samples taken from LP row 17 (L-2) blading. Some sodium oxide was present in the L-2 row sample.
2008	EPR 5.736 Issued	Energy Supply Production Resources Guideline (EPR) Steam Turbine Rotor Wheel Inspections for stress corrosion cracking (SCC) was issued after Sherco L-1 wheel cracking event to provide inspection recommendations where OEM guidance was lacking.
2008	L-0 Visual	Visual inspections performed on L-0 blade rows only. No defects noted other than some cover fit-up issues from 2005 MD&A L-0 cover replacement work.
2011	L-0 Visual	Visual inspections performed by Alstom on L-0 blade rows only. LP rotors were scheduled for standard overhaul inspection in 2014. Failure event occurred after start-up during overspeed trip testing.
2012	LP Rotor Repair	GE removed all L-1 and L-0 blading from both LP rotors. Mag testing of rotor wheel dovetails performed including TIL 1121 testing. Mag tests revealed substantial crack indications on all 4 L-1 rows and no indications on the L-0 rows.

GE performed the first major inspection in 1989 and no cracking was found. In 1992 when GE issued TIL 1121, Xcel was notified of SCC and, in 1993, in response to the recommendation,

²⁴ Ex. DOC-25 Sherco Low Pressure Turbine Operation and Inspection History.

conducted its second major inspection. Several cracked L-0 pins were replaced, no L-1 pins were cracked, and several LPA L-1 buckets and covers were replaced. An L-1 blade inspection was performed in 1996 and no SCC evidence was indicated. In April 1999, GE performed Xcel's third major inspection. No SCC evidence was indicated but GE recommended:

Continue service in accordance with current GE Company prewarming, starting, and loading recommendations. The rotor should be completely reinspected after not more than ten (10) additional years of service. The primary purpose of the reinspection is to reduce the probability of a catastrophic failure by detecting the initiation or propagation of crack-like discontinuities near the bore and performing corrective action before critical conditions are reached. The probability of failure from other degradation such as periphery or dovetail cracking is also reduced by early detection and appropriate action. In addition, routine inspections provide periodic reevaluations of the rotor integrity with the latest techniques that may permit the identification of conditions not previously recognized.²⁵

In December 1999, GE issued TIL 1277-2 "to inform users of need to inspect low pressure rotor wheel dovetails on steam turbines to detect possible Stress Corrosion Cracking."²⁶ GE recommended steam chemistry monitoring, dovetail inspection for cracking and for the inspection results to be forwarded to GE for review and recommendation. TIL 1277-2 applied to all units with once-through boilers. Sherco Unit 3 had a drum boiler, so GE did not issue this letter to Xcel. An Xcel employee learned of this letter at an industry conference.

In 2002, Xcel replaced cross-over expansion bellows due to cracking. Bearing 6 was inspected because it was running hot but was returned to service without repair. Heavy cover erosion was found so a replacement was recommended at the next opportunity. The Department noted that condenser tube leaks occurred in 2002 and 2003.²⁷

Xcel engineers' 2005 Sherco Unit 3 systems health report found LP turbines to be in good ("green") condition; thus, maintaining a 6-year overhaul inspection frequency was recommended. The report noted that, based on the results on the scheduled 2005 inspection, the inspection could be extended to 9 years. The risks associated with a "yellow" or "red" score were wheel cracking involving wheel failure and buckets departing from the rotor resulting in severe collateral damage.²⁸ Following this report, a third party performed the fourth major inspection. As discussed above, GE performed the previous three inspections. The LP turbines were found to be in good condition, 190 broken dovetail pins were replaced, bearings were

²⁵ Ex. DOC-29 GE In-Service Turbine Inspection April 2, 1999.

²⁶ Ex. Xcel-23 Schedule 6 at 1 (Sirois Direct – Part 3).

²⁷ ALJ Report Findings of Fact ¶ 286.

²⁸ Ex. Xcel-23 Schedule 14 at 1 (Sirois Direct – Part 3).

repaired, and the L-0 cover was replaced.²⁹ Heavy deposits were noted on L-1 and L-2. Samples were taken and some sodium oxide was present in the L-2 sample.

During the 2005 inspection, a contractor inadvertently steam cleaned or “washed” the LP rotor of Sherco Unit 3 using untreated well water. Xcel stated:

Our overhaul contractor was attempting to clean the penetrant exam developer off the L-0 blade satellite strips with a steam cleaner that was borrowed from the Sherco electric shop. Our contractor steam cleaned or “washed” one of the two L-0 rows on one of the rotors. Notably, the L-1 rows were not washed with the untreated steam as the L-0 blade tip being cleaned was at a lower elevation in the rotor stand; accordingly, any steam/water sprayed on the L-0 dropped down to the floor—not over to the adjacent L-1 blade root.³⁰

Xcel reviewed the well water chlorine levels, sprayed the affected areas with demineralized water, monitored the equipment and considered the situation contained.

Xcel’s engineers’ 2007 systems health report Found LP good, green condition and maintaining a 6-year overhaul inspection frequency was recommended. The report noted that the inspection could be extended to 9 years. The industry experience with rotor wheel cracking from dovetail pin cracking and water erosion was noted. The report also mentioned uprate project plans to replace LPs in 2011.³¹ The risks associated with a “yellow” or “red” score were cracking involving wheel failure and buckets departing from the rotor resulting in severe collateral damage. The report added:

Erosion damage may allow components to separate and contact other rotating and stationary components. Cracked dovetail pins may allow buckets to separate from the rotor (low probability). Bearing Babbitt failures can lead to high vibrations unit trip and failed unit re-starts. In an extreme case it can lead to catastrophic turbine failures.³²

In 2008, Xcel found SCC in wheel dovetails of Sherco Unit 1 and contacted GE to inquire if a TIL would be issued for drum boiler units. GE responded that no TIL would be issued and noted that TIL 1277-2 was available for SCC on once-through boilers.³³ After this communication with GE, Xcel issued ERP 5.736G and its purpose was to “provide some background on stress

²⁹ Ex. Xcel-23 Schedule 14 at 6 (Sirois Direct – Part 3).

³⁰ Ex. Xcel-52 at 1 (Kolb Surrebuttal).

³¹ Ex. Xcel-23 Schedule 14 at 5, 7 (Sirois Direct – Part 3).

³² *Id.* at 4.

³³ Ex. Xcel-23, Schedule 15 at 11 (Sirois Direct – Part 3); Ex. Xcel-7 at 43 (Kolb Direct).

corrosion cracking of steam turbine rotors, summarize current OEM recommendations, and provide inspection recommendations where OEM guidance is lacking.”³⁴ The document recommended additional examinations and testing at the next scheduled overhaul.

Xcel’s 2009 system health report for Sherco Unit 3 received a “green” result just as it did in 2005 and 2007. It was noted that the LPs would not be replaced as planned in the 2011 uprate project. New plans included a major overhaul and phased array ultrasound inspection for LP rotor wheel dovetails, both scheduled for 2011.

Two system health reports were generated in 2010. The first was in January 2010 and Sherco Unit 3 received a green result. It indicated the next major overhaul would be 2011 or 2014. The second report was in December 2010 where Sherco 3 received another green result. The major overhaul and phased array ultrasound inspection for LP rotor wheel dovetails that were scheduled for 2011 were moved to 2014. Both system health results noted the possibility of extending the major inspection from 6 to 9 years. The December 2010 report specified that an extension should be based on proper engineering studies. Since the last major inspection was 2005, so Xcel decided to extend the inspection interval to 9 years, or 2014. No engineering study was conducted prior to Xcel’s management decision to change the major inspection schedule.³⁵ The report noted that extending the TBO (time between overhauls) increased risks of failure.³⁶ Xcel explained its decision to change the overhaul timing by stating:

Unit 3 had a planned outage in 2011. In 2005, following the major outage on Unit 3’s LP turbines, we planned the next major for 2011. Consistent with the fluid nature of outage planning, as we got closer to that outage time, we had to assess whether a major in 2011 was warranted. Based upon the information available through industry resources and our OEM, as well as the operational history of Unit 3, we determined that a major overhaul of the LP turbines was not needed in 2011, and instead should be deferred until 2014 – which would be nine (8 1/3) years from the last LP major on Unit 3, consistent with the LP turbine inspection intervals for Units 1 and 2, as well as aligning with industry trends that were extending low pressure turbine outages from 5 to 6 years, to 9 to 12 years. Exhibit ___ (HJS-1), Schedule 14. Our decision to defer the major from 2011 to 2014 meant that a minor overhaul was performed in 2011. We performed a thorough visual inspection of the L-0 blades from inside the LP turbine exhaust hoods to look for damage or unusual conditions that might indicate a problem with the L-0 rows, blade rows upstream of the L-0 rows, or operation of the unit. This included visual inspections for unusual deposits on the airfoils, foreign object damage,

³⁴ Ex. Xcel-23, Schedule 10 at 1 (Sirois Direct – Part 3).

³⁵ Evidentiary Hearing Transcript Volume (Tr. Vol.) 1 at 113 (Murray).

³⁶ Ex. Xcel-23 Schedule 14 at 19 (Sirois Direct – Part 3).

excessive moisture erosion, and airfoil, sleeve, cover, and cover tenon cracks. No issues were found. Our decision to defer the major inspection was prudent and reasonable based on industry standards, OEM recommendations, and the excellent operational history of Unit 3 at that time.³⁷

In 2011, Xcel installed updated components into the high-pressure and low-pressure steam turbine and auxiliary equipment for Sherco Unit 3 to increase its efficiency and output during a planned outage. After completion of this work, the Event occurred during testing to bring Sherco Unit 3 back online.

b. Water Chemistry

Since a corrosive environment is one of the SCC causes, boiler water chemistry is a critical mitigation factor because boiler water impurities are carried over into the steam and can be deposited on the LP turbine as the steam flows through the blades and rotor. The Electric Power Research Institute (EPRI)³⁸ provides water and steam chemistry guidelines for the utility industry. GE steam purity guidelines for the turbines it manufactures closely align with the EPRI guidelines.

Xcel retained David Daniels to evaluate its chemistry practices. After a thorough review, Daniels determined that Xcel diligently monitored the steam cycle chemistry in the 2000 to 2011 review period. There was no instance where the records show that the chemistry of the feedwater, boiler, or steam were sufficiently contaminated to put the turbine at risk of caustic contamination.³⁹ Daniels added that Xcel's steam chemistry is taken seriously by the Company and its practices were better than many power plants that he has visited over his career.⁴⁰ Daniels noted that Sherco Unit 3's sodium chemical limits were consistent with EPRI guidelines.⁴¹

Stephen Klotz was retained by the Department to evaluate Xcel Sherco Unit 3's steam chemistry practices and determine its relationship to the turbine failure. Klotz concluded that Xcel's cycle chemistry practices very likely contributed to the Sherco 3 LP turbine failure. Klotz identified several gaps in Xcel's cycle chemistry practices that left the plant susceptible to contamination of the LP turbines and noted that Xcel did not follow EPRI's recommendation to continuously monitor steam sodium until 2008.⁴² Klotz stated:

³⁷ Ex. Xcel-4 at 18 – 19 (Murray Direct).

³⁸ EPRI is an industry group and not a regulatory body.

³⁹ Ex. Xcel-10 at 31 (Daniels Direct).

⁴⁰ *Id.* at 32.

⁴¹ *Id.* at 20.

⁴² Ex. DOC-7 at 32 (Klotz Rebuttal).

The failure mechanism for the Sherco 3 LP turbine was determined to be transgranular SCC which is indicative of sodium hydroxide influenced corrosion. Sodium hydroxide contamination was present at levels that were high enough to initiate and sustain ongoing SCC damage in both Sherco 3 LP turbines. To the degree that sodium hydroxide concentrations were allowed to remain at these levels, Xcel's cycle chemistry practices failed to protect the Sherco 3 LP turbines from SCC damage.⁴³

Xcel did not have a formal, written chemistry performance, review, and improvement plan. Klotz noted that the steam chemistry review and analysis was conducted by informal evaluation and communication, such as through logbook entries, chemistry monitor checks, daily plant meetings, hallway discussions, emails, and phone calls where specific issues and day-to-day concerns could be identified, discussed, or communicated.⁴⁴

c. Finger Dovetail Defect

The blades on the L-0 and L-1 rows of Sherco Unit 3 are connected to the rotor disks using finger dovetail attachments. In January 2008, GE received a patent that addressed SCC in finger dovetail attachments. Xcel described the design change by stating:

On June 17, 2008, GE was granted United States patent US 7,387,494 B2 titled "Finger Dovetail Attachment Between A Turbine Rotor Wheel and Bucket For Stress Reduction," Yehle et. al. (2008 Patent). The essence of the 2008 Patent is the incorporation of compound radii in the two transition areas (ledges) between varying thicknesses of the wheel fingers and at the bottom radius between adjacent wheel fingers. This design detail is similar to the design process for contouring the side surfaces of steam and gas turbine wheels to produce "constant" or nearly constant stress profile from the hub of the wheel toward outer radius of the wheel but not including the rim of the wheel. The 2008 Patent abstract clearly states: "The fillets on the wheel fingers and slot bottoms have a blend of different radii with the larger radii outward of the smaller radii to reduce stress concentrations and to avoid stress corrosion cracking in steam turbine applications."⁴⁵

The ALJ noted that the patent demonstrated that GE knew, at least by 2008, that the finger-pinned dovetail attachments in its steam turbines, including drum boiler units, were flawed and subject to developing SCC.⁴⁶ GE did not update TIL 1121-3AR1 or TIL 1277 to recommend a blades-off inspection for drum boiler units with finger-pinned dovetails like Sherco Unit 3. GE

⁴³ *Id.* at 7.

⁴⁴ *Id.* at 9.

⁴⁵ Ex. Xcel-25 at 15 (Sirois Rebuttal).

⁴⁶ ALJ Report Findings of Fact ¶ 195.

issued TIL 1886 in 2013 to inform users of the need to inspect L-1 wheel finger dovetails on steam turbines to detect possible stress corrosion cracking.⁴⁷

Xcel's expert noted that finger dovetails in the L-1 blades of GE steam turbines are hidden within the rotors and cannot be inspected without a blades-off inspection which makes finding SCC difficult, costly, and potentially destructive to the unit.⁴⁸ Prior to the Event, GE did not specify to owners of drum boiler units that a blades off inspection for units with finger dovetail attachments was required to investigate the SCC presence. Instead, GE recommended finger dovetail attachments' inspection whenever the blades were removed for other reasons like abnormal events or operational abnormalities.⁴⁹ TIL 1886 was issued in 2013, after the Event, and recommended "buckets be removed" to inspect the finger dovetails for units greater than 22 years old.⁵⁰ Sherco Unit 3 was in operation for more than 22 years at the time of the Event in 2011.

5. Party Positions

a. Xcel Energy

Xcel stated that it operated Sherco Unit 3 in a manner consistent with industry knowledge and practices. A design flaw in the turbine caused it to be susceptible to stress corrosion cracking. Xcel Energy believes: (1) it acted reasonably and prudently in its Sherco Unit 3 operation and maintenance prior to the Event; (2) the Company acted reasonably and prudently in restoring Sherco Unit 3 to service and pursuing third-party recoveries after the Event; (3) those actions have benefitted customers since Sherco Unit 3 returned to service; and (4) as the Commission has already provided over \$21 million in rate relief to customers due to the Event, no further Commission action is necessary or appropriate.⁵¹ Sherco Unit 3 was the first utility steam turbine generator with a drum boiler to fail catastrophically as a result of stress corrosion cracking in finger dovetail attachments. GE issued its first guidance with specifications that applied to Unit 3 after the event occurred.

b. Department of Commerce

The Department stated that Xcel did not maintain adequate purity of the Sherco Unit 3 steam cycle chemistry to detect the presence of contaminants that could lead to SCC, which caused the failure of the LP turbine. Additionally, Xcel did not follow its own established interval for

⁴⁷ Ex. Xcel-23 Schedule 16 at 1 (Sirois Direct – Part 3).

⁴⁸ ALJ Report Findings of Fact ¶ 200, Evidentiary Hearing Tr. Vol. 2 at 49-50 (Tipton).

⁴⁹ Ex. Xcel-23 Schedule 7 (Sirois Direct – Part 3).

⁵⁰ Ex. Xcel-23 Schedule 16 at 4 (Sirois Direct – Part 3).

⁵¹ Xcel Initial Br. at 136 - 137.

completing major inspections which increased the failure risk that Sherco Unit 3 ultimately experienced. Xcel failed to act prudently in operating and maintaining Sherco Unit 3; therefore, the replacement power costs must be refunded in full, with interest calculated through the date of the refund.

c. Office of the Attorney General

The OAG stated Xcel's actions leading up to Sherco 3's catastrophic failure were imprudent and the replacement power costs incurred should be returned to ratepayers. Xcel did not provide enough detail to prove that ratepayers experienced true net benefits that could offset a ratepayer refund of replacement energy costs. The OAG recommended the following findings:

1. Xcel's imprudent actions caused the catastrophic failure of Sherco 3.
2. Xcel's GE Litigation modeling best captures the total cost of replacement energy purchases necessitated by Sherco 3's catastrophic failure and extended outage.
3. Xcel has not sufficiently supported its claims of ratepayer benefits stemming from Sherco 3's restoration during the extended outage period.
4. Xcel cannot offset any ordered refund of replacement energy costs with the speculative value of these asserted ratepayer benefits.
5. Xcel must refund ratepayers, in the 2024 FCA true-up filing, the entire balance of replacement energy costs and interest, as calculated by Department witness Mr. King.⁵²

d. Xcel Large Industrials

Sherco Unit 3's catastrophic failure resulted from undetected SCC in the unit's LP dovetails. Xcel failed to detect the SCC because it did not monitor and maintain the steam chemistry within EPRI guidelines, and it postponed a major LP inspection from 2011 to 2014 which would have discovered the damage before the catastrophe. Moreover, Xcel acknowledged that it did not conduct an engineering study to determine whether LP turbine inspection postponement was prudent. The Event was preventable, so the replacement power costs were not prudently incurred; therefore, Xcel should be required to refund replacement power costs, with interest. The refund should be quantified according to the amounts from the AAA methodology, as allocated to the Minnesota jurisdiction and offset by a portion of the GE settlement amount that pertained to replacement energy costs. The refund should be made to Xcel's customers through its 2024 Fuel Clause Adjustment (FCA) true-up filing.

6. ALJ Report

The ALJ stated that Xcel's management made an informed decision to defer the 2011 major inspection despite the known risks of SCC in finger dovetails. Additionally, Xcel did not factor

⁵² OAG Initial Br. at 1.

the condenser tube leaks and the 2005 washing incident before deferring the 2011 major inspection demonstrating a lack on reasonable care in its maintenance practices.

The ALJ found that Xcel failed to satisfy its burden of proof that it operated and maintained Sherco Unit 3 in a reasonable and prudent manner consistent with good utility practices. A preponderance of the evidence established that Xcel's failure to conduct necessary inspections and maintenance on Sherco Unit 3 contributed to its catastrophic failure on November 19, 2011.⁵³ Additionally, Xcel's imprudence was mitigated by the contributory negligence of Sherco Unit 3's manufacturer, GE, which knew of defects in its product design but failed to adequately advise Xcel. Therefore, the ALJ concluded that both Xcel and GE contributed to the catastrophic failure attributing 52 percent of the loss to GE and 48 percent of the loss to Xcel.

7. Exceptions to ALJ Report

a. Xcel

Xcel stated that the record is clear in that there was no industry or manufacturer expectation that a utility would undertake costly, time-consuming, and potentially destructive turbine-blade removal and inspection unless certain anomalous events transpired, none of which occurred. A blades-off inspection was the only way to detect the internal stress corrosion cracking in the specific components at issue in this matter. Xcel suggested that the ALJ's conclusion that it failed to prudently operate and maintain Sherco Unit 3 was erroneous based on five faulty premises:

1. Industry knowledge about the potential for SCC in steam turbines generally is equivalent to actual knowledge about the level of susceptibility of specific components in specific unit types to SCC;
2. There was no reasonable basis to re-assign Sherco Unit 3's Major inspection interval from 6 years to 9 years—ignoring evidence that 9-year Major inspection intervals were well within the range of industry trends, the Company's experience with Sherco Units 1 and 2, and aligned with GE's guidance that acknowledged inspection intervals could be extended beyond 6 years based on numerous factors, including fleet experience;
3. A 1999 GE recommendation that a "complete reinspection" occur after ten years of continued service unequivocally meant that GE recommended that the Company perform a Blades-Off inspection no later than 2009—despite a conflicting Finding that "[i]t is unclear in the record what GE meant by 'completely reinspected,'" and despite GE specifically declining to recommend a Blades-Off inspection prior to the 2011 inspection;

⁵³ ALJ Report Conclusions of Law ¶ 11.

4. A Major inspection in 2011 would have revealed evidence of internal SCC in the finger-pinned attachments, which would have resulted in the Blades-Off inspection, the detection of the SCC, “and could have avoided the Event”—disregarding GE’s post-Event guidance that expressly confirms it is “not possible” to inspect finger-pinned attachments for latent SCC in the absence of a Blades-Off inspection as there are no external indications of cracking; and
5. Although the extensive record in these proceedings fails to reveal evidence of either a conflict or that economic decisions prevailed over engineering judgment, that there was, in fact, a disagreement between the Company’s experienced engineers and Xcel Energy’s management about the proposed scope of the 2011 inspection, and that management could not be convinced “to invest the time and money” on the Blades-Off inspection “despite the known risk of SCC for finger [pinned] dovetails and the potential for ‘catastrophic’ results, including units with drum boilers.”

Xcel stated that each conclusion was unsupported by the record and demonstrated a failure to fully understand the testimony. Xcel believed the record demonstrated that it prudently maintained and inspected Sherco Unit 3 including the decision regarding the 2011 inspection.

b. Other Parties

The Department, OAG, and XLI agreed with the ALJ’s finding that Xcel acted imprudently in the operation and maintenance of Sherco Unit 3. Xcel’s failure to conduct a major inspection in 2011 contributed to the catastrophic loss that occurred on November 19, 2011.

8. Reply to Exceptions

a. Xcel

Xcel continued to express that it acted prudently in the operation and maintenance of Sherco Unit 3 based on the information available at the time of the Event. The turbine failure was a result of GE’s faulty design and its failure to advise Xcel of the SCC risks for finger dovetail attachments.

b. Other Parties

The Department, OAG, and XLI continued to express that Xcel acted imprudently in the operation and maintenance of Sherco Unit 3. The Department and OAG emphasized that Xcel was aware of the SCC risks and its maintenance decisions failed to mitigate those risks.

9. Reference to Record

ALJ Report Findings of Fact ¶¶ 25-306, COL ¶ 11
Ex. Xcel-4 at 18 – 19 (Murray Direct).

Ex. Xcel-7 at 43 (Kolb Direct).
 Ex. Xcel-10 at 20 (Daniels Direct).
 Ex. Xcel-10 at 31 (Daniels Direct).
 Ex. Xcel-10 at 32 (Daniels Direct).
 Ex. Xcel-23 Schedule 6 at 1 (Sirois Direct – Part 3).
 Ex. Xcel-23 Schedule 7 (Sirois Direct – Part 3).
 Ex. Xcel-23 Schedule 10 at 1 (Sirois Direct – Part 3).
 Ex. Xcel-23 Schedule 14 at 1 (Sirois Direct – Part 3).
 Ex. Xcel-23 Schedule 14 at 6 (Sirois Direct – Part 3).
 Ex. Xcel-23 Schedule 14 at 4 (Sirois Direct – Part 3).
 Ex. Xcel-23 Schedule 14 at 5 and 7 (Sirois Direct – Part 3).
 Ex. Xcel-23 Schedule 14 at 19 (Sirois Direct – Part 3).
 Ex. Xcel-23 Schedule 15 (Sirois Direct – Part 3).
 Ex. Xcel-23 Schedule 16 at 1 (Sirois Direct – Part 3).
 Ex. Xcel-23 Schedule 16 at 4 (Sirois Direct – Part 3).
 Ex. Xcel-25 Sched. 4 at 15 (Sirois Rebuttal).
 Ex. Xcel-26 Schedule 2 at 3 – 4 (Tipton Direct).
 Ex. Xcel-52 at 1 (Kolb Surrebuttal).
 Xcel Energy Initial Br. at 136 – 134.
 Xcel Energy Exceptions at 4 – 5.
 Ex. DOC-1 at 21 (Polich Direct).
 Ex. DOC-1 at 53 (Polich Direct).
 Ex. DOC-7 at 7 (Klotz Rebuttal).
 Ex. DOC-7 at 9 (Klotz Rebuttal).
 Ex. DOC-7 at 32 (Klotz Rebuttal).
 Ex. DOC-25 Sherco Low Pressure Turbine Operation and Inspection History
 Ex. DOC-29 GE In-Service Turbine Inspection April 2, 1999.
 OAG Initial Br. at 1.
 Evidentiary Hearing Tr. Vol. 1 at 113 (Murray).
 Evidentiary Hearing Tr. Vol. 2 at 49-50 (Tipton).

B. Energy Replacement Cost

1. Introduction

Energy replacement costs are incurred by utilities when a generation asset (such as a coal-fired power plant) goes offline for a scheduled or forced outage. The utility is obligated to provide retail electric service to its customers. Therefore, when a generation asset goes offline, the utility must purchase additional wholesale power from another source, such as its other generation assets, bilateral purchases from an independent power producer, or purchases from the MISO energy market.

The Commission tasked the ALJ with determining whether Xcel's energy replacement costs

were reasonable and prudent and “if not, the amount of overcharges, plus interest that should be returned to ratepayers.”⁵⁴ Because Xcel calculated two completely different total costs of replacement energy—one for its 2012-2013 AAA proceeding,⁵⁵ and one for the Company’s GE Litigation⁵⁶—the ALJ and the Commission must decide, as a threshold matter, which cost amount should be used. The two cost amounts are shown in the following table.

Table 2: Energy Replacement Cost Calculations⁵⁷

	AAA Report	GE Litigation
Total Energy Replacement Cost Allocated to Minnesota	\$41,327,637	\$33,681,734
Interest	\$30,220,751	\$24,521,895
Total	\$71,548,388	\$58,203,629

The parties do not dispute Xcel’s calculations for energy replacement costs under both the AAA and GE Litigation methodologies.⁵⁸ Rather, the dispute is which calculation to utilize should the Commission grant a refund.

2. Party Positions

a. Xcel Energy

Xcel argued that determining the exact costs associated with an outage would require that the Company calculate what its costs would have been had an outage not occurred, essentially recreating a history that never happened. Because many variables – including the outage itself – affect energy market prices, Xcel would need to make reasonable assumptions in its modeling efforts to recreate a hypothetical “what if” scenario. To calculate the replacement energy costs, then, Xcel would need to determine what its costs would have likely been had the outage not occurred. To do this, Xcel would rely on dispatch models and other tools to approximate what would have occurred without the outage at Sherco Unit 3. Therefore, the energy replacement cost for any outage, including the Sherco 3 outage, cannot be precisely calculated due to the interaction of its system and the complexity of the energy market.

⁵⁴ *In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota, et al.*, Docket No. E-002/GR-12-961, et. al., NOTICE OF AND ORDER FOR HEARING at 10, (July 13, 2022).

⁵⁵ Docket No. E-999/AA-13-599, Reply Comments of Xcel Energy at Attachment I, Page 7 of 49 (Nov. 10, 2014).

⁵⁶ Docket No. E-999/AA-13-599, Comments of the OAG at Exhibit C, Page 5 of 29 (Xcel Response to OAG IR No. 1 at 4) (Sept. 26, 2014).

⁵⁷ Ex. DOC-10 at 18 (King Rebuttal); Ex. Xcel-33 at 11-12, 18, and Schedule 3 (Detmer Direct).

⁵⁸ Ex. Xcel-34 at 12, 18 (Detmer Direct); Ex. DOC-4 at 13, 18 (King Direct); Ex. OAG-2 at 10-12 (Lee Rebuttal). XLI did not challenge the calculations and did not offer any witnesses.

In comparison, Xcel noted that the AAA process uses a much simpler month-by-month analysis to estimate replacement power costs.⁵⁹ The outage cost for any unit reported in the AAA Docket is derived by multiplying the maximum output of the unit by the difference between the Real-Time Locational Marginal Price (LMP) less the average plant cost. In other words, Xcel first assumed the plant was generating at full capacity. Then Xcel compared the Real-Time market price at the relevant Commercial Pricing node (specifically, Commercial Pricing node NSP.NSP) with the average cost of running the generation unit on an hour-by-hour basis. Hours where the result was positive meant the Real-Time market exceeded the cost of generation from the plant. In these circumstances, the unit would have operated at a profit. Using the above-described calculation, Xcel determined the cost of replacement power and summed the results. Hours where the result was negative meant the Real-Time market was less than the cost of generation from the plant. During these hours, the unit would have operated at a loss. These hours were excluded. This calculation applied for just the duration a plant was offline due to planned or forced outages.⁶⁰ Using this methodology, Xcel calculated replacement power costs shown in Table 2, above.

For the GE Litigation, Xcel conducted a more robust analysis for the replacement power costs associated with the Sherco 3 outage (Litigation Estimate). As Xcel explained, the Litigation Estimate incorporated significant data not considered in the earlier AAA Estimate, including:

- 1) An estimate for some forced and maintenance outages at Sherco Unit 3 that would have occurred, while the [AAA Estimate] assumes zero outages or 100% availability;
- 2) The impact to the whole Xcel Energy portfolio and the Locational Marginal Prices actually experienced at both load and generation, while the [AAA Estimate] only takes into account the Locational Marginal Prices at load;
- 3) The impact on Day-Ahead and Real-Time Locational Marginal Prices had Sherco Unit 3 generation been offered into the MISO market, while the [AAA Estimate] only compares the cost the Sherco Unit 3 generation with the cost of the Real-Time market without accounting for the impact of that generation on the market;
- 4) Heat rate and capacity improvements at the Sherco Unit 3 plant; and
- 5) Avoided O&M costs while the unit was being repaired.⁶¹

⁵⁹ The AAA methodology is described further in Ex. Xcel-33 schedule 2 (Detmer Direct).

⁶⁰ Ex. Xcel-33 at 11-12 (Detmer Direct).

⁶¹ *Id.* at 18-19.

b. Department

The Department concluded that utilizing the GE Litigation amount as the basis for energy replacement costs was reasonable. Specifically, the Department witness stated:

Based on the additional information Xcel provided through testimony, I recommend utilizing the GE Litigation amount as the basis for energy replacement costs in favor of the AAA amount. Xcel explained that the GE Litigation analysis is more comprehensive than the analysis underpinning the AAA amount because it considers broader market impacts to Xcel's load and other resources. Additionally, the AAA analysis contains certain simplifying assumptions related to forced outage rates and start-up costs that are not realistic for the long outage that Sherco 3 experienced.⁶²

c. OAG

The OAG did not provide witness testimony on this topic but did support the use of the GE Litigation amount "as the starting point for calculating a refund for Minnesota ratepayers." Specifically the OAG stated:

The Commission should adopt the recommendation of Department expert, Mr. King, and find that Xcel's GE litigation modeling is the appropriate basis for calculating Xcel's replacement energy costs. Mr. King recommended using the GE Litigation amount as the starting point for calculating Xcel's energy replacement costs because Xcel performed a more comprehensive analysis, and considered broader market impacts, for the GE Litigation than it did for the AAA proceeding. Xcel has also testified that the GE Litigation analysis "provides the more complete picture of the Company's replacement power costs," and goes so far as to say that "a comprehensive analysis – such as that prepared for the Lawsuit – is required." The ALJ and the Commission should use the GE Litigation amount as the starting point for calculating a refund for Minnesota's ratepayers.⁶³

d. XLI

XLI argued Xcel should absorb the replacement power costs associated with the Sherco 3 outage. Fundamental utility regulation principles hold that Xcel's investors accepted the risks of providing utility service, including costs arising from an outage, in exchange for a "just and reasonable" rate of return on their investments. Utilities receive "just and reasonable rates" in

⁶² Ex. DOC-10 at 15 (King Rebuttal).

⁶³ OAG Initial Br. at 6.

exchange for the provision of service to all customers within the monopoly service territory.⁶⁴

In this matter, Xcel's energy replacement costs have been recovered from Minnesota ratepayers via the FCA from 2013 to 2018. For the outage period, Xcel used the pass-through FCA to recover, monthly, actual fuel expenses and purchased power costs, including energy replacement costs due to planned and forced outages.

The amount at issue should, as closely as possible, match the incremental amount customers were charged in the FCA due to the Sherco 3 outage. Although the GE Litigation amount was the result of an extensive modeling effort made by Xcel focused on quantifying the financial impacts of the Sherco 3 outage, Xcel's AAA outage cost reporting is a better means of quantifying those impacts.⁶⁵

The amount needs to be representative of the amount that ratepayers paid and should be returned to ratepayers through the 2024 FCA true-up filing. Xcel should not be permitted to substitute a value of costs that is not indicative of the costs recovered from ratepayers. Therefore, XLI recommended Xcel be ordered to refund \$71.5 million in costs that were inappropriately recovered from ratepayers in this matter.

3. ALJ Report

In her report, the ALJ recommended that the refund be calculated based on the AAA estimate, reasoning that Xcel's AAA filings "as closely as possible match[ed] the incremental amount customers paid through the FCA as a result of the Event."⁶⁶

The ALJ noted that ratepayers paid \$41,327,637 in energy replacement costs based on Xcel's calculations in the 2012-2013 AAA docket. Xcel argued that if energy replacement costs are reimbursed back to ratepayers, the Commission should use the Company's calculation from the GE Litigation – a lesser amount of \$33,681,734. Xcel's argument is that the GE Litigation calculation is more comprehensive and accurate than the amount submitted in the AAA reports and charged to ratepayers.⁶⁷

The ALJ determined that it was appropriate that energy replacement costs, as closely as possible, match the amount customers were charged in the FCA due to the Sherco 3 outage. Specifically, the ALJ stated:

⁶⁴ XLI Initial Br. at 15.

⁶⁵ *Id.* at 18.

⁶⁶ ALJ Report Findings of Fact ¶ 330.

⁶⁷ *Id.* ¶ 323.

325. Matthew King is an expert hired by the Department to review Xcel's energy replacement cost calculations. King explained that the amount of replacement costs to be refunded to ratepayers should, as closely as possible, match the amount customers were charged in the FCA due to the Unit 3 outage. . .⁶⁸

In regard to interest, the ALJ agreed that interest should be added to any energy replacement costs paid by the customers. Specifically, the ALJ stated:

King, opined that, because the energy replacement costs were incurred and paid by customers during the outage period over 10 years ago, interest should also be added to the costs charged to translate the costs into today's dollars for reimbursement. The Administrative Law Judge agrees.⁶⁹

326. To adequately compensate ratepayers for replacement power costs or other FCA costs that were not prudently incurred by the utility, the Commission has required utilities to pay interest on the amount of over-recovery. For customer refunds in the forced-outage context and for other refunds, interest calculated at the U.S. Federal Reserve Prime Rate, compounded monthly, has been required by the Commission. Thus, the Commission has directed the Administrative Law Judge to include interest in any overage calculation.

327. Using the numbers submitted by Xcel for energy replacement costs in the Company's AAA reports and the historical prime interest rates applicable at the time, King calculated interest based on the monthly costs as they were incurred and paid by customers during the outage period through January 1, 2025 (King assumed a refund to ratepayers in January 2025.)

328. When interest is included, the total energy replacement costs allocated to Minnesota, based on Xcel's 2012-2013 AAA report and FCA, is \$71,548,388: \$41,327,637 in energy replacement costs and \$30,220,751 of interest.

The ALJ noted that neither Xcel nor any other party disputed King's calculations of interest.⁷⁰

Ultimately, the ALJ found XLI's recommended approach to be more reasonable and equitable. Specifically, the ALJ stated:

⁶⁸ *Id.* ¶ 325.

⁶⁹ *Id.*

⁷⁰ *Id.* ¶ 329.

330. Xcel, the Department, and the OAG suggest that the Commission use Xcel's estimate of energy replacement costs from the GE Litigation because of its greater complexity and detail, and because of Xcel's failure to fully explain the AAA calculation. The Administrative Law Judge disagrees. Instead, the Judge finds more reasonable and equitable the arguments presented by XLI, as well as the rationale expressed by King: the amount of replacement costs should, as closely as possible, match the incremental amount customers paid through the FCA as a result of the Event. [Footnotes omitted]

331. When calculating the amount of energy replacement costs due as a refund to Minnesota ratepayers, the Commission should use the amount presented by Xcel in its 2012-2013 AAA report, as this amount was used to calculate the FCA actually charged to ratepayers. It would be unreasonable for the Commission to use a different, after-the-fact calculation to return less to the ratepayers than the ratepayers actually paid as a result of the Event. Any lesser amount would not fairly compensate ratepayers who had no control over and no contributory fault for the Event. It would allow the Company a windfall to which it is not entitled.

332. Accordingly, the Administrative Law Judge recommends that the Commission use the total energy replacement costs reported by Xcel in its 2012-2013 AAA report and add interest, as calculated by King, for a total of energy replacement costs and interest of \$71,548,388.

4. Exceptions to ALJ Report

a. Xcel

Xcel argued that two witnesses analyzed replacement power costs incurred during the period Sherco Unit 3 was out of service and both agreed the GE Litigation method provided the most reasonable estimate of any such costs.⁷¹ Additionally, Xcel noted that the OAG, in its Initial Brief, agreed with Xcel and the Department on this issue.⁷² Xcel argued that the ALJ Report revealed a lack of understanding of the regulatory process by which utilities recover their energy costs, and the ALJ findings on this issue must be rejected.

Xcel noted that the Commission reviewed the Company's AAA reports for all three years, 2012 through 2014, in April 2016. During the three years, the Company incurred a total of approximately \$2.644 billion in fuel and purchased power costs. At the same time, the Company recovered approximately \$2.655 billion for fuel and purchased power costs. After review, the Commission accepted the Company's AAA reports (resulting in a true-up in

⁷¹ See Evidentiary Hearing Tr. Vol. 2 (Nov. 2, 2023) at 142 (Detmer); Ex. DOC-10 at 15 (King Rebuttal).

⁷² OAG Initial Br. at 5-6.

customers' favor of approximately \$11 million), meaning Xcel has recovered the full fuel and purchased power costs reported during those years (and no more). However, the Commission reserved any final decision as to whether some portion of those costs related to "replacement power" needs during the time Sherco Unit 3 was not available may not be appropriate for recovery, such that some remedy may be required.⁷³

Given this backdrop, Xcel argued that if the Commission determines the Company was imprudent in operating and maintaining Sherco Unit 3, and that this imprudence caused the Company to incur additional power costs that have already been recovered from customers, the question becomes what portion of the \$2.65 billion in fuel and purchased power cost was incurred due to the unavailability of Sherco 3.

Xcel argued that this more accurate and reliable analysis resulted in an estimate of the total replacement power cost during Sherco Unit 3 restoration to be approximately \$45.4 million total, and approximately \$33.7 million on a Minnesota jurisdictional basis.

Xcel noted that the record of this proceeding demonstrated the Company prudently operated and maintained Sherco Unit 3, such that any replacement power costs were prudently incurred. However, should the Commission disagree, the record established that the best estimate of any replacement power costs incurred due to the Event was \$33.7 million on a Minnesota jurisdictional basis. Use of an earlier, less accurate estimate, that used assumptions the Department agreed is not realistic, cannot be justified, and the ALJ findings on this issue must be rejected.⁷⁴

b. Department

The Department continued its support of the Litigation Estimate and argued that although it produces a lower refund amount, it is the most appropriate basis for estimating replacement power costs incurred during the period that Sherco 3 was out of service. The Department noted the Litigation Estimate is based on complex modeling to estimate the MISO market results under a scenario where Sherco 3 remained available. Whereas the AAA estimate, while appropriate to estimate replacement power costs for shorter outages, contains simplifying assumptions on forced outage rates and start-up costs that are not realistic for an outage lasting almost two years. Also, the GE Litigation estimate was supported by Xcel and its insurers in the extensive litigation, where they had an incentive to seek the highest defensible replacement power costs amount to support higher damages. The Department concurred that the Litigation Estimate is the most reasonable estimate of replacement power costs and should

⁷³ See Docket Nos. E-999/AA-12-757, AA-13-599 & AA-14-579, ORDER ACTING ON ELECTRIC UTILITIES' ANNUAL REPORTS AND REQUIRING ADDITIONAL FILINGS (June 2, 2016).

⁷⁴ Xcel Exceptions at 42.

be used to calculate a refund to Xcel's customers.⁷⁵

The Department recommended the following adjustments to the ALJ report.

Findings of Fact, ¶1330, revise:

330. Xcel, the Department, and the OAG suggest that the Commission use Xcel's estimate of energy replacement costs from the GE Litigation because of its greater complexity and detail, and because of Xcel's failure to fully explain the AAA calculation. The Administrative Law Judge agrees. ~~disagrees. Instead, the Judge finds more reasonable and equitable the arguments presented by XLI, as well as the rationale expressed by King: the amount of replacement costs should, as closely as possible, match the incremental amount customers paid through the FCA as a result of the Event.~~

Findings of Fact, ¶1331, omit.

Findings of Fact, ¶1332, revise:

332. Accordingly, the Administrative Law Judge recommends that the Commission use the total energy replacement costs estimated reported by Xcel in ~~its 2012-2013 AAA report~~ the GE Litigation, subtract a portion of Xcel's GE settlement attributable to reimbursement for energy replacement costs, and add interest, as calculated by King, for a total of energy replacement costs and interest of ~~\$71,548,388~~ \$55,675,052 on a Minnesota Jurisdictional basis.

Conclusions of Law ¶ 14 revise:

14. The amount of energy replacement costs incurred by Xcel for Unit 3 from November 2011 to October 2013, is best represented by the Company's damage calculation prepared for the GE Litigation Fuel Clause Adjustment (FCA) ~~calculated by Xcel in the 2012-2013 Annual Automatic Adjustment docket, MPUC Docket No. E-999/AA-13-599.~~

Conclusions of Law ¶ 20 revise:

20. A summary of the refund due to ratepayers is as follows:

Energy Replacement Costs in ~~2012-2013 AAA Report~~ as estimated by Xcel for the GE Litigation:
~~\$41,327,637~~ 33,681,734

c. OAG

The OAG noted that the ALJ recognized Matthew King as an expert hired by the Department to

⁷⁵ Department Exceptions at 18-19.

review Xcel's energy replacement cost calculations. As an advocate for Minnesota's ratepayers, the Department and its expert have an interest in identifying the calculation of replacement energy costs most likely to make ratepayers whole. After reviewing Xcel's explanations for the GE Litigation and AAA calculations, King recommended use of the Litigation Estimate because it is a more thorough calculation that considers broader market impacts to Xcel's load and other resources and does not make the simplifying assumptions in the AAA calculation, which are unrealistic for an outage as long as that experienced by Sherco 3.⁷⁶

The OAG concluded that requiring Xcel to refund 100 percent of the GE Litigation calculation of replacement energy costs (as adjusted with interest and the GE Settlement offset), will much more effectively make ratepayers whole.

The OAG recommend the following adjustments to the ALJ Report:

Mod. 327. Using the numbers submitted by Xcel for energy replacement costs in the Company's AAA reports GE Litigation and the historical prime interest rates applicable at the time, King calculated interest based on the monthly costs as they were incurred and paid by customers during the outage period through January 1, 2025.

Mod. 328. When interest is included, the total energy replacement costs allocated to Minnesota, based on Xcel's GE Litigation calculation, is \$55,675,052. ~~2012-2013 AAA report and FCA, is \$71,548,388: \$41,327,637 in energy replacement costs and \$30,220,751 of interest.~~

330. Xcel, the Department, and the OAG suggest that the Commission use Xcel's estimate of energy replacement costs from the GE Litigation because of its greater complexity and detail, ~~and because of Xcel's failure to fully explain the AAA calculation.~~ The Commission agrees and will adopt the GE Litigation calculation of replacement energy costs. ~~The Administrative Law Judge disagrees. Instead, the Judge finds more reasonable and equitable the arguments presented by XLI, as well as the rationale expressed by King: the amount of replacement costs should, as closely as possible, match the incremental amount customers paid through the FCA as a result of the Event.~~

Mod. 331. When calculating the amount of energy replacement costs due as a refund to Minnesota ratepayers, the Commission should use the amount ~~presented~~ calculated by Xcel ~~in~~ for its ~~2012-2013 AAA report,~~ GE Litigation as this amount was determined by the Department and the OAG as the most thorough and appropriate calculation of replacement energy costs. The Commission finds that while the GE Litigation calculation is a smaller amount than the 2012-2013 AAA calculation, requiring Xcel to refund 100% of the GE Litigation cost, minus the GE Settlement offset, with the addition of interest, will more fairly compensate ratepayers, who

⁷⁶ Ex. DOC-9 at 15 (King Rebuttal).

~~had no control over the operation and maintenance of Sherco 3, than 48% of the AAA calculation similarly adjusted for the GE Settlement and interest, used to calculate the FCA actually charged to ratepayers. It would be unreasonable for the Commission to use a different, after-the-fact calculation to return less to the ratepayers than the ratepayers actually paid as a result of the Event. Any lesser amount would not fairly compensate ratepayers who had no control over and no contributory fault for the Event. It would allow the Company a windfall to which it is not entitled.~~

~~Mod. 332. Accordingly, the Administrative Law Judge recommends that the Commission will use the total energy replacement costs reported by Xcel in its 2012-2013 AAA report GE Litigation and add interest, as calculated by King, for a total of energy replacement costs and interest of \$71,548,388.~~

d. XLI

XLI supports the ALJ's recommendation that the amount of energy replacement costs incurred by Xcel for Sherco Unit 3 from November 2011 to October 2013 is best represented by the Company's FCA calculated by Xcel in the 2012-2013 Annual Automatic Adjustment docket, MPUC Docket No. E-999/AA-13-599.⁷⁷

5. Replies to Exceptions

a. Xcel

Xcel argued that there is no record support for using the AAA estimate to determine the amount of replacement energy costs incurred during the period Sherco Unit 3 was out of service. Xcel noted the two witnesses who did testify regarding replacement power costs agreed that the AAA Estimate is not the best representation of these costs, due to its use of several simplifying assumptions that are "not realistic" when estimating costs incurred during a long-duration outage such as Sherco Unit 3. Rather, Xcel argued that the Litigation Estimate best reflects the cost of replacement power.

Xcel continued to argue the ALJ Report recommended use of the AAA Estimate due to the ALJ's misunderstanding of the fuel clause process and what was "actually paid" by customers because of that process. Xcel believes the record of this proceeding demonstrated the Company prudently operated and maintained Sherco Unit 3, such that any replacement power costs were prudently incurred. However, should the Commission disagree, Xcel argued the record unequivocally establishes that the best estimate of any replacement power costs incurred due to the Event were \$33.7 million on a Minnesota jurisdictional basis. Xcel noted, the Department and OAG continue to support this Litigation Estimate of replacement power costs. Use of the earlier, less accurate AAA Estimate cannot be justified, and the ALJ Findings on

⁷⁷ XLI Exceptions at 1.

this issue must be rejected.

b. OAG

The OAG continued its support of the Litigation Estimate of replacement power costs. Specifically, the OAG stated:

Xcel Large Industrials (XLI) argue that the Commission should adopt the ALJ's Finding that the 2012-2013 AAA calculation of replacement energy costs instead of the GE Litigation calculation as recommended by the OAG, the Department, and Xcel. The OAG explained the reasons for the superior accuracy of the GE Litigation calculation in testimony, briefing, and exceptions and continues to recommend that the Commission adopt the GE Litigation calculation as the underlying method for determining replacement energy costs because it is the most accurate calculation. [Footnotes omitted]

c. XLI

XLI continued its support of the ALJ's recommendation that ratepayers should be refunded the amount of replacement power Xcel recovered through the FCA. XLI argued it is inconsistent to use cost estimates to determine recoveries but a "more robust" methodology in determination of refunds. XLI noted that the utility bears the burden of proof in the instant proceeding and that the ALJ correctly determined that the methodologies for recovery and refund should be the same.

Specifically, XLI stated:

Xcel asserts it is "not possible to precisely determine replacement power costs incurred as a result of any particular outage." Xcel is correct, in that "precise" costs may not be available, but this is exactly the point. Parties do not use "precise" costs in determining the replacement costs that are recovered through the FCA; they use cost estimates, the estimates provided by the utility. It makes no sense to use cost estimates to determine recoveries, but "more robust" methodologies to determine refunds.

If the cost estimates are not sufficient to determine the amount of refund, they should not be sufficient to determine the amount of initial recovery in the first place. Xcel seems appalled that the ALJ correctly determined the methodologies for recovery and refund should be the same, and that "the amount of replacement power costs 'ratepayers actually paid as a result of the Event'" should be refunded, stating "as though replacement power costs associated with the Event were somehow separately accounted for and charged to customers." The utility bears the minimum burden of identifying and separately accounting for the replacement power costs that flow through

the FCA, just like it identified the replacement power costs it recovered in its current FCA. At no point in the FCA process are costs determined using the “more robust” methodology Xcel seeks to use to determine the refund in this proceeding.⁷⁸

6. Reference to Record

ALJ Report ¶ 334-342
 Ex. Xcel-2 at 13-16 (Krug Direct).
 Ex. Xcel-37 at 10 (Miller Direct).
 Xcel Initial Br. at 134.
 Xcel Reply Br. at 86-88.
 Xcel Exceptions at 42-46
 Xcel Reply to Exceptions at 11-12
 Ex. DOC-3 at 19 (King Direct)
 Ex. DOC-5 at 8-9 (King Rebuttal)
 Department Initial Br. at 42-44, 49-51
 Department Reply Br. at 20-21
 Department Exceptions at 17-19, 21
 Ex. OAG-1 at 5 (Lee Rebuttal)
 OAG Initial Br. at 6-7.
 OAG Reply Br. at 9.
 OAG Exceptions at 8-9.
 XLI Initial Br. at 22-23.
 XLI Reply Br. at 20.

C. Setoffs, Deductions, or Credits from Refund Amount – GE Litigation Settlement

1. Introduction

Xcel argued that, should the Commission find that Xcel acted imprudently in its operation or maintenance of Sherco Unit 3, then Xcel should be entitled to certain setoffs or deductions from the energy replacement costs to be returned to ratepayers. Those setoffs include: (1) all the GE Litigation settlement proceeds; (2) insurance proceeds for excess fuel oil costs; (3) “avoided costs”; and (4) labor and material savings.

On November 15, 2013, Xcel, SMMPA, and insurers of Sherco Unit 3 filed a joint complaint against GE (the Lawsuit). The complaint, as amended on January 27, 2014, sought to recover costs associated with the Event. Ultimately, Xcel settled the Lawsuit with GE. Under the terms of the confidential settlement, GE made a payment to the Company that the Company proposed be credited in its entirety to customers, and the Company’s claims against GE were

⁷⁸ XLI Reply Exceptions at 2-3.

dismissed.

Xcel proposed applying the GE payment as a credit to its monthly FCA in February 2019. In its April 11, 2019, Order Authorizing Sherco Unit 3 Ratepayer Refund Amount and Method and Requiring Compliance Filing in these dockets, the Commission agreed with the Company's proposal.

The question before the Commission is whether any of the GE settlement payment should be credited towards energy replacement costs owed by Xcel. Although the calculation of the refund is straightforward, the parties dispute how to account for the proceeds of Xcel's settlement with GE. Xcel argued that the Commission should reduce any refund of replacement power costs by the entire amount of the proceeds of its settlement with GE, which it already refunded to ratepayers. The Department, OAG and XLI argue that only a portion of the settlement refund should be used to offset any refund of replacement power costs.

2. Party Positions

a. Xcel

In testimony, Xcel listed three primary categories of costs incurred by the Company due to the Event: restoration costs (i.e., the cost of replacing and repairing the Unit), replacement power costs (the net impact on the Company's costs of energy during the November 2011 to October 2013 time period when Sherco Unit 3 was unavailable) and excess fuel oil costs (excess fuel oil was consumed during the initial startup of Sherco Unit 3 following repairs). While the restoration and excess fuel oil costs can be determined with precision, the replacement power costs must be estimated.⁷⁹ Xcel stated that the total costs incurred by the Company was \$138.4 million which is comprised of approximately \$104.3 million of restoration costs, \$33.7 million of replacement power costs, and \$0.4 million of excess fuel oil costs,⁸⁰ of which \$99.2 million (Minnesota jurisdiction) was recovered from various insurers to fund the repairs needed to get the plant back in service and to reimburse the Company for excess fuel oil costs.⁸¹ Thus, Xcel recovered virtually all of the restoration and excess fuel oil costs from its insurance providers.⁸² In addition, Xcel filed a lawsuit against GE, the turbine manufacturer, and ultimately negotiated a confidential settlement that resulted in payment by GE to Xcel.

Xcel argued that this settlement provided material rate relief to customers and that the Company's efforts to secure these proceeds is demonstrative of Xcel's prudent actions after the Event. Any analysis of replacement power costs must consider the credit of GE settlement

⁷⁹ Ex. Xcel-2 at 11 (Krug Direct).

⁸⁰ *Id.* at 12.

⁸¹ *Id.* at 13.

⁸² *Id.* at 12.

proceeds as an offset.⁸³

b. Department

The Department argued that offsetting the forced outage cost refund by the full amount refunded in the FCA is inappropriate. Doing so would allow Xcel to double-recover approximately \$5.5 million for its property losses—first through the recovery of restoration costs not recovered through insurance and second by offsetting imprudently incurred replacement power costs. In addition, some amount of the settlement must be attributable to the more substantial property loss, as the settlement ended Xcel’s litigation against GE.

The Department argued the replacement power cost refund should be reduced by the portion of Xcel’s settlement with GE that represents replacement power costs. The Department estimated the replacement power costs embedded in the settlement by using the portion of damages from the GE Litigation that Xcel attributed to loss of use (replacement power costs). In the GE Litigation, Xcel categorized 24.4 percent of its damages attributable to loss of use and 76.5 percent of its damages as property loss. The Department proposed applying the same loss of use percentage to the total GE settlement to estimate the amount applicable to replacement power costs. Using that same proportion of replacement power costs and restoration costs that Xcel advocated in the litigation to determine the component of the settlement for refund purposes is reasonable, particularly in the absence of any alternative explanation provided by Xcel.

Although the calculation of the refund is straightforward, the parties dispute how to account for the proceeds of Xcel’s settlement with GE. Xcel argued that the Commission should reduce any refund of replacement power costs by the entire amount of the proceeds of its settlement with GE, which it has already refunded to ratepayers. The Department argued that Xcel’s position failed to recognize that the settlement covered both types of costs: 1) costs to restore Sherco 3 (i.e., capital costs included in rate case proceedings), and 2) replacement power costs (i.e., costs resulting from loss of use of the facility addressed in the FCA). That Xcel and GE chose to not distinguish between these two different sources of loss does not erase the distinction, and ratepayers should not have to bear costs that result from litigation positions of private parties, into which ratepayers had no input.

Moreover, the Department noted that Xcel has the burden of proof in this proceeding and since Xcel has refused to provide an estimate of replacement power costs embedded in the GE settlement, the Commission could determine that no amount of the settlement should offset replacement power costs. Such a determination would be consistent with the utility’s burden of proof and the statutory directive that “any doubt be resolved in favor of the consumer.” However, the Department did not advocate such an approach.

⁸³ Xcel Reply Br. at 86.

Therefore, the Department recommended that the principal amount of replacement power cost calculation be reduced by 24.4 percent of the GE settlement amount in the month where it was returned to ratepayers.

c. OAG

The OAG agreed with the Department's analysis and argued the Commission should reject most of Xcel's claims of ratepayer benefits stemming from the catastrophic failure of Sherco Unit 3 and deny any associated cost recovery. However, the OAG concluded that adoption of 24.4 percent of Xcel's GE Settlement payment as an offset to Xcel's replacement energy costs was reasonable.

d. XLI

XLI argued the insurance reimbursement associated with restoring Sherco 3 to service and for excess fuel oil costs is not relevant to replacement power costs. XLI noted that the insurance reimbursement did not fully offset the restoration costs, and Xcel recovered the restoration costs in excess of insurance reimbursement from customers via its 2013 rate case.⁸⁴ The insurance reimbursement does not pertain to the calculation and prudence of the replacement power costs and it has no bearing on this matter.

XLI disagreed with Xcel's contention that its settlement with GE should be an offset to replacement power costs. XLI concluded that not all of the settlement is applicable to replacement power costs, despite Xcel's claims to the contrary. XLI agreed with the Department and OAG that 24.4 percent should be applied to the settlement offset from the Commission's quantification of replacement power costs that should be refunded to customers.⁸⁵

3. ALJ Report

The ALJ found the arguments of the Department, OAG, and XLI regarding the apportionment of the GE Litigation settlement reasonable. The ALJ noted that the GE Litigation settlement was a global settlement and did not specifically identify how the settlement was to be apportioned amongst the various damage categories.⁸⁶ Additionally, in the GE Litigation, Xcel and its insurers sued GE both for the costs of restoring the plant to its pre-accident condition (i.e., restoration costs) and for loss of use (i.e., energy replacement costs). In its lawsuit, Xcel categorized \$45,382,406 (24.4 percent of its total damages) as "loss of use" and \$142,260,860 (76.5 percent of its total damages) as property loss.⁸⁷ Finally, Xcel did not provide any information on the

⁸⁴ Ex. DOC-4 at Schedule 2 -Expert Report of Kenneth P. Metcalfe (King Direct).

⁸⁵ XLI Initial Br. at 22.

⁸⁶ ALJ Report Findings of Fact ¶ 337.

⁸⁷ *Id.* ¶ 336.

record as to the portion of the GE Litigation settlement that corresponded with its energy replacement costs claim.⁸⁸

The ALJ concluded that it is fair and reasonable to credit 24.4 percent of the Minnesota portion of the GE settlement proceeds against the energy replacement costs to be refunded to Minnesota ratepayers.⁸⁹

4. Exceptions to ALJ Report

a. Xcel

Xcel argued that the ALJ's recommendation to use less than 25 percent of the GE Litigation settlement as an offset to any replacement power costs incurred to be unreasonable. Xcel noted that the settlement provided material rate relief to customers and customers received the direct benefit of the settlement proceeds in the form of a full credit to purchased power costs, by flowing the credit through the FCA in February 2019.⁹⁰ Any analysis of replacement costs should consider the credit of the full amount of the GE Litigation settlement proceeds as an offset to any such costs.

Any post hoc allocation needed to reflect the reality of the total Event-related costs at issue and what Xcel did and did not have at the time of the settlement. Xcel noted that total Event-related costs were \$138.4 million, inclusive of restoration costs, replacement power costs, and excess fuel oil costs.⁹¹ However, upon obtaining \$99.2 million in insurance recovery for restoration work and excess fuel oil costs from its insurers (on a Minnesota jurisdictional basis), Xcel no longer had claims against GE for recovery of those costs. Rather, Aegis and the Company's other insurers held those claims, which formed the basis of the Aegis Litigation.

The Commission must recognize that Xcel's recovery in the GE Settlement resolved the remaining claims held by the Company, virtually all of which were represented by replacement power costs. After insurance recovery, capital costs only accounted for approximately \$5.1 million of Xcel's remaining claims, whereas replacement power costs accounted for \$33.7 million (on a Minnesota jurisdictional basis).⁹² Xcel argued that using the ALJ's logic that the Settlement should be apportioned by the percentage of damage attributable to replacement power costs, this calculation should be performed at the time of settlement—after accounting for the insurance proceeds received by the Company and credited to customers, and the

⁸⁸ *Id.* ¶ 339.

⁸⁹ *Id.* ¶ 341.

⁹⁰ Xcel Exceptions at 43-44.

⁹¹ Ex. Xcel-1 at 12 (Krug Direct).

⁹² Ex. Xcel-33 at 18 (Detmer Direct).

subrogation of those claims to Xcel's insurers. Xcel concluded that if any apportionment is applied, 86.8 percent of the settlement proceeds should be apportioned to replacement power costs (i.e., \$33.7 million in replacement power costs ÷ \$38.8 million in remaining claims against GE).⁹³

Finally, Xcel argued the ALJ Report failed to recognize the timing of the GE Settlement. Xcel noted that customers, not the Company, have had the benefit of the settlement proceeds since the timing of the February 2019 refund. The ALJ Report calculated a total amount of estimated replacement power costs, adding interest since those estimated costs were recovered from customers, and then proposed simply deducting any settlement offset from that total amount as though customers received the settlement funds today. In other words, the Report recommended Xcel be required to provide ongoing interest on funds returned to customers over five years ago. To address the interest calculation issue, Xcel recommended that to the extent that Commission orders any refund, a compliance filing be required detailing the final refund amount and recognizing the timing of the GE Settlement credit (and other offsets) to customers.

b. OAG

The OAG continued to oppose Xcel's argument that the entire Minnesota jurisdictional portion of its GE settlement should be counted as an offset against a refund of replacement energy costs. The OAG noted that Xcel did not provide any information as to what portion of the GE Settlement corresponded with loss of use (i.e. replacement energy costs), the OAG, the Department of Commerce, and the XLI all agreed that Xcel should receive a credit for 24.4 percent of the GE Settlement. The ALJ also found that it is fair and reasonable to credit Xcel for only 24.4 percent of the settlement. For these reasons, the OAG continued to recommend that the Commission should recognize that Xcel is entitled to no further relief beyond this 24.4 percent offset.⁹⁴

5. Reply to Exceptions

a. Xcel

Xcel continued its argument that the ALJ and intervenors erred in their support for limiting the GE settlement offset. Notably, at the time of the settlement Xcel had already received insurance recoveries from its insurers and most Xcel's remaining claims against GE were for replacement power costs. Additionally, the ALJ failed to correctly account for the timing of the GE settlement as the ratepayers received the settlement proceeds in 2019 and it is unfair for the Company to pay interest on money it had already refunded. Specifically, Xcel stated:

⁹³ Xcel Exceptions at 45.

⁹⁴ OAG Exceptions at 8-9.

As the Company discussed in its Exceptions, there can be no dispute that at the time of the GE Settlement, the Company had already received substantial insurance recoveries from its insurers (that the Company directly credited to customers), meaning the overwhelming majority of its remaining claims against GE were for replacement power costs. While the Report and the Intervenors attempt to account for the GE Settlement proceeds that the Company credited to customers as an offset to any refund now due to customers, they only partially account for this prior relief. The Report, to which the Intervenors did not take exception, allows less than one-quarter of the prior customer credit to be used as an offset against replacement power costs, despite those costs accounting for nearly 90 percent of the Company's remaining claims against GE at the time of settlement. In doing so, the Report and the Intervenors would apportion the majority of the GE Settlement to property loss, despite the fact that the Company had recovered those losses from its insurers and credited the recoveries to its customers as a credit to rate base – effectively providing customers double recovery of these costs. This error must be corrected before the Commission determines whether any additional customer credit is required.

In addition, the ALJ Report and Intervenors fail to recognize the timing of the GE Settlement. Again, it is undisputed that the Company returned the settlement proceeds to customers in their entirety through its monthly fuel clause adjustment in February 2019. Customers, not the Company, have had the benefit of the settlement proceeds since that time, and the Company cannot be required to pay interests on money it did not have. This error, too, must be corrected.⁹⁵

b. Department

The Department continued its support for the ALJ's recommended offset percentage noting that Xcel bears the burden of proof and since the Company failed to provide any information on the record to apportion the GE Litigation settlement, the Department would have been justified arguing for no offset for the refund. Instead, the Department and the other intervenors proposed an allocation based on the information that was available – Xcel's own damage calculation for purposes of the GE Litigation. The ALJ adopted the allocation that the intervenors proposed.

Additionally, the Department noted that even after Xcel's insurance recovery, ratepayers were still assessed \$5.1 million in repair costs that were not covered by insurance. Although ratepayers benefitted from Xcel's settlement with GE via a one-time credit in the FCA, the long-term impact to ratepayers will exceed \$5.1 million because the repair costs were included in

⁹⁵ Xcel Reply to Exceptions at 11-12.

Xcel's rate base, allowing Xcel return of and on investment since its 2013 rate case. By seeking to now apportion much of the GE settlement against replacement power costs, Xcel effectively unwinds the GE settlement's benefit of partially making ratepayers whole for incremental repair costs through a lower replacement power refund.

Because it appropriately recognized that ratepayers were harmed from both the incremental repair and replacement power cost, the ALJ's recommendation that apportions the GE settlement based on Xcel's damage calculation represents the most equitable approach and should be adopted.⁹⁶

6. Staff Analysis

Staff notes that Xcel raised the issue of interest calculation since the GE Settlement refund was issued to ratepayers via the FCA in February 2019 and the ALJ did not appear to take that fact into account in her report. Thus, the Commission may wish to explore this issue further at the October 15, 2024, agenda meeting.

7. Reference to Record

ALJ Report ¶ 334-342
 Ex. Xcel-2 at 13-16 (Krug Direct).
 Ex. Xcel-37 at 10 (Miller Direct).
 Xcel Initial Br. at 134.
 Xcel Reply Br. at 86-88.
 Xcel Exceptions at 42-46
 Xcel Reply to Exceptions at 11-12
 Ex. DOC-3 at 19 (King Direct)
 Ex. DOC-5 at 8-9 (King Rebuttal)
 Department Initial Br. at 42-44, 49-51
 Department Reply Br. at 20-21
 Department Reply to Exceptions at 23-25
 Ex. OAG-1 at 5 (Lee Rebuttal)
 OAG Initial Br. at 6-7.
 OAG Reply Br. at 9.
 OAG Exceptions at 8-9.
 XLI Initial Br. at 22-23.
 XLI Reply Br. at 20.

⁹⁶ Department Reply to Exceptions at 25.

D. Setoffs, Deductions, or Credits from Refund Amount - 2012 Rate Case Disallowance

1. Introduction

The Commission first addressed the Event and its potential impact on customers in Xcel's 2012 electric rate case. In that case, Xcel sought recovery of \$35.4 million in Sherco Unit 3 plant costs incurred in the test year. Xcel agreed that "all avoidable [operation and maintenance] costs related to Sherco 3 should be removed from the test year." Xcel stated, "we propose to lower test year costs further by deferring depreciation expense" for both 2012 and 2013, which preserves fixed costs for recovery.⁹⁷

The Commission accepted Xcel's argument on O&M, deferred the depreciation expenses, allowed Xcel to recover property taxes on the unit, and denied other direct expenses of the unit, including the return on equity. In granting Xcel's request to defer depreciation expenses, the Commission reasoned: "Deferral recognizes that, although the unit was not used and useful during the 2013 test year, it remains a valuable asset and an integral part of the Company's generating fleet." Finally, the Commission stated that it "cannot conclude who should bear the significant costs the Company has incurred for replacement power. That issue may be examined when the Company files its petition for approval of its fuel cost adjustment."⁹⁸

The Commission decision amounted to total disallowance of \$21.6 million to the Company, consisting of \$13.2 million in disallowed recovery due to removing Sherco Unit 3 from the Company's rate base, plus \$8.4 million in disallowed operations and maintenance expenses.⁹⁹

2. Party Positions

a. Xcel

Xcel argued that the \$21.6 million disallowance from its 2012 electric rate case should be credited from any refund of energy replacement costs the Commission grants in this proceeding. The Commission effectively determined that customers would not pay to have Sherco Unit 3 as part of the Company's portfolio of generating assets coming out of that rate case. Specifically, Xcel stated:

In essence, the Commission decision reflected a view that – while it was out of service – Unit 3 should not be considered a part of the Company's system.

⁹⁷ *In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota*, E-002/GR-12-961, FINDINGS OF FACT, CONCLUSIONS AND ORDER (Sept. 3, 2013).

⁹⁸ *Id.* at 23.

⁹⁹ Ex. Xcel-2 at 17-18 and Sched. 2 (Krug Direct).

That decision lowered costs for customers and disallowed recovery to the Company. It would be unreasonable, after removing Unit 3 from rates, to then also require the Company to refund the costs of purchased power incurred in Unit 3's absence. At minimum, these lower customer costs must be accounted for in any determination of net harm to customers as a result of the Event.¹⁰⁰

Additionally, Xcel noted that, in comments prior to the issue being referred to a contested case, the Department agreed that this disallowance should be factored into any potential refund of replacement power costs. Specifically, Xcel stated:

In discussing whether customers should receive a refund of any size, the Department discussed what it referred to as "remaining ratepayer harm," stating:

To determine the ratepayer harm, the Department examined the Sherco 3 outage costs and the counteracting payments; specifically, the reimbursements by insurers and the settlement with the turbine manufacturer. Further in its Compliance Filing, Xcel states that the Commission previously disallowed \$21.6 million in costs associated with the Sherco outage in 2012, and that it would be unreasonable to count these costs again to determine the remaining replacement power costs. The Department agrees and, therefore, subtracts the previously denied costs from the total calculated damages to determine the remaining damage to ratepayers due to the outage.¹⁰¹

b. Department

The Department disagreed with Xcel's contention that any refund of energy replacement costs should be offset by the disallowance from Xcel's 2012 electric rate case. The Department noted that the Commission refuted this argument previously, stating:

Xcel has tried this argument before. In comments submitted immediately before the Commission referred this matter to OAH, Xcel argued that, because of the 2012 rate case disallowance, "no further reimbursement of replacement power costs is required in this docket because customers were not incurring any direct costs associated with the plant while it was out of service (and rate base) during the outage period." But Xcel continued, "[t]o the extent the Commission disagrees, however, it should undertake its own investigation and fact-finding, and then apply its specialized knowledge to determine whether the Company acted prudently in connection with the

¹⁰⁰ Ex. Xcel-3 at 10 (Krug Rebuttal).

¹⁰¹ Xcel Initial Br. at 124.

Sherco 3 outage.” The Commission elected the second path and ordered a contested case to develop the record, rather than granting Xcel’s dismissal request based on an extreme legal theory.¹⁰²

The Department argued the partial disallowance of Sherco 3 direct costs provided ratepayers with relief from paying for a plant that was not in service, but it did not compensate ratepayers for replacement power costs caused by Sherco 3’s unavailability. The Department noted that the Commission’s partial disallowance in the rate case did not concern replacement power costs. Rather, the Commission expressly deferred the question of who should bear the costs incurred for replacement power during the outage, ultimately deciding to take that issue up in this case. In so doing, the Commission rejected, at least implicitly, the same argument that Xcel now advances – that the partial disallowance of direct costs should be credited towards any replacement power costs.

Additionally, because the Commission determined that ratepayers should not be charged some costs for a generation plant that was offline for almost two years, does not make customers whole for incremental energy costs incurred because of the same unavailability. The Department recommended the Commission “dismiss Xcel’s ongoing attempts to shield itself from its obligation to make ratepayers whole by pointing to the Commission’s decision in Xcel’s 2012 rate case that simply prevented Xcel from profiting from an offline plant.”

c. OAG

The OAG recommended Xcel’s argument be rejected. The OAG noted the reason the Commission excluded the plant from rate base was that it was on outage because of the Company’s imprudent maintenance.¹⁰³

The OAG added that, first, accepting Xcel’s arguments would allow Xcel to use a rate treatment that it proposed in its 2012 rate case as a shield against refunding imprudently incurred costs, an outcome that would be contrary to public policy. Second, the idea that excluding Sherco 3 from rate base and disallowing replacement-power costs for the plant is one that the Commission has already considered and rejected in referring this matter to the Office of Administrative Hearings. Xcel has provided nothing new to support its theory, and the Commission should continue to reject it.¹⁰⁴

d. XLI

XLI concluded that Xcel’s argument is flawed and should be rejected because it avoids the Commission’s real question and explicit intent. The Commission specifically excluded the issue

¹⁰² Department Initial Br. at 48.

¹⁰³ OAG Reply Br. at 4.

¹⁰⁴ *Id.* at 5.

of replacement energy costs from the Company's 2013 rate case and opened the instant proceeding to investigate this issue. Furthermore, Xcel's flawed argument that the absence of a generating plant would result in an absence of replacement energy costs subject to disallowance fails to recognize that any non-replacement power market energy purchases would be subject to, and reviewed for, reasonableness and prudence prior to recovery from ratepayers. In other words, whether the energy purchased was replacement energy or not, the costs must still be reasonable and prudent.¹⁰⁵

Finally, XLI noted Xcel's arguments ignore the procedural posture and the Commission's Notice for Hearing in this case. Since this matter first came before the Commission in Xcel's 2012 rate case, all parties and the Commission have agreed the prudence of the fuel costs recovered should be evaluated in the fuel cost dockets after the completion of the litigation proceedings. The Commission's inquiry into the prudence of Xcel's automatic fuel cost recovery has been a long time coming and this inquiry evaluates the reasonableness of automatically passing along these costs that arose from the Sherco Unit 3 failure – a matter entirely unrelated to the Commission's previous decisions in this matter, including inclusion in rate base, and the recovery of depreciation, property tax and O&M expenses.¹⁰⁶

3. ALJ Report

In her report, the ALJ acknowledged that the Commission's direction was limited to energy replacement costs and not whether \$21.6 million Sherco Unit 3 plant costs' disallowance was appropriate. The ALJ argued that the disallowance of O&M and ROE costs for Sherco Unit 3 during the outage are separate and distinct issues from the energy replacement costs that Xcel's customers paid during the outage because of Xcel's imprudence.¹⁰⁷

Moreover, the ALJ determined that the forementioned disallowance did not make ratepayers whole for the energy replacement costs.¹⁰⁸

The ALJ concluded that Xcel is not entitled to any setoff in this proceeding for the disallowance from the 2012 Xcel electric rate case.¹⁰⁹

¹⁰⁵ XLI Initial Br. at 23-24.

¹⁰⁶ *Id.* at 24.

¹⁰⁷ ALJ Report Findings of Fact ¶ 349.

¹⁰⁸ *Id.*

¹⁰⁹ *Id.* ¶ 350.

4. Exceptions to ALJ Report

a. Xcel

Xcel argued the \$21.6 million disallowance provided rate relief to customers by excluding Sherco Unit 3 from the Company's portfolio of generation assets that customers paid for during the 2013 test year. In response, Xcel witness Krug indicated that, since customers did not pay for the unit during that time, there should be no expectation that the unit would have generated any energy to serve customers and offset market energy purchases.

Xcel argued that the Commission is not limited to only considering replacement power costs in this proceeding, and that consideration must be given to the rate case disallowance and resulting rate relief received by customers back in 2013. The Company, again, cited an earlier recommendation by the Department, who agreed that this disallowance must be factored into any possible rate relief related to the cost of replacement power.¹¹⁰

Xcel concluded that, but for the outage, it is true that Minnesota customers would not have incurred approximately \$33.7 million in replacement power costs; however, they would have paid the \$21.6 million that was disallowed in the Company's 2012 rate case. Xcel indicated that, if the Commission ultimately required a refund in this matter, any decision made should recognize these facts and reflect the timing of the rate relief provided by the rate case disallowance.

5. Reply to Exceptions

a. Xcel

In its reply to exceptions, Xcel Energy indicated that neither the ALJ nor the intervenors recognized the fact that customers paid \$21.6 million less for Sherco Unit 3 in 2013, as it was determined not used and useful due to the Event.

The Company once again cited the Department's prior recommendation of factoring in the \$21.6 million disallowance for any possible rate relief to customers related to the cost of replacement power.¹¹¹

Xcel agreed with the Department's prior recommendation and indicated that of the \$33.7

¹¹⁰ Xcel Exceptions at 47 citing Comments of the Minnesota Department of Commerce, Division of Energy Resources (Jan. 15, 2021) at 19. Xcel noted that in other prior comments, the Department had also recommended that the Commission consider a jury finding in the Aegis Litigation that Xcel Energy bore 48 percent responsibility for the Event, while GE bore 52 percent responsibility, and require the Company to refund 48 percent of the Replacement Power costs. Comments of the Minnesota Department of Commerce, Division of Energy Resources (Jan. 14, 2019) at 6-9. Xcel noted the Department now appears to have abandoned both prior positions.

¹¹¹ *Id.* at 19.

million in replacement power costs during the Sherco Unit 3 outage, \$20.7 million was incurred during calendar year 2013,¹¹² which was paid by customers through the FCA. At the same time, because Sherco Unit 3 was not available, customers paid \$21.6 million less in base rates. Therefore, the net impact to customers of Sherco Unit 3 being unavailable was approximately \$900,000 less than if Sherco Unit 3 been available and included in base rates.¹¹³

Xcel concluded that this error must be corrected in determining whether any refund is necessary or appropriate.

b. Department

The Department recommended Xcel's attempt to reduce the amount of the refund by the \$21.6 million disallowance be rejected.

The Department argued that the Commission's partial disallowance of Sherco 3-related expenses in Xcel's 2012 rate case did not, and was not intended to, compensate ratepayers who were overcharged for replacement power costs. Instead, the Commission attempted to balance the interests of the utility and ratepayers regarding rate case treatment of direct expenses relating to Sherco 3, explaining:

On the one hand, Xcel's investment in Sherco 3 provided many years of service before the outage, and the unit is expected to operate for many more years once it returns to service. On the other hand, Sherco 3 has been unavailable to ratepayers for nearly 22 months. Even accepting Xcel's prediction of a September 2013 in-service date, the unit will have been offline for most of the test year. And, although past costs related to Sherco 3 are not directly relevant to the reasonableness of the test-year costs, ratepayers' payment of substantial O&M and replacement-power costs during the outage underscores the need for caution in evaluating the Company's current request.¹¹⁴

The Department also noted that, while the partial disallowance of Sherco 3 costs provided ratepayer relief from paying for a plant that was not in service, it did not compensate ratepayers for replacement power costs caused by Sherco 3's unavailability. Instead, the

¹¹² See Ex. DOC-2, Sched. 7 at 8 (King Direct) (listing the month-by-month Minnesota jurisdictional replacement power costs for January through October 2013 when Sherco 3 returned to service, as determined in the GE Litigation).

¹¹³ The replacement power costs were incurred until October 2013 when Sherco 3 was placed back in service. However, the rate case disallowance continued until the start of the Company's next rate case test year, January 1, 2014.

¹¹⁴ *In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota*, Docket No. E-002/12-961, FINDINGS OF FACT, CONCLUSIONS, AND ORDER at 22 (Sept. 3, 2013).

Commission deferred the question of who should bear the replacement power costs during the outage to this case, and implicitly rejected that the partial disallowance of direct costs meant that there should be no refund of replacement power costs.¹¹⁵ Simply because the Commission determined that ratepayers should not be charged some costs for a generation plant that was offline for almost two years did not make customers whole for incremental energy costs incurred as a result of the same unavailability.

6. Reference to Record

ALJ Report Findings of Fact ¶¶ 343-350
 Ex. Xcel-2 at 3-4, 17-18, and Sched. 2 (Krug Direct)
 Ex. Xcel-3 at 10 (Krug Rebuttal)
 Xcel Initial Br. at 123-124
 Xcel Reply Br. at 83-84
 Xcel Exceptions at 46-48
 Xcel Reply to Exceptions at 12-13
 Ex. DOC-9 at 6 (King Rebuttal)
 Department Initial Br. at 48-49.
 Department Reply Br. at 21-24
 Department Reply to Exceptions at 20-23
 OAG Reply Br. at 4-5
 XLI Initial Br. at 20
 XLI Reply Br. at 14-16

E. Setoffs, Deductions, or Credits from Refund Amount - Restoration Work, “Avoided” Costs, and Customer Benefits

1. Introduction

Xcel argued that ratepayers benefitted from the extended, unplanned outage because of (1) the avoidance of direct cost of future planned work that was instead performed as part of the necessary restoration work; (2) the reduction of future outage time; (3) improved performance and efficiency of the unit; and (4) reduction of the future risk of significant failure events.¹¹⁶ Xcel estimated these “ratepayer benefits” at between \$16.26 million and \$16.76 million.¹¹⁷

¹¹⁵ *In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota*, MPUC Docket No. E-002/GR-12-961, et al., NOTICE AND ORDER FOR HEARING at 10 (issues to be determined in this case include, if Xcel’s Sherco 3 energy replacement costs were not prudent and reasonable, the amount of overcharges, plus interest, that should be returned to ratepayers) (July 13, 2022); see also DOC Initial Br. at 48

¹¹⁶ Ex. Xcel-31 at 11 (Schottler Direct)

¹¹⁷ Ex. Xcel-31 at 20, Table 1 (Schottler Direct), Xcel-2 at 20, Table 1 (Krug Direct). Staff notes that there is a slight discrepancy between Krug’s benefit amount of \$16.2 million and Schlotter’s benefit range of \$16.26 million -

2. Party Positions

a. Xcel

Xcel argued that its customers benefited in multiple ways, beyond simply restoring Sherco Unit 3 to in service status. Specifically, Xcel stated:

First, they received new and/or upgraded equipment for many of the impacted systems/equipment damaged during the Event. Secondly, they received the benefit of thorough inspections and repairs during the restoration. Thirdly, they received the performance benefits of the additional work and received the benefit of this work being completed without having to take a future outage (forced or planned), or allowing the duration of a future outage to be shortened. The customers also benefited from the increased performance of this new/upgrade equipment and from the reduction in risk that resulted from this work. Finally, customers benefited as the insurance proceeds covered many of the costs.¹¹⁸

Xcel contended that the work performed during the restoration process enabled Xcel to avoid or shorten later planned outages which reduced future ratepayer costs. Xcel estimated that, as a result of the restoration work, it avoided, between 2015 and 2022, somewhere between 76 to 84 days of additional outage time.¹¹⁹

b. Department

The Department argued that Xcel's claimed avoided costs are outside the scope of this proceeding and therefore should be dismissed. None of the claimed benefits have the effect of reducing ratepayer costs for replacement power resulting from Xcel's failure to maintain and operate Sherco 3 in a prudent manner. The benefits that Xcel seeks to credit against the refund amount include future costs that Xcel estimated it may avoid and increased operational efficiencies and reliability resulting from work performed to return Sherco 3 to service. Even if it were appropriate to consider Xcel's claimed customer benefits in this case, the Department argued that Xcel has not provided the evidence and detailed analysis necessary to establish the existence and amount of such benefits with any reasonable degree of certainty.

Additionally, the Department argued that the claim that Sherco 3's restoration reduced the future risk of a forced outage is similarly unsupported. Quantifying such risks requires defining a potential forced outage frequency for each restored component, reviewing of all historical

\$16.76 million. Should the Commission choose to allow some of these costs in the instant proceeding it may want to ask the Company to clarify the record on this issue.

¹¹⁸ Ex. Xcel-31 at 13-14 (Schottler Direct).

¹¹⁹ Ex. Xcel-34 at 20 (Detmer Direct)

outages to determine whether the restored component had caused previous outages, and performing a long-term projection of the likelihood that each restored component might contribute to an outage.¹²⁰ The Department stated that Xcel’s “back-of-the-envelope guesstimation” falls far short of what is required.

c. OAG

The OAG argued that Xcel’s claimed benefits are misleading. The OAG noted that many, if not all, of what the Company refers to as opportunity projects—significant work performed during the restoration period that was not required to return Sherco 3 to service—would have eventually been performed even if Sherco 3 had not suffered catastrophic failure. One example the OAG noted was the replacement of Sherco 3’s cooling towers, Xcel noted that the towers were at the end of their predicted life and scheduled for replacement in 2014, until the outage window presented a lengthy opportunity to complete the project in advance.¹²¹ The OAG argued that while Xcel “may have reduced some of the costs of future maintenance by completing projects during the outage period and ahead of its established schedule, these are still costs that the Company would have eventually incurred even if the catastrophic failure had not occurred.”¹²² Accordingly, Xcel’s attempt to offset a ratepayer refund with eventual costs that it accelerated, and passed on to ratepayers ahead of schedule, should be denied.

Additionally, the OAG argued that any costs Xcel may have saved ratepayers by accelerating its maintenance and repair schedule are likely balanced out, if not overwhelmed, by the ongoing costs of including new capital costs in rate base passed on to ratepayers. This is because “[m]ost of the projects listed pertain to ‘older’ less expensive parts/equipment/assets that would have continued to be in service, allowing ratepayers to pay for an operable generating plant that had a lower rate base, when compared to newer parts and higher restoration costs.”¹²³ Accordingly, “even if most of the restoration costs were covered by insurance and removed from rate base, there could still be a rate base balance for the remaining restoration costs comparable in value to the rate base balance off the existing plant that was replaced.”¹²⁴ The OAG noted that Xcel’s analysis did not include sufficiently detailed data to determine whether ratepayers experienced a net benefit under the short-term accelerated maintenance scenario, or whether ratepayers would have been better off paying for a functional, less expensive plant over the long-term.

Also, the OAG argued that Xcel ignored the fact that ratepayers pay the costs of a utility’s

¹²⁰ Ex. DOC-5 at 27 (Polich Rebuttal).

¹²¹ Ex. Xcel-31 Schedule 3 at 1 (Schottler Direct).

¹²² Ex. OAG-2 at 15 (Lee Rebuttal).

¹²³ *Id.* at 16.

¹²⁴ *Id.*

insurance through base rates. As a result, ratepayers, not Xcel, should receive the benefits provided by insurance. The OAG observed that, although Xcel presented the fact that insurance covered much of its restoration costs, it would be inappropriate for the Company not to flow the benefits of insurance back to ratepayers. In other words, Xcel should not be able to use ratepayer benefits to offset replacement energy costs and deprive ratepayers a refund of those costs.

Also, considering the scale of the Company's insurance claim—in which Xcel recovered nearly \$99 million of the approximately \$104.3 million (MN jurisdiction) costs it incurred, the OAG argued that the Company did not provide any details on what the long-term impact has been, or will be, on the cost of its future insurance premiums after making a claim of this magnitude. Thus, any ratepayer benefits which may have arisen from an insurance claim of this size may have been offset by substantially increased insurance premiums, such that ratepayers might still be paying for the catastrophic failure of Sherco 3 through increased insurance premiums.

Finally, the OAG argued that the calculations of any labor and material cost savings is “flawed and unreliable.” First, Xcel indicated that “some plant operators and maintenance staff were not required” during the outage period but, because some of these resources were reassigned to Sherco 1 and 2, Xcel claims a resultant reduction in overtime expenses for the Sherco plant as a whole of approximately \$525,000 (MN jurisdictional).¹²⁵ To arrive at this number, the Company took “the amounts spent on overtime at the Sherco plant in total (Units 1, 2, and 3) [and] compared [it] to the most recent non-impacted year in 2010.”¹²⁶

Similarly, the Company stated that “[m]aterial expenditures in 2012 and 2013 were compared to 2010 material expenditures to calculate a total material savings of \$990,836,” (total company) or “\$735,000 (MN jurisdiction).”¹²⁷ The OAG argued that Xcel's calculations of labor/overtime and materials cost savings each suffer from the same flaw: comparing two separate years of actual overtime labor and materials cost to one year (here, 2010) failed to consider that operations and maintenance costs usually fluctuate from year to year—i.e., such costs could be much higher (or conceivably lower) from one year to the next. Thus, a snapshot comparing actual costs to any one year would not likely reflect what any net benefits actually are. Therefore, any actual net benefits are cast further in doubt when considering that “other operating and maintenance expenses, specifically depreciation expense associated with the plant renovation costs, could be higher in future years as compared to 2010.”¹²⁸

For the reasons described above, the OAG concluded that Xcel did not sufficiently support its

¹²⁵ Ex. Xcel-31 at 19 (Schottler Direct).

¹²⁶ Ex. Xcel-34 Schedule 5 at 31 (Detmer Direct Schedule 5 at 31).

¹²⁷ Ex. OAG-2 at 17 (Lee Rebuttal).

¹²⁸ *Id.* at 18.

claims of ratepayer benefits stemming from the catastrophic failure of Sherco 3, and the resultant extended outage period. Accordingly, Xcel's attempt to offset any ordered ratepayer refund with the unsubstantiated costs of these benefits should be rejected.

d. XLI

Like the Department and OAG, XLI recommended denial of Xcel's request. Or, in the alternative, referred to a Commission Investigation to determine if ratepayers are due additional refunds because Xcel over-collected O&M and other costs related to its restoration at Sherco 3 and other activities.¹²⁹

XLI argued the issues before the Commission in this portion of the 2013 through 2018 fuel cost adjustment proceeding are focused on costs for the replacement power Xcel incurred during the extended Sherco 3 outage that occurred between November 2011 through October 2013. Any benefits to Xcel customers of future changes in fuel costs and associated adjustments in fuel recovery would be part of future fuel cost recovery proceedings. In this case, Xcel attempted to claim that it should be compensated for reductions in fuel costs based upon calculations that cannot be verified, contain variables with a wide range of possible answers, and that are likely to be part of other regulatory proceedings. Awarding Xcel the benefit of the reduced forced outages by reducing the replacement power cost refunds would be awarding Xcel funds it is not entitled to under normal principles of utility cost recovery. Therefore, the concept Xcel is proposing should be rejected because it does not follow fundamental ratemaking and regulatory principles.

Additionally, the cost benefits Xcel claimed are not appropriate with the scope of this fuel cost adjustment proceeding. As an example, maintenance costs are addressed in general rate cases and should not be considered in this proceeding. If any maintenance costs were reduced through the Sherco 3 restoration activities, they flow to Xcel's customers, not Xcel. Xcel is trying to claim a benefit for reduction in future costs which the customers are entitled to and was the result of Xcel's own poor decisions in the maintenance of the Sherco 3 steam turbine. Xcel's proposal to keep maintenance cost benefits from the Sherco 3 restoration is inconsistent with the way maintenance costs are treated in the regulatory process.

Also, XLI noted that Xcel did not upgrade Sherco 3 during its restoration but rather restored Sherco 3 to its condition before the event. As discussed in filings to the Commission as part of Xcel's 2013 rate case, the Company's restoration strategy was "restore the Unit to its pre-event condition," and that the "approach was supported by its insurance coverage which obviously would not reimburse the Company for a final product that was better than what we started with." The Company's own restoration strategy, limited by Xcel's possible insurance recovery, weighs heavily against any contention that ratepayers ended up with any net benefits, let alone a better Sherco 3.

¹²⁹ XLI Initial Br. at 25-26.

Finally, just because these benefits are calculated for the outage period, it does not mean that these benefits would not eventually all accrue to ratepayers at some time in the future. For example, the improved performance benefits would eventually be realized by ratepayers anyway, when the appropriate time came for repair or replacement not accelerated by the catastrophic failure. Xcel's analysis fails to consider all benefits that ratepayers would receive under a long-term horizon under both scenarios.

3. ALJ Report

In her report, the ALJ concluded that Xcel's evidence and cost estimates on these issues to be "speculative, based on upon assumptions, and without adequate evidentiary corroboration."¹³⁰ Additionally, the ALJ determined that these issues were "outside the scope of this proceeding"¹³¹ and since "ratepayers paid the premiums on the applicable insurance policies – and will incur the future increases in insurance premiums as a result of the Event . . . ratepayers, not shareholders should reap all collateral 'benefits' of the restoration paid for through insurance coverage."¹³² Thus, the ALJ found that Xcel is not entitled to credit for any "avoided costs' or "collateral benefits" that Xcel argued arose out of the restoration work performed as a result of the Event.¹³³

Specifically, the ALJ found:

351. Xcel next claims that ratepayers "benefitted" from the Event because of: (1) the avoidance of the cost of future planned work performed as part of the Unit 3 restoration; (2) the reduction of future outage time; (3) improved performance and efficiency of the restored unit; and (4) a reduction of future risk of significant failures.

352. Xcel estimates that these ratepayer "benefits" and "avoided costs" have a value of approximately \$16 million.

353. First, the Administrative Law Judge finds the Company's evidence and cost estimates on these issues speculative, based upon unproven assumptions, and without adequate evidentiary corroboration. Thus, Xcel has not met its burden of proof with respect to these "avoided costs" and collateral "benefits."

¹³⁰ ALJ Report Findings of Fact ¶ 353.

¹³¹ *Id.* ¶ 354.

¹³² *Id.* ¶ 355.

¹³³ *Id.* ¶ 359.

354. Second, these issues are outside the scope of this proceeding, which is limited to energy replacement costs incurred as a result of the Event. The Commission's Notice and Order for Hearing expressly limits the scope of the hearing to the issues set forth in the Order.

355. Third, any "benefits" accrued to, or costs avoided by, Xcel due to the restoration of Unit 3 were largely the result of insurance proceeds paid to Xcel because of the Event. Ratepayers paid the premiums on the applicable insurance policies -- and will incur the future increases in insurance premiums as a result of the Event. Therefore, it is ratepayers, not shareholders, who should reap all collateral "benefits" of the restoration paid for through insurance coverage.

356. Fourth, Xcel's imprudence was a contributing cause of the Event. For Xcel to now claim that it should receive "credit" for avoided costs and collateral "benefits" resulting from the insurance-paid restoration is without merit. As the OAG aptly put it, Xcel's argument is akin to "claiming that a homeowner actually benefits from their home burning down because insurance pays for a new kitchen floor."

357. Fifth, insurance proceeds did not cover all the losses incurred by Xcel as a result of the Event. The final restoration costs for the Minnesota jurisdiction were \$104.27 million.⁶⁹⁶ The Company collected \$98.77 million in restoration costs from its insurers, leaving approximately \$5.5 million in restoration costs unrecovered from insurers. The restoration costs in excess of insurance reimbursements, approximately \$5.5 million, were recovered from customers via the Company's 2013 rate case.

358. The Company also collected all of its excess fuel oil costs (\$385,000 Minnesota jurisdiction) from its insurers. Thus, the only losses not covered by insurance arising from the Event were the energy replacement costs (which were already charged to, and paid by, ratepayers) and \$5.5 million in uncovered restoration costs (which were also charged to, and paid for by, customers). These amounts do not include the legal fees and costs incurred by Xcel arising out of the Event, the Company's insurance claims, and the GE Litigation, which are outside of the scope of this proceeding.

359. For these reasons, the Administrative Law Judge finds that Xcel is not entitled to credit for any "avoided costs" or "collateral benefits" that Xcel argues arose out of the restoration work performed as a result of the Event.

4. Exceptions to ALJ Report

a. Xcel

Xcel argued that the ALJ took too narrow of a view when she determined that she did not have jurisdiction to consider such benefits. Customers received new or upgraded equipment for many of the impacted components or systems damaged during the Event, received the benefit of thorough inspections and repairs during the restoration, received significant performance improvements from additional work conducted by the Company with no additional downtime and without the need for a future planned or forced outage, received the benefit of the reduction in risk that this work achieved, and benefitted by avoiding the costs that these repairs and inspections would have accrued when performed as planned in future years.¹³⁴

Sherco Unit 3 had been in service for over 22 years at the time of the Event and, due to the damage magnitude, the restoration work required purchasing and installing numerous new components, auxiliaries, systems, and subsystems. Because the costs to acquire and install the new and upgraded equipment was almost entirely covered by insurance proceeds, customers significantly benefitted and continue to benefit by having a more efficient, safe, and reliable unit without the inclusion of those costs in the rate base or otherwise recovered from customers.

Xcel noted that it performed additional work during the restoration period that was not required to bring Sherco Unit 3 back to service but was performed at that time to avoid future planned outages and improve the unit's performance and efficiency. Xcel stated it was able to conduct these "Opportunity Projects" without extending the restoration period or delaying the return of Sherco Unit 3 to service as expeditiously as possible. Xcel argued that, by performing the Opportunity Projects without the need for future outages, the Company avoided the future replacement power costs it would have accrued during those outages. Additionally, the performance and efficiency improvements gained by the Opportunity Projects reduced the amount of coal burned and emissions released, reducing fuel charges that would have been passed on to them through the Company's fuel adjustment clause. Also, for many of these Opportunity Projects, the direct capital replacement costs were lower in 2012 and 2013 than they would have been in future years when the projects were initially planned to occur. Therefore, Xcel's decision to accelerate these Opportunity Projects from future years and conduct them during the restoration period netted customers numerous quantifiable benefits that must be considered.

Xcel concluded that its management of the restoration process provided customer benefits in four categories: (1) the avoidance of direct cost of future work that was performed as part of the restoration work and avoidance of labor and material costs during the outage, (2) the reduction of future outage time, (3) improved performance and efficiency of Unit 3, and (4) the reduction of future risk of significant failure events. In total, Xcel estimated that, for those

¹³⁴ Xcel Exceptions at 49.

categories capable of reasonable estimation, customers received benefits of approximately \$16,260,000 to \$16,760,000 on a Minnesota jurisdictional basis. Xcel recommended these customer benefits be recognized in determining whether any refund is appropriate.¹³⁵

5. Reply to Exceptions

a. Xcel

Xcel argued that its actions after the Event to return Sherco Unit 3 to service were prudent and, by returning the recoveries to customers, the Company acted prudently in recovering costs from insurers and GE. Xcel concluded that these efforts, in addition to the Commission's disallowance of the inclusion of Sherco Unit 3 in the Company's rate base in its 2012 rate case, have already provided significant rate relief to Xcel Energy customers that more than outweigh the replacement power costs incurred. As a result, customers have not paid more for power than they would have had the Event not occurred. Therefore, even if the Commission determines that the Company did not act prudently before the Event, which the Company vigorously disputes, no further refund is appropriate or warranted.¹³⁶

b. Department

The Department argued that the ALJ correctly found Xcel's claimed avoided costs, were outside the scope of this proceeding. The Department noted that the ALJ rejected Xcel's argument on the ground that the supposed benefits were: 1) beyond the scope of this case; 2) "speculative, based on unproven assumptions, and without adequate evidentiary corroboration;" and 3) largely paid for by proceeds from insurance for which ratepayers paid the premium.¹³⁷ The Department recommended the Commission adopt the ALJ's recommendations on this issue.

The fact that Xcel may have acted prudently to mitigate costs following Sherco 3's destruction does not entitle it to a reduction in the amount of the refund due ratepayers for replacement power costs resulting from Xcel's prior imprudence. Ratepayers have a right to expect that a utility will act prudently and that they will not have to compensate a utility for imprudently incurred costs. The Department noted that prudently incurred costs is a baseline requirement for Xcel to recover those costs from ratepayers. Costs that are imprudent are not reasonable and may not be included in Xcel's rates.

Additionally, since Xcel did not provide sufficiently granular level of data about its claimed benefits and the costs of the capital additions included in rate base, it is impossible to determine whether these yielded a ratepayer benefit, particularly considering Sherco 3's

¹³⁵ *Id.* at 51.

¹³⁶ Xcel Reply to Exceptions at 13.

¹³⁷ Department Reply to Exceptions at 25 citing ALJ Findings of Fact ¶¶ 353-355.

retirement in 2030. The Department noted Sherco 3 has a significant amount unrecovered depreciation and a return on rate base that may still be passed on to ratepayers after the plant is retired. The Department noted the Commission is exploring how to account for unrecovered depreciation and return on rate base for all early retiring fossil fuel plants in a separate proceeding.¹³⁸

The Department recommended Xcel's claims to reduce the refund by the supposed "collateral benefits" be rejected.

c. OAG

The ALJ substantively found that Xcel had not carried its burden of proof to support any of its claimed avoided costs and collateral benefits before finding that such issues were outside the scope of this proceeding.¹³⁹

The OAG and other parties extensively addressed Xcel's offset arguments in testimony, at trial, and in briefing. To any extent the Commission entertains Xcel's arguments, then, there is a fully developed record refuting them. As an example, the OAG noted that Xcel continued to claim that ratepayers significantly benefitted because the costs to acquire and install new equipment at Sherco 3 were almost entirely covered by insurance proceeds. However, ratepayers pay the costs of Xcel's insurance and therefore rightfully deserve any benefits stemming from it.

The OAG agreed with the Department's observation that, in acting prudently to mitigate costs during the restoration process, Xcel was not conveying upon its ratepayers a special benefit, but instead it was merely holding up its end of the regulatory compact - the end that it dropped in failing to prevent the catastrophic explosion of Sherco 3.

For these reasons and for all those argued in testimony and briefing by the OAG, the Department, and XLI, any offsets to that refund beyond the portion of the GE Litigation settlement attributable to replacement power costs should be rejected.

6. Reference to Record

ALJ Report Findings of Fact ¶¶ 351-359
 Ex. Xcel-2 at 16-17, 19-20 (Krug Direct)
 Ex. Xcel-3 at 11-12 (Krug Rebuttal)
 Ex. Xcel-31 at 10-20 (Schottler Direct)
 Ex. Xcel-34 at 19-20 (Detmer Direct)
 Ex. Xcel-35 at 8-9 (Detmer Rebuttal)

¹³⁸ See *In re Commission Inquiry into the Ratemaking Treatment for Early Retiring Generating Facilities Owned by Regulated Elec. Utils.*, E-002, E-015, E-017/CI-23-375.

¹³⁹ ALJ Report Findings of Fact ¶ 354.

Xcel Initial Br. at 135
 Xcel Reply Br. at 84-86
 Xcel Exceptions at 48-51
 Xcel Reply to Exceptions at 12-13
 Ex. DOC-5 at 19-29(Polich Rebuttal)
 Ex.DOC-10 at 10-14 (King Rebuttal)
 Department Initial Br. at 51-56
 Department Reply Br. at 25-27
 Department Reply to Exceptions 25-28
 Ex. OAG-2 at 14-19
 OAG Initial Br. at 7-12
 OAG Reply Br. at 7-8
 OAG Reply to Exceptions at 11-13
 XLI Initial Br. at 25-28
 XLI Reply Br. at 18-21

F. Percentage of Recovery Attributable to Xcel Imprudence

1. Introduction

As discussed above, the Commission tasked the ALJ with determining the amount, plus interest, that should be refunded to ratepayers if the ALJ determined that Xcel failed to operate and maintain Sherco 3 in a reasonable and prudent manner consistent with good utility practice.

In her report, the ALJ determined when interest is included, the total energy replacement costs allocated to Minnesota, based on Xcel's 2012-2013 AAA report and FCA, is \$71,548,388: \$41,327,637 in energy replacement costs and \$30,220,751 of interest.¹⁴⁰ Ultimately, the ALJ determined a 52/48 percent allocation of contributory negligence for the Event between GE and Xcel, respectively appropriate under the facts set forth in this proceeding.

2. ALJ Report

In her report, the ALJ determined that the jury's verdict in the GE Litigation, with respect to the allocation of contributory negligence for the Event between GE and Xcel, is consistent with the evidence established in this proceeding. Specifically, the ALJ stated:

360. Upon review of the full record of this proceeding and the GE Litigation, the Administrative Law Judge finds that the jury's verdict in the GE Litigation, with respect to the allocation of contributory negligence for the Event between GE (52%) and Xcel (48%), is consistent with the evidence of Xcel's imprudence established in this proceeding.

¹⁴⁰ ALJ Report Findings of Fact ¶ 328.

361. The Administrative Law Judge is aware that Xcel was not a party to the trial that occurred in the GE Litigation. Xcel did, however, play an active role in the case, as a litigant, until just days before the hearing, when Xcel settled with GE. In addition, Xcel was able to present all of its evidence in this proceeding to supplement any evidence contained presented from the GE Litigation record.

362. In this proceeding, the parties stipulated to including pertinent portions of the transcripts, depositions, evidence, and exhibits from the GE Litigation into this administrative record. The parties have also presented new exhibits, testimony, and argument in this proceeding. Xcel has had the full opportunity to present its evidence with regard to prudence, GE's culpability, energy replacement costs, and all other matters at issue in this proceeding. The Judge has carefully reviewed all of the evidence in this record and concludes that GE and Xcel both contributed to causing the Event. The Judge's independent allocation of fault is consistent with the jury's verdict in the GE Litigation: 48% Xcel and 52% [GE].

363. Xcel's imprudence in the operation and maintenance of Unit 3, and, specifically, its failure to conduct a major inspection in 2011, contributed to the catastrophic loss that occurred on November 19, 2011. While GE's knowledge of its faulty product design, and its failure to adequately advise Xcel of the SCC risks for drum boiler turbines, contributed to the loss, Xcel should nonetheless be responsible for its share of imprudence (48%), which caused the Event.

364. The Judge's recommendation is not based on hindsight, but rather, a upon evidence of what Xcel knew, what Xcel should have known, and what Xcel did or did not do before the Event. The recommendation is further based upon the full record presented in this proceeding, supplemented by the GE Litigation evidence, and not the reverse.

365. The Judge thus recommends that the Commission require Xcel to refund 48% of the energy replacement costs incurred by ratepayers during the outage, as calculated by Xcel in its 2012 and 2013 AAA reports and FCA, plus interest, as calculated by Department witness King.

3. Exceptions to ALJ Report

a. Department

The Department argued that Contributory negligence is a concept of tort law that has no application to the Commission's prudency review and is, in fact, contrary to the purpose of such review. The Department stated the ALJ cited no decision where the Commission reduced a utility's financial responsibility for imprudent conduct based on the negligence of a third party

and the Department noted that its research uncovered no such case. The Department recommended the Commission reject this aspect of the ALJ's recommendation.

The Department argued this case is founded on the legal requirement that "[e]very rate made, demanded, or received by a public utility must be just and reasonable."¹⁴¹ Any doubt as to the reasonableness of a utility's rates must be resolved in favor of ratepayers. When a utility's lack of prudence causes ratepayers to pay higher rates than would otherwise be the case, those higher rates are, by definition, unreasonable and ratepayers are entitled to a refund.

The Department argued there was nothing that GE did or didn't do that prevented Xcel from conducting a major inspection of the Sherco 3 LP turbines in 2011. The evidence established that, had Xcel conducted such an inspection, the disaster would not have happened, and the costs of replacement power would not have been incurred. The decisions about whether to inspect and the scope of inspections always remained with Xcel. The Department noted that Xcel employees with responsibility for Sherco 3's safe operation communicated to Xcel's management that extending the inspection interval increased the risk of precisely the kind of catastrophe that resulted. Those employees wanted to do the buckets off inspection that would have found the SCC but did not do so due to cost concerns. Xcel's imprudence is responsible for the disaster that necessitated the costs for replacement power and Xcel should refund those costs in full, plus interest.

Finally, the Department argued that if the Commission were to adopt the ALJ's recommendation to reduce the amount of the refund by the amount of GE's "contributory negligence," this would open up a new strategy for utilities seeking to avoid responsibility for their imprudent practices. Any time a utility's lack of prudence results in higher rates, the utility would be encouraged to claim that its financial responsibility must be reduced or even eliminated altogether because some third party or parties not before the Commission were negligent. The Department concluded that such an outcome would serve only the interests of the utility's shareholders in higher profits and not the interests of ratepayers who would pay unreasonable rates because they are unable to get a full refund.

The Department recommended the following adjustments to the ALJ report.

C. Percentage of Recovery Attributable to Xcel Imprudence

Findings of Fact, ¶1360, omit.

Findings of Fact, ¶1362, revise:

362. In this proceeding, the parties stipulated to including pertinent portions of the transcripts,

¹⁴¹ Department Exceptions at 12 citing Minn. Stat. § 216B.03.

depositions, evidence, and exhibits from the GE Litigation into this administrative record. The parties have also presented new exhibits, testimony, and argument in this proceeding. Xcel has had the full opportunity to present its evidence with regard to prudence, GE's culpability, energy replacement costs, and all other matters at issue in this proceeding. ~~The Judge has carefully reviewed all of the evidence in this record and concludes that GE and Xcel both contributed to causing the Event. The Judge's independent allocation of fault is consistent with the jury's verdict in the GE Litigation: 48% Xcel and 52% Xcel~~

Findings of Fact, ¶1363, revise:

363. Xcel's imprudence in the operation and maintenance of Unit 3, and, specifically, its failure to conduct a major inspection in 2011, ~~contributed to~~ caused the catastrophic loss that occurred on November 19, 2011. Reducing the refund due in this case based on a claim that GE was "contributorily negligent" is inconsistent with the purpose of this proceeding and otherwise inappropriate. ~~While GE's knowledge of its faulty product design, and its failure to adequately advise Xcel of the SCC risks for drum boiler turbines, contributed to the loss, Xcel should nonetheless be responsible for its share of imprudence (48%), which caused the Event.~~

Findings of Fact, ¶¶ 365-368, revise:

365. The Judge thus recommends that the Commission require Xcel to refund ~~48% of~~ the energy replacement costs incurred by ratepayers during the outage, as calculated by Xcel ~~in its 2012 and 2013 AAA reports and FCA~~ for the GE Litigation, plus interest, as calculated by Department witness King.

366. The energy replacement costs set forth in Xcel's ~~2012-2013 AAA report~~ damage calculation for the GE Litigation, less credit for a portion of Xcel's settlement with GE, plus interest, total ~~\$71,548,388~~ \$55,675,052. ~~Forty-eight percent of that figure is \$34,343,226.~~

367. In addition, as set forth above, the Administrative Law Judge recommends that the ~~net~~ amount of ~~\$34,343,226~~ be reduced by 24.4% of the Minnesota portion of the GE Litigation settlement, [Trade Secret], which was previously credited to Minnesota ratepayers in the Company's 2019 FCA.

368. ~~Forty-eight percent of is \$34,343,226,~~ \$33,681,734 less [Trade Secret], plus interest, results in a final sum of [Trade Secret], which should be returned to Minnesota ratepayers.

Conclusions of Law ¶ 12 omit.

Conclusions of Law ¶ 13 revise:

13. As a result of the ~~combined negligence~~ imprudent inspection and maintenance practices of ~~GE and~~ Xcel, the Administrative Law Judge finds that the energy replacement costs for Unit 3

from November 2011 to October 2013, were not reasonable and prudently incurred and should be refunded to ratepayers in proportion to Xcel's contributory fault (48%) for the Event, plus interest.

Conclusions of Law ¶ 16 revise:

16. Based upon Xcel's imprudence and contributory fault for the Event, ratepayers are entitled to a refund of ~~48%~~ of the total energy replacement costs charged to ratepayers through the FCA, plus interest. This amount equals ~~\$34,343,226~~ \$55,675,052.

Conclusions of Law ¶ 17 omit.

b. OAG

The OAG argued that, after nearly two years of discovery, written testimony, and trial, Xcel failed to show it acted prudently and instead continued its civil litigation strategy of pointing fingers at GE to absolve its decision to delay necessary maintenance. The Commission need not be constricted by Xcel's continued efforts to shift blame for its actions onto GE. Essentially, adopting the jury's verdict in the civil litigation and apportioning 52 percent fault to GE defeats the Commission's goal of contested case proceedings developing a complete record. Xcel failed to show it acted prudently considering the facts available to it at the time of its decision to delay. Any contributory fault on GE's portion is not relevant to this analysis and, even if it were, a finding of comparative fault here is unreliable where only one of the parties at fault participated. Specifically, the OAG argued:

The Commission ordered these contested case proceedings, at least in part, because of the possible existence of evidence outside of the record that had not been introduced because it would not have been relevant in Xcel's civil litigation with GE. The Commission recognized this and explicitly stated that if such evidence exists, Xcel would have an opportunity to present it. In its appellate brief, GE pointed to the fact that Xcel and its insurers did not plead an ordinary negligence claim, but that if they had, GE "would have submitted far more evidence of Xcel's negligence." If GE had "far more" evidence of Xcel's negligence than it presented in the district court, due to all the evidentiary and strategic concerns of civil litigation, it is quite likely that GE would also have had more evidence relevant to a utility proceeding free from those restrictions. It is also likely that some of that evidence would have shown additional imprudence by Xcel.

At the very least, the absence of this evidence in the record casts significant doubt on the ALJ's 48% fault determination. This doubt must be resolved in favor of Minnesota ratepayers by rejecting division of fault between Xcel and GE. It would be unjust and unreasonable to allow Xcel a 52% windfall solely at

the expense of Minnesota ratepayers because all possible evidence was not available for consideration in this proceeding.¹⁴²

The OAG concluded that GE's portion of negligence is irrelevant to whether Xcel acted prudently and the ALJ's determination of comparative fault where the question of comparative fault was not asked by the Commission, is unreasonable.

The OAG recommended the following adjustments to the ALJ report:

Mod. 363. For purposes of this prudency proceeding, Xcel's imprudence in the operation and maintenance of Unit 3, and, specifically, its failure to conduct a major inspection in 2011, ~~contributed to~~ caused the catastrophic loss that occurred on November 19, 2011. While GE's knowledge of its faulty product design, and its failure to adequately advise Xcel of the SCC risks for drum boiler turbines, contributed to the loss, Xcel, as owner and operator of Sherco 3 throughout the applicable maintenance period and at the time of the catastrophic explosion, should nonetheless be responsible for its imprudence and the resulting replacement energy costs. ~~its share of imprudence (48%), which caused the Event.~~

Mod. 364. The ~~Judge's recommendation~~ Commission's refund order is not based on hindsight, but rather, ~~a~~ upon evidence of what Xcel knew, what Xcel should have known, and what Xcel did or did not do before the catastrophic explosion of Sherco 3 Event. The ~~recommendation order~~ order is further based upon the full record ~~presented~~ developed in this proceeding, supplemented by the GE Litigation evidence, and not the reverse.

Mod. 366. The energy replacement costs set forth in Xcel's GE Litigation calculation, 2012-2013 AAA report, plus interest, minus the GE Settlement offset, totals \$55,675,052. ~~\$71,548,388~~. ~~Forty eight percent of that figure is \$34,343,226.~~

Mod. 367. In addition, ~~as set forth above~~, the Administrative Law Judge recommends that the net amount of \$55,675,052 ~~of \$34,343,226~~ has been reduced by the agreed upon portion of the GE Settlement offset. ~~24.4% of the Minnesota portion of the GE Litigation settlement, [PROTECTED DATA EXCISED], which was previously credited to Minnesota ratepayers in the Company's 2019 FCA.~~

Mod. 368. ~~Forty eight percent of \$71,548,388 is less [PROTECTED DATA EXCISED], results in a final sum of [PROTECTED DATA EXCISED], which should be returned to Minnesota ratepayers.~~ \$55,675,052 is the final refund Xcel will issue to its Minnesota ratepayers.

c. XLI

XLI disagreed with ALJ's Conclusions noting that, if the ALJ's recommendation were adopted,

¹⁴² OAG Exceptions at 6-7.

ratepayers would pay for replacement energy even though it is undisputed that the replacement energy costs should never have been incurred or recovered from ratepayers. XLI argued that ratepayers are not at fault for Xcel's imprudent management of Sherco or its decision to settle with GE. Instead, XLI noted that Xcel, as the utility provider, is expected to act prudently to protect ratepayers from unreasonable risks. In this case, Xcel chose to defer needed maintenance at Sherco 3, which resulted in its catastrophic failure, and Xcel chose to settle with GE and assumed the risk that the settlement amount would not cover the replacement energy costs Xcel imprudently incurred. Costs in excess of that settlement amount cannot be borne by ratepayers. To do so would shift unreasonable risk to them, in contravention of Minnesota statutes and the Commission's Order in this proceeding. The ALJ's recommendation for ratepayers to pay millions in imprudent costs would result in unjust and unreasonable rates and the Commission should reject this portion of the ALJ's Report.

Specifically, XLI stated:

At the outset, the ALJ's provision of fault between Xcel and GE is not supported in the record. GE was not a party to this contested case hearing and therefore it is inappropriate to assign them any fault, or even any role, in the question of whether replacement energy costs should be refunded to customers. GE has no direct relationship or obligation to Xcel's customers, and it did not purchase, and had no influence on Xcel's decision to purchase, the replacement power at issue in this proceeding. No party advocated that GE's role should be considered and no party, not even Xcel, argued that its fault in this proceeding should be offset by GE's.

In fact, in requesting this contested case proceeding, Xcel distinguished this regulatory proceeding from the underlying litigation, stating it did not have a fair opportunity to develop the record on issues material to this regulatory proceeding – e.g., whether Xcel acted prudently according to the standard of a reasonable electric utility – in the litigation. Noting that the trial record was limited by evidentiary rules that bind Minnesota courts but do not govern Commission proceedings, Xcel argued it should have an opportunity to offer additional evidence that may be relevant to the Commission's prudence determination. Asserting that prudence reviews involve complex, technically challenging issues specific to utilities, Xcel recommended that the Commission conduct an independent investigation in which the Commission may leverage its expertise and base its determination on facts pertaining directly to the issue of prudence for purposes of rate recovery. Xcel argued that a contested case is the best procedural framework available for this undertaking. According to Xcel, "courts have held that findings in one proceeding cannot form the basis of an imprudence finding in a cost-recovery proceeding."

Here, Xcel had a duty of care to its customers, and that standard of care is what is at issue in this regulatory proceeding, and Xcel has admitted the underlying litigation was for a different purpose, under a different standard, and GE's actions should not be arbitrated, and are completely irrelevant, here.¹⁴³

4. Replies to Exceptions

a. Xcel

In response to both the Department's and OAG's exceptions on the apportionment issue, Xcel noted that, in comments prior to the Commission ordering a contested case proceeding, both the Department and OAG previously endorsed the approach recommended by the ALJ. Specifically, Xcel stated:

The Intervenors recommend the Commission reject this apportionment recommendation, with the Department calling this recommendation "plainly incorrect" and the OAG labeling it "unjust and unreasonable." However, both the Department and OAG previously endorsed the exact same apportionment approach now recommended by the ALJ. Earlier in these dockets, the Department stated it: "recommends that the Commission require the Company to credit Xcel [Energy]'s 48 percent share of fault of the Minnesota jurisdictional portion of the incremental energy cost resulting from the Sherco 3 outage . . . to its customers through the monthly fuel clause adjustment." The OAG subsequently stated that it supported the Department recommendation to apply this percentage allocation approach in determining any refund or credit amount due to customers.¹⁴⁴

b. XLI

XLI agreed with the Department's argument that tort law concepts are irrelevant to the Commission's prudence review, and it would be patently unfair to require Xcel's customers to bear more than half of the costs resulting from the Company's negligence. As noted by the OAG, Minnesota ratepayers had no control over Sherco 3 and they should not bear the cost of Xcel's imprudent operation and maintenance thereof, or its decision to settle its litigation with GE. XLI supports the Department's and OAG's Exceptions and, as for the reasons included in XLI's Exceptions, the ALJ's recommendation to reduce the refund due customers should be rejected.

¹⁴³ XLI Exceptions at 2-4.

¹⁴⁴ Xcel Reply to Exceptions at 8.

5. Reference to Record

ALJ Report ¶ 360-368
 Xcel Exceptions at 47-48.
 Xcel Reply to Exceptions at 8.
 Department Exceptions at 11-17.
 OAG Exceptions at 5-8, 13.
 XLI Exceptions at 2-4.
 XLI Reply to Exceptions at 1.

G. Interest Calculation Post 2024

1. Introduction

To adequately compensate ratepayers for replacement power costs or other FCA costs that were not prudently incurred, the Commission has required utilities to pay interest on the amount of over-recovery.¹⁴⁵ For customer refunds in the forced-outage context and for other refunds, interest calculated at the U.S. Federal Reserve Prime Rate, compounded monthly, has been required by the Commission.¹⁴⁶ Thus, the Commission directed the ALJ to include interest in any overage calculation.¹⁴⁷

2. Party Positions

In Rebuttal Testimony, the Department updated the interest calculation to account for changes to the Prime rate since direct testimony was filed.¹⁴⁸ As the Prime rate is a publicly available figure not subject to reasonable dispute, the Department indicated that the Commission could

¹⁴⁵ See *In re Review of the July 2018–December 2019 Annual Automatic Adjustment Reports*, Docket No. E-999/AA-20-171, ORDER ADOPTION ADMINISTRATIVE LAW JUDGE REPORT AS MODIFIED AND REQUIRING REFUND at 9 (Feb. 25, 2022) (requiring Minnesota Power to refund \$4,482,456 plus interest calculated at the U.S. Federal Reserve Prime Rate).

¹⁴⁶ See *In re Review of the July 2018–December 2019 Annual Automatic Adjustment Reports*, Docket No. E-999/AA-20-171, ORDER ADOPTING ADMINISTRATIVE LAW JUDGE REPORT AS MODIFIED AND REQUIRING REFUND at 5 (Feb. 25, 2022) (including interest at Prime Rate for refund for forced-outage costs related to hot reheat line failure at Minnesota Power’s Boswell facility); Docket Nos. E-002/GR-15-826 et al, ORDER at 2 (Oct. 21, 2020) (adopting Department comments as order to include interest at Prime Rate, compounded monthly, for Xcel’s incentive compensation refund); *In re Application by CenterPoint Energy Res. Corp., d/b/a CenterPoint Energy Minn. Gas for Authority to Increase Nat. Gas Rates in Minn.*, G-008/GR-17-285, ORDER ACCEPTING REPORT, REQUIRING STI REFUND, AND ALLOWING STI REFUND TO BE INCLUDED AS PART OF INTERIM RATE REFUND IN DOCKET NO. G-008/GR-19-524 at 4 (Apr. 6, 2021) (ordering gas utility to refund \$147,212 of over collected short-term incentive compensation (STI) to ratepayers plus interest).

¹⁴⁷ *In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Electric Service in the State of Minnesota, et al.*, Docket No. E-002/GR-12-961, et. al., NOTICE OF AND ORDER FOR HEARING at 10, (July 13, 2022).

¹⁴⁸ Ex. DOC-9 at 16 (King Rebuttal).

request an updated prime rate and interest calculations in a compliance filing prior to the refund being issued.

In its Exceptions, the OAG stated, that, given the extended history of this proceeding, it is possible that a refund may not be issued by January 2025. In such an instance, the OAG recommended that the Commission follow the Department's recommendation in requiring an updated interest calculation to include any additional months the refund is delayed in a compliance filing prior to the refund being issued.¹⁴⁹

The OAG recommended the following adjustment to the ALJ Report:

OAG 369. If the refund is issued in any month after January 2025, the amount of interest must be updated to account for additional time using the method proposed by Mr. King.

In its Reply to Exceptions, XLI agreed that interest needs to be accrued until the refund to customers is made and that the Department witness calculated interest assuming a ratepayer refund would be issued by January 2025.¹⁵⁰ XLI agreed with the OAG's recommendation that the Commission require an updated interest calculation to include additional months the refund is delayed beyond January 2025 in a compliance filing before the refund is issued.

3. Staff Analysis

The recent Prime Rate reduction by the Federal Reserve will impact the interest calculations presented on this record. Therefore, the Commission may want to require Xcel to make a final compliance requirement that not only captures the revised Prime Rate but also incorporates both the Commission decisions in this proceeding and Xcel's anticipated refund date. If the Commission agrees then, at the hearing, it may want to ask Xcel how long it would take the Company to make such a filing.

4. Reference to Record

ALJ Report ¶ 77-78

OAG Exceptions at 10, 13.

XLI Reply to Exceptions at 4.

Ex. DOC-4 at 17 (King Direct)

Ex. DOC-9 at 16 (King Rebuttal)

¹⁴⁹ OAG Exceptions at 10.

¹⁵⁰ XLI Reply Exceptions at 4.

H. XLI Commission Investigation Recommendation

1. Introduction

In its Reply to Exceptions, XLI recommended the Commission “investigate whether Xcel has over-recovered replacement power costs in other FCA dockets.”¹⁵¹ XLI argued that the disconnect between using different methodologies to determine cost and refunds was inappropriate and noted that using cost estimates to determine recoveries but ‘more robust’ methodologies to determine refunds made no sense.

2. Party Positions

XLI argued that, if Xcel’s methodology used to recover the outage costs at issue is insufficient to determine ratepayer refunds in the instant proceeding, the same methodology would also be insufficient to determine amounts to be recovered in any FCA proceeding.

Specifically, XLI stated:

If the cost estimates are not sufficient to determine the amount of refund, they should not be sufficient to determine the amount of initial recovery in the first place. Xcel seems appalled that the ALJ correctly determined the methodologies for recovery and refund should be the same, and that “the amount of replacement power costs ‘ratepayers actually paid as a result of the Event’” should be refunded, stating “as though replacement power costs associated with the Event were somehow separately accounted for and charged to customers.” The utility bears the minimum burden of identifying and separately accounting for the replacement power costs that flow through the FCA, just like it identified the replacement power costs it recovered in its current FCA. At no point in the FCA process are costs determined using the “more robust” methodology Xcel seeks to use to determine the refund in this proceeding.

Moreover, if the methodology Xcel used to recover the costs at issue here is insufficient to determine the refunds due ratepayers, it is patently insufficient to determine the amounts that should be initially recovered in any FCA proceeding. The Commission should investigate whether Xcel’s methodology of quantifying replacement costs has been sufficient to allow recovery of those costs, and whether it is sufficient going forward. Here, Xcel’s “more defensible” estimate is \$10.1 million less than the amount it recovered from ratepayers. This significant difference is concerning and the Commission

¹⁵¹ *Id.* at 3.

should investigate whether Xcel has over-recovered replacement power costs in other FCA dockets.¹⁵²

XLI recommended the Commission investigate whether Xcel's methodology of quantifying replacement energy costs has been sufficient for cost recovery, and whether it is sufficient for going forward. As Xcel's litigation cost estimate of \$45.4 million was \$10.1 million less than the amount recovered from ratepayers in the FCA, XLI indicated that the Commission should investigate whether Xcel has over-recovered replacement energy costs in other FCA dockets.

3. Staff Analysis

Staff notes that since the issue first appeared in XLI's Reply to Exceptions no party has had an opportunity to address XLI's recommendation. Thus, the Commission may want to solicit comments from parties at the October 15, 2024, agenda meeting.

4. Reference to Record

XLI Reply to Exceptions at 2-3.

¹⁵² *Id.* at 2-3.

III. DECISION OPTIONS

General

1. Adopt the ALJ's Findings of Fact, Conclusions of Law, and Recommendation.

or,

2. Adopt the ALJ's Findings of Fact, Conclusions of Law, and Recommendation except as set forth herein.

Prudency (Pages 3-18)

3. Conclude that Xcel operated and maintained Sherco Unit 3 reasonably and prudently. [Xcel]

or,

4. Conclude that Xcel failed to operate and maintain Sherco Unit 3 reasonably and prudently, in a manner consistent with good utility practice. [ALJ, Department, OAG, XLI]

If the Commission adopts alternative #4 then it will need to decide the following issues.

Energy Replacement Cost (Pages 18-30)

5. Adopt the ALJ's recommendation to use the total energy replacement costs reported by Xcel in its 2012-2013 AAA report, with interest, to calculate the replacement power cost refund to Xcel's customers. [ALJ, XLI]

or,

6. Determine the use of the GE Litigation estimate is reasonable and should be used to calculate the replacement power cost refund to Xcel's customers. [Department, OAG, Xcel]

and,

7. Adopt the Department's proposed modifications to the ALJ Report as follows:

A. Modify Findings of Fact ¶330:

330. Xcel, the Department, and the OAG suggest that the Commission use Xcel's estimate of energy replacement costs from the GE Litigation because of its greater complexity and detail, and because of Xcel's failure to fully explain the AAA calculation. The Administrative Law Judge agrees. ~~disagrees. Instead, the~~

Judge finds more reasonable and equitable the arguments presented by XLI, as well as the rationale expressed by King: the amount of replacement costs should, as closely as possible, match the incremental amount customers paid through the FCA as a result of the Event.

B. Omit Findings of Fact ¶331.

C. Modify Findings of Fact ¶332:

332. Accordingly, the Administrative Law Judge recommends that the Commission use the total energy replacement costs estimated reported by Xcel in its ~~2012-2013 AAA report~~ the GE Litigation, subtract a portion of Xcel's GE settlement attributable to reimbursement for energy replacement costs, and add interest, as calculated by King, for a total of energy replacement costs and interest of ~~\$71,548,388~~ \$55,675,052 on a Minnesota Jurisdictional basis.

D. Modify Conclusions of Law ¶ 14 :

14. The amount of energy replacement costs incurred by Xcel for Unit 3 from November 2011 to October 2013, is best represented by the Company's damage calculation prepared for the GE Litigation ~~Fuel Clause Adjustment (FCA)~~ calculated by Xcel in the ~~2012-2013 Annual Automatic Adjustment docket, MPUC Docket No. E-999/AA-13-599.~~

E. Modify Conclusions of Law ¶ 20:

20. A summary of the refund due to ratepayers is as follows:

Energy Replacement Costs in ~~2012-2013 AAA Report~~ as estimated by Xcel for the GE Litigation: ~~\$41,327,637~~ 33,681,734

or,

8. Adopt the OAG's proposed modifications to the ALJ Report as follows:

- A. **Mod. 327.** Using the numbers submitted by Xcel for energy replacement costs in the Company's ~~AAA reports~~ GE Litigation and the historical prime interest rates applicable at the time, King calculated interest based on the monthly costs as they were incurred and paid by customers during the outage period through January 1, 2025.
- B. **Mod. 328.** When interest is included, the total energy replacement costs allocated to Minnesota, based on Xcel's GE Litigation calculation, is \$55,675,052. ~~2012-2013 AAA~~

- report and FCA, is \$71,548,388: \$41,327,637 in energy replacement costs and \$30,220,751 of interest.
- C. **Mod. 330.** Xcel, the Department, and the OAG suggest that the Commission use Xcel's estimate of energy replacement costs from the GE Litigation because of its greater complexity and detail, ~~and because of Xcel's failure to fully explain the AAA calculation.~~ The Commission agrees and will adopt the GE Litigation calculation of replacement energy costs. ~~The Administrative Law Judge disagrees. Instead, the Judge finds more reasonable and equitable the arguments presented by XLI, as well as the rationale expressed by King: the amount of replacement costs should, as closely as possible, match the incremental amount customers paid through the FCA as a result of the Event.~~
- D. **Mod. 331.** When calculating the amount of energy replacement costs due as a refund to Minnesota ratepayers, the Commission should use the amount ~~presented calculated~~ by Xcel ~~in for~~ its ~~2012-2013 AAA report,~~ GE Litigation as this amount was determined by the Department and the OAG as the most thorough and appropriate calculation of replacement energy costs. The Commission finds that while the GE Litigation calculation is a smaller amount than the 2012-2013 AAA calculation, requiring Xcel to refund 100% of the GE Litigation cost, minus the GE Settlement offset, with the addition of interest, will more fairly compensate ratepayers, who had no control over the operation and maintenance of Sherco 3, than 48% of the AAA calculation similarly adjusted for the GE Settlement and interest. ~~used to calculate the FCA actually charged to ratepayers. It would be unreasonable for the Commission to use a different, after the fact calculation to return less to the ratepayers than the ratepayers actually paid as a result of the Event. Any lesser amount would not fairly compensate ratepayers who had no control over and no contributory fault for the Event. It would allow the Company a windfall to which it is not entitled.~~
- E. **Mod. 332.** Accordingly, ~~the Administrative Law Judge recommends that the Commission~~ will use the total energy replacement costs reported by Xcel in its ~~2012-2013 AAA report~~ GE Litigation and add interest, as calculated by King. ~~for a total of energy replacement costs and interest of \$71,548,388.~~

GE Litigation Settlement Offset (Pages 30-37)

9. Determine that it is fair and reasonable to credit 24.4 percent of the Minnesota portion of the GE Litigation settlement proceeds against the energy replacement costs to be refunded to Minnesota ratepayers. [ALJ, Department, OAG, XLI]

or,

10. Determine that it is reasonable to credit the entire amount of the GE Litigation settlement proceeds against the energy replacement costs to be refunded to Minnesota ratepayers. [Xcel]

or,

11. Determine that it is reasonable to credit 86.8 percent of the GE Litigation settlement proceeds against the energy replacement costs to be refunded to Minnesota ratepayers. [Xcel Alternate]

and,

12. Require Xcel to make a compliance filing detailing the final refund amount and recognizing the timing of the GE Settlement credit (and other offsets) to customers. [Xcel]

2012 Rate Case Disallowance (Pages 38-44)

13. Subtract the \$21.6 million disallowance from Xcel's 2012 rate case from any replacement power refund to Xcel's ratepayers. [Xcel]

or,

14. Do not subtract the \$21.6 million disallowance from Xcel's 2012 rate case from any replacement power refund to Xcel's ratepayers. [Department, OAG, XLI]

Restoration Work, "Avoided" Costs, and Customer Benefits (Pages 44-54)

15. Determine that, due to the management of the restoration process, ratepayers received a benefit of approximately \$16.2 million which shall be used to offset the replacement power refund. [Xcel]

or,

16. Determine that Xcel is not entitled to credit for any "avoided costs" or "collateral benefits" of the restoration work performed as a result of the Event. [ALJ, Department, OAG, XLI]

Percentage of Recovery Attributable to Xcel Imprudence (Pages 54-62)

17. Adopt the ALJ's recommendation and require Xcel to refund 48 percent of the energy replacement costs incurred by ratepayers during the outage, as calculated by Xcel in its 2012 and 2013 AAA reports and FCA, plus interest. [ALJ]

or,

18. Determine that the Company prudently incurred the replacement power costs and no refund is necessary. [Xcel]

or,

19. Reject the ALJ's finding of contributory negligence and order Xcel to refund the complete amount of energy replacement cost. [Department, OAG, XLI]

and,

20. Adopt the Department's proposed modifications to the ALJ Report as follows:

A. Revise heading IX.C at p. 83:

~~C. Percentage of Recovery Attributable to Xcel Imprudence~~

B. Omit Findings of Fact ¶360.

C. Modify Findings of Fact ¶362:

362. In this proceeding, the parties stipulated to including pertinent portions of the transcripts, depositions, evidence, and exhibits from the GE Litigation into this administrative record. The parties have also presented new exhibits, testimony, and argument in this proceeding. Xcel has had the full opportunity to present its evidence with regard to prudence, GE's culpability, energy replacement costs, and all other matters at issue in this proceeding. ~~The Judge has carefully reviewed all of the evidence in this record and concludes that GE and Xcel both contributed to causing the Event. The Judge's independent allocation of fault is consistent with the jury's verdict in the GE Litigation: 48% Xcel and 52% Xcel~~

D. Modify Findings of Fact ¶363:

363. Xcel's imprudence in the operation and maintenance of Unit 3, and,

specifically, its failure to conduct a major inspection in 2011, ~~contributed to~~ caused the catastrophic loss that occurred on November 19, 2011. Reducing the refund due in this case based on a claim that GE was “contributorily negligent” is inconsistent with the purpose of this proceeding and otherwise inappropriate. ~~While GE’s knowledge of its faulty product design, and its failure to adequately advise Xcel of the SCC risks for drum boiler turbines, contributed to the loss, Xcel should nonetheless be responsible for its share of imprudence (48%), which caused the Event.~~

E. Modify Findings of Fact ¶¶ 365-368:

365. The Judge thus recommends that the Commission require Xcel to refund ~~48% of~~ the energy replacement costs incurred by ratepayers during the outage, as calculated by Xcel in its 2012 and 2013 AAA reports and FCA for the GE Litigation, plus interest, as calculated by Department witness King.

366. The energy replacement costs set forth in Xcel’s ~~2012–2013 AAA report~~ damage calculation for the GE Litigation, less credit for a portion of Xcel’s settlement with GE, plus interest, total ~~\$71,548,388~~ \$55,675,052. ~~Forty eight percent of that figure is \$34,343,226.~~

367. In addition, as set forth above, the Administrative Law Judge recommends that the ~~net amount of \$34,343,226~~ be reduced by 24.4% of the Minnesota portion of the GE Litigation settlement, [Trade Secret], which was previously credited to Minnesota ratepayers in the Company’s 2019 FCA.

368. ~~Forty eight percent of is \$34,343,226,~~ \$33,681,734 less [Trade Secret], plus interest, results in a final sum of [Trade Secret], which should be returned to Minnesota ratepayers.

F. Omit Conclusions of Law ¶ 12.

G. Revise Conclusions of Law ¶ 13:

13. As a result of the ~~combined negligence~~ imprudent inspection and maintenance practices of GE and Xcel, the Administrative Law Judge finds that the energy replacement costs for Unit 3 from November 2011 to October 2013, were not reasonable and prudently incurred and should be refunded to ratepayers ~~in proportion to Xcel’s contributory fault (48%)~~ for the Event, plus interest.

H. Modify Conclusions of Law ¶ 16:

16. Based upon Xcel's imprudence and ~~contributory~~ fault for the Event, ratepayers are entitled to a refund of ~~48% of~~ the total energy replacement costs charged to ratepayers through the FCA, plus interest. This amount equals ~~\$34,343,226~~ \$55,675,052.

I. Omit Conclusions of Law ¶ 17.

and/or,

21. Adopt the OAG's proposed modifications to the ALJ Report as follows:

- A. Mod. 363. For purposes of this prudency proceeding, Xcel's imprudence in the operation and maintenance of Unit 3, and, specifically, its failure to conduct a major inspection in 2011, ~~contributed to~~ caused the catastrophic loss that occurred on November 19, 2011. While GE's knowledge of its faulty product design, and its failure to adequately advise Xcel of the SCC risks for drum boiler turbines, contributed to the loss, Xcel, as owner and operator of Sherco 3 throughout the applicable maintenance period and at the time of the catastrophic explosion, should nonetheless be responsible for its imprudence and the resulting replacement energy costs. ~~its share of imprudence (48%), which caused the Event.~~
- B. Mod. 364. The ~~Judge's recommendation~~ Commission's refund order is not based on hindsight, but rather, a upon evidence of what Xcel knew, what Xcel should have known, and what Xcel did or did not do before the catastrophic explosion of Sherco 3 Event. The ~~recommendation~~ order is further based upon the full record ~~presented~~ developed in this proceeding, supplemented by the GE Litigation evidence, and not the reverse.
- C. Mod. 366. The energy replacement costs set forth in Xcel's GE Litigation calculation, ~~2012-2013 AAA report~~, plus interest, minus the GE Settlement offset, totals \$55,675,052. ~~\$71,548,388. Forty-eight percent of that figure is \$34,343,226.~~
- D. Mod. 367. In addition, ~~as set forth above~~, the Administrative Law Judge recommends ~~that~~ the net amount of \$55,675,052 ~~of \$34,343,226~~ has been reduced by the agreed upon portion of the GE Settlement offset. ~~24.4% of the Minnesota portion of the GE Litigation settlement, [PROTECTED DATA EXCISED], which was previously credited to Minnesota ratepayers in the Company's 2019 FCA.~~
- E. Mod. 368. ~~Forty-eight percent of \$71,548,388 is less [PROTECTED DATA EXCISED], results in a final sum of [PROTECTED DATA EXCISED], which should be returned to Minnesota ratepayers.~~ \$55,675,052 is the final refund Xcel will issue to its Minnesota ratepayers.

Interest Calculation Post 2024 (Pages 62-63)

22. Require Xcel to make a compliance filing within 30 days of the Commission's Order in this proceeding, containing an updated calculation of interest using the methodology as agreed in the contested case should the ratepayer refund be issued after January 2025.
[Department, OAG, XLI]

and,

23. Modify the ALJ Report to include the following new finding proposed by the OAG:

OAG 369. If the refund is issued in any month after January 2025, the amount of interest must be updated to account for additional time using the method proposed by Mr. King.

and,

24. Order Xcel to include an updated calculation of interest to account for any changes to the Prime rate that have occurred since the Department's Rebuttal testimony in a compliance filing prior to the refund being issued. [Department]

or,

25. Within 30 days of the Commission's Order in this proceeding, require Xcel to make a final compliance requirement that not only captures the revised Prime Rate but also incorporates both the Commission decisions in this proceeding and Xcel's anticipated refund date. [Staff]

Commission Investigation (Pages 63-65)

26. Open an investigation to determine if Xcel Energy's methodology of quantifying replacement energy costs has been sufficient for cost recovery, and whether it is sufficient for going forward. [XLI]

and/or,

27. Open an investigation to determine whether Xcel Energy has over-recovered replacement energy costs in other FCA dockets. [XLI]

and/or,

28. Open an investigation to determine if ratepayers are due additional refunds because Xcel

over-collected O&M and other costs related to its restoration at Sherco 3 and other activities. [XLI]