

**BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION
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In the Matter of the Review of the July 2018–
December 2019 Annual Automatic
Adjustment Reports

MPUC Docket No. E-999/AA-20-171
OAH Docket No. 82-2500-37082

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

**REPLY TO MINNESOTA POWER’S EXCEPTIONS
TO THE REPORT OF THE
ADMINISTRATIVE LAW JUDGE**

September 10, 2021

ARGUMENT

Minnesota Power asks the Minnesota Public Utilities Commission to cast aside the Administrative Law Judge's factual findings, credibility determinations, the Commission's own burden-of-proof allocation,¹ and almost a year of litigation in favor of its previously rejected arguments and burden shifting attempts. To buttress these efforts, Minnesota Power further asks the Commission to entertain new and untested evidence and accept baseless maintenance-cost claims. Minnesota Power makes these requests because it disagrees with the ALJ's thorough and well-reasoned report. Yet, this is not a basis for rewriting or replacing 41 different factual findings and legal conclusions. The Commission should reject Minnesota Power's arguments and adopt the ALJ's findings of fact and conclusions of law relating to Boswell Unit No. 4's hot-reheat-line rupture.

I. MINNESOTA POWER MISCHARACTERIZES THE ALJ REPORT AND SEEKS TO INTRODUCE NEW EVIDENCE WITHOUT BASIS.

Minnesota Power failed to show that it should permanently retain provisionally charged costs relating to Boswell Unit No. 4's hot-reheat-line longitudinal seam-weld failure. As the ALJ concluded, Minnesota Power did not prove its ten-year inspection program complies with good utility practice. In developing her conclusions, the ALJ carefully weighed the evidentiary record and arguments made by the parties. With no viable alternative, Minnesota Power now mischaracterizes the ALJ Report and the Department's positions. The company also seeks permission to introduce new evidence. These attempts should be rejected.

¹ ORDER ACCEPTING 2018–2019 ELECTRIC AAA REPORTS; NOTICE OF AND ORDER FOR HEARING at 4 (Sept. 16, 2020) (eDocket No. 20209-166630-01) (“Minnesota Power will bear the burden of proving that any or all of its forced outage costs were reasonably and prudently incurred, applying good utility practices.”).

A. The Commission Should Not Give Minnesota Power a “Do-over” to Prove Its Case.

Minnesota Power complains that the Department improperly attacked its testimony relating to purported guidance from consultant Thielsch Engineering. Minnesota Power also takes offense to the limited weight that the ALJ gave the purported Thielsch guidance.² Notably, Minnesota Power doesn’t appear to argue that the ALJ’s findings are unsupported by the record. Instead, the company seems upset that the ALJ also considered the Department’s arguments.

According to Minnesota Power, Thielsch’s clients commonly use a ten-year schedule for hot-reheat-line inspections. In Minnesota Power’s view, this should be sufficient proof to demonstrate its ten-year schedule comports with good utility practice.³ The ALJ was unconvinced. Minnesota Power now asks that the Commission reverse the ALJ’s credibility and evidentiary determinations. In the alternative, Minnesota Power asks that the Commission award it a “do-over” that would expand the evidentiary record with new and unverified claims.⁴ The Commission should decline both invitations. The ALJ’s well-reasoned determination requires no revision. Minnesota Power’s failure to adequately support its claims, moreover, hardly warrants the extraordinary step of accepting new evidence after the ALJ issued her report.⁵

As a threshold matter, Minnesota Power misstates the Department’s arguments relating to Thielsch’s purported guidance. The Department did not move to exclude Minnesota Power’s testimony regarding the alleged inspection practices of Thielsch’s other customers.⁶ Instead, the

² MP Exceptions at 14–15.

³ MP Ex. 7 at 18 (Undeland Direct); MP Ex. 14 at 23, 27 (Undeland Rebuttal); Evid. Hrg. Tr. at 24–29 (Undeland).

⁴ MP Exceptions at 15–16 (“If the Commission would like a more formal statement from Thielsch before the record closes after the hearing, Minnesota Power can certainly facilitate such a filing.”).

⁵ See *In re Hackbarth*, No. A17-1572, 2018 WL 2090627, at *4 (Minn. Ct. App. May 7, 2018) (holding that additional evidence is neither an exception nor an argument).

⁶ Compare MP Exceptions at 15 (“If the Department wished to exclude that evidence, it should have made a motion to that effect or given Minnesota Power an opportunity to provide a sworn

Department argued that the ALJ should not afford much weight to this testimony because it amounted to undocumented and self-serving hearsay. No one from Thielsch testified. Minnesota Power did not document this purported guidance.⁷ And, even if other Thielsch customers do use a ten-year inspection schedule, Thielsch presumably gives consistent advice on inspection timelines to all customers. As a result, Thielsch's guidance likely reflects a bias toward a ten-year inspection program.⁸ The Department then highlighted that Thielsch's purported guidance appeared to be Minnesota Power's only evidence in support of its ten-year inspection schedule. The Department reasoned Thielsch's advice might inform Minnesota Power's understanding of good utility practice in conjunction with specific guidance from *other* respected sources. But alone and without context, it has little value.⁹

Minnesota Power's other grievance is that the ALJ did not find Thielsch's purported guidance persuasive. Yet, the ALJ cannot simply accept claims at face value. The ALJ must, as the trier of fact, weigh conflicting evidence and differing inferences.¹⁰ Here, the ALJ appropriately considered the record as a whole and found Minnesota Power's evidence unpersuasive. The ALJ concluded, "Minnesota Power's . . . ten-year inspection schedule of longitudinal seam-welds is supported solely by advice from its contractor, Thielsch. . . . Unsworn claims from its contractor that other utilities advised by the contractor have similar inspection schedules offers minimal

statement from Thielsch."), *with* DER Initial Br. at 15 ("This undocumented and self-serving claim provides little support regarding whether Minnesota Power's program is consistent with good utility practice.").

⁷ Evid. Hrg. Tr. at 24–25 (Undeland).

⁸ DER Initial Br. at 15.

⁹ DER Reply Br. at 6–7.

¹⁰ Minn. R. 1400.5500(I) (2019); *Fears v. Seagate Tech. Inc.*, No. C5-97-777, 1998 WL 27243, at *5 (Minn. Ct. App. Jan. 27, 1998) ("As the trier of fact, the ALJ had to weigh conflicting evidence and differing inferences.").

support[.]”¹¹ Minnesota Power’s failure to provide enough evidence to support its claims during a full year of litigation is not a basis to up-end the ALJ Report.

Recognizing the deficiencies in its case, Minnesota Power now offers to provide a “more formal statement from Thielsch.”¹² Yet, Minnesota Power is not entitled to a “do-over.” The Commission should not allow Minnesota Power to continue introducing evidence after the ALJ Report.¹³ No witness could be cross-examined on this new evidence. Other parties would have no opportunity to respond. Accepting evidence at this late stage would defeat the purpose of referring the matter to a contested case; namely, to develop a record for Commission consideration. Minnesota Power had two rounds of pre-filed testimony and an evidentiary hearing to prove up its case. Minnesota Power has pointed to no reason why it could not have produced this evidence earlier. That the ALJ found Minnesota Power’s evidence not credible is no basis for creating novel evidentiary procedures.

B. Minnesota Power Mischaracterizes the ALJ’s Findings Regarding the ASME Code and EPRI Guidelines.

Minnesota Power wrongly claims the ALJ found that the company was obligated to follow the American Society of Mechanical Engineers (ASME) code and Electric Power Research Institute’s (EPRI) guidelines when setting an inspection schedule for Boswell Unit No. 4’s hot reheat line.¹⁴ The ALJ did not purport to set or recommend any specific maintenance practices. Instead, the ALJ first considered whether Minnesota Power met its burden to show that its ten-year full inspection schedule was consistent with good utility practice. As discussed above, the

¹¹ ALJ Report ¶ 110.

¹² MP Exceptions at 15–16.

¹³ *In re License of Olson*, No. A16-0400, 2016 WL 7188699, at *5 (Minn. Ct. App. Dec. 12, 2016) (holding that the evidentiary record closed upon filing exceptions to the ALJ’s recommendation and “[n]either party could offer evidence at the board hearing”).

¹⁴ MP Exceptions at 7, 11.

ALJ concluded that purported guidance from Thielsch—Minnesota Power’s main substantive support for its position—was inadequate to demonstrate good utility practice. The ALJ then concluded that a more frequent inspection schedule—as recommended by the Department’s expert—was consistent with good utility practice.

In contrast to Minnesota Power’s reliance on unreliable hearsay, the Department’s expert ascertained the relevant good utility practice for hot-reheat-line inspection using his professional expertise and his extensive knowledge of the industry to interpret and synthesize reputable industry sources and reports produced by Minnesota Power’s contractors. Specifically, the Department’s expert considered numerous sources, including: (1) the ASME code and EPRI’s *Guidelines for the Evaluation of Seam-Welded High-Energy Piping*;¹⁵ (2) EPRI’s *High Energy Piping Systems. Still a Clear and Present Danger* presentation;¹⁶ (3) Structural Integrity’s *Hot Reheat Piping Inspections Spring 2019 Outage* report;¹⁷ (4) Thielsch’s February 2019 inspection report;¹⁸ and (5) EPRI’s *30-Plus Years of Long-Seam Weld Failures in the Power Generation Industry—Perspective and Continuing Challenges with Life Management* report.¹⁹ The ALJ found the Department expert’s conclusion persuasive, in part, because it was supported by a diverse range of industry sources.²⁰

¹⁵ DER Ex. 10 at 24 (Polich Direct)

¹⁶ DER Ex. 10 at 26 (Polich Direct); DER Ex. 10, RAP-13 at 13 (EPRI, *High Energy Piping Systems. Still a Clear and Present Danger*) (EPRI Presentation).

¹⁷ DER Ex. 10 at 30 (Polich Direct); DER Ex. 10, RAP-11 at 61–62 (Polich Direct) (Structural Integrity Report).

¹⁸ DER Ex. 10 at 32 (Polich Direct); DER Ex. 10, RAP-6 at 13 (Polich Direct) (Feb. 20, 2019 Thielsch Report).

¹⁹ DER Ex. 10 at 32 (Polich Direct); MP Ex. 14, PJU-1 at 427 (Undeland Rebuttal) (EPRI 30 Year Report).

²⁰ ALJ Report ¶ 111.

Importantly, the ALJ also concluded that Minnesota Power failed to rebut the Department expert's conclusion with its own evidence. The ALJ explained that "[u]nsworn claims from its contractor that other utilities advised by the contractor have similar inspection schedules offers minimal support[.]"²¹ The ALJ further found that "Minnesota Power's claims of the high expense of the Department's proposed inspections were unsupported with specific evidence in the record."²² Accordingly, the ALJ did not conclude that ASME and EPRI exclusively determine what constitutes good utility practice for Boswell Unit No. 4's hot-reheat-line inspection. Instead, the ALJ simply concluded that Minnesota Power failed to offer up credible evidence to support its alternative to the Department expert's well-supported conclusion.

C. The ASME Code and EPRI Provide Relevant Guidance for Boswell Unit No. 4's Hot-Reheat-Line Inspections.

In exceptions, Minnesota Power also repeats its lengthy arguments from briefing about the general applicability of the ASME code and EPRI's guidelines to Boswell Unit No. 4's hot reheat line.²³ Specifically, Minnesota Power argued the ASME code was not applicable and that the EPRI guidelines were not representative of industry practices. The ALJ rejected both arguments.²⁴

First, Section 8.1 of Appendix V of the ASME code describes the types of power piping subject to ASME's five-year maximum inspection recommendation, which includes critical piping systems subject to internal or external corrosion-erosion. Minnesota Power agreed that its hot reheat line is a critical piping system.²⁵ But the company disagreed that Section 8 applies, arguing that the pipe did not fit any of the examples of piping systems provided.²⁶ But the code clearly

²¹ *Id.* ¶ 110.

²² *Id.* ¶ 112.

²³ MP Exceptions at 6–14.

²⁴ ALJ Report ¶¶ 68, 91–93, 111.

²⁵ Evid. Hrg. Tr. at 31 (Undeland).

²⁶ MP Ex. 14 at 21 (Undeland Rebuttal).

does not limit the types of pipes it covers to the provided examples, and instead uses the terms “such as” and “include, but are not limited to.”²⁷

In addition, Minnesota Power’s claim overlooks the applicability of Section 12 of the ASME code. Minnesota Power admits Section 12 of the ASME code applies to Boswell Unit No. 4’s hot reheat lines.²⁸ And Section 12.2.2 states that the frequency of examination for piping areas more likely to have greater creep damage “should be based on previous evaluation results and *industry experience*.”²⁹ In this case, EPRI has documented more than 42 longitudinal seam-welded pipe failures since 1985 with the same creep deterioration as occurred in Boswell Unit No. 4’s hot reheat line.³⁰ Minnesota Power knew these types of failures were an industry wide problem that could result in high-costs for replacement power and repairs, injuries, or even deaths.³¹ Thus, industry experience alone dictates that Minnesota Power should have inspected the longitudinal seam-welds more often than every ten years.

Second, Minnesota Power’s claim that only 2% of utilities follow the EPRI guidelines “completely” and 41% complied “for the most part” is inaccurate.³² On the same page cited by Minnesota Power, EPRI explains that deviations from the guidelines did not relate to ultrasonic flaw *detection* but deviated with respect to crack *sizing*.³³ That is, unlike Minnesota Power, almost 50% of survey respondents performed ultrasonic testing on longitudinal seam-welds to try to detect

²⁷ *Id.* at 20. Minnesota Power also appears to dispute that the hot reheat line is subject to “high fluid velocity,” but it did not provide the velocity of superheated steam in the hot reheat pipe in the record. Evid. Hrg. Tr. at 31–32 (Undeland).

²⁸ MP Initial Brief at 65–67.

²⁹ MP Ex. 15, PJU-2 at 6–7 (Undeland Rebuttal) (ASME Code) (emphasis added).

³⁰ DER Ex. 10 at 32 (Polich Direct); MP Ex. 14, PJU-1 at 399–432 (Undeland Rebuttal) (EPRI 30 Year Report).

³¹ MP Ex. 6 at 12 (Poulter Direct); Evid. Hrg. Tr. at 36–39 (Undeland).

³² MP Exceptions at 11; MP Ex. 14, PJU-1 at 33 (Undeland Rebuttal) (EPRI Guidelines) (emphasis added).

³³ *Id.*

flaws, although some utilities differed on the methodology used to determine the flaws' size. As EPRI emphasizes, "flaw detection is the highest priority in any inspection."³⁴ EPRI's survey, therefore, shows that a significant portion of the utility industry substantially complies with the EPRI guidelines to detect flaws in longitudinal seam-welds using ultrasonic testing.

As these discussions show, the Department's expert and the ALJ both reasonably considered guidance from ASME and EPRI—in addition to other respected industry sources—in ascertaining what constitutes good utility practice for hot-reheat-line inspections.

II. DISALLOWING MINNESOTA POWER'S IMPRUDENT FORCED OUTAGE COSTS WILL NOT UNREASONABLY INCREASE COSTS FOR RATEPAYERS.

Minnesota Power claims that the ALJ's recommendation will significantly increase maintenance costs and therefore rates.³⁵ Minnesota Power reaches this incorrect conclusion by misinterpreting the ALJ Report. Minnesota Power also ignores problematic incentives created by the automatic pass-through of forced outage costs, which the Commission has long recognized. Lastly, Minnesota Power's claims of skyrocketing costs fail to appreciate that if indeed an aging plant can only be safely and reliably maintained at incredibly high costs, this information should not be masked by allowing unreasonable forced outage costs. Instead, these high costs should be recognized to appropriately model the utility's resources.

First, Minnesota Power misreads the ALJ's conclusions. The ALJ did not determine, as Minnesota Power claims, that all utilities need to implement EPRI's recommended five-year inspection schedule and did not require Minnesota Power to implement "the most stringent and fulsome recommendations."³⁶ Instead, the ALJ recommended the Commission disallow forced outage costs because "Minnesota Power should have inspected the hot reheat line more frequently

³⁴ *Id.*

³⁵ *See* MP Exceptions at 29–30.

³⁶ *Id.* at 29.

based on the line’s age and potential for catastrophic failure.”³⁷ Indeed, reports from Thielsch and Structural Integrity—Minnesota Power’s own contractors—indicate that the hot reheat line’s creep damage likely would have been detectable beginning in 2011 or 2012.³⁸ As a result, even a seven- or eight-year inspection schedule could have caught the flaws before the rupture event.

Second, Minnesota Power’s doomsday cost scenario is unsupported. Minnesota Power continues to take a limited view of the cost-balancing equation by looking at only inspection costs versus forced-outage replacement power costs.³⁹ Minnesota Power continues not to recognize other potential costs from hot-reheat-line seam-weld ruptures, including pipe replacement, potential damage to other parts of the plant, and the potential for worker injuries and deaths.⁴⁰ While Boswell Unit No. 4’s hot-reheat-line rupture thankfully did not cause injuries or deaths, these human and economic costs should not be removed from the calculation due to the long history of injuries and deaths in past longitudinal seam-weld ruptures.⁴¹ On the other side of the scale, the ALJ recognized that Minnesota Power failed to support the high inspection-costs that it continues to tout:

As the party with the burden of proof, Minnesota Power must show that the costs would be unreasonable. Instead it claimed, without support, that “the cost associated with such an inspection protocol . . . would be significantly higher than the potential benefit.” This is especially concerning when the dangers of an HRH failure are not merely an unplanned outage, but possible loss of life or significant injury.⁴²

³⁷ ALJ Report ¶ 108.

³⁸ DER Ex. 10, RAP-6 at 7 (Polich Direct) (Feb. 20, 2019 Thielsch Report); DER Ex. 10 at 32 (Polich Direct); DER Ex. 10, RAP-11 at 61 (Polich Direct) (Structural Integrity Report).

³⁹ *See id.* ¶ 102 (“Mr. Undeland claimed that inspection costs should be weighed solely against the actual forced outage costs in this proceeding.”).

⁴⁰ *Id.* ¶ 102.

⁴¹ *Id.* ¶¶ 68–69.

⁴² *Id.* ¶ 112 (footnotes omitted).

Third, Minnesota Power’s failure to accurately balance costs and benefits is not surprising. The Commission has long recognized utilities’ lack of incentive to prevent forced outages, due to the normally automatic pass-through process.⁴³ Minnesota Power’s underspending on operations and maintenance is not the focus of this contested case proceeding. But Minnesota Power’s claims of soaring rates from additional inspections should be discounted given that it did not even spend its full maintenance budget.⁴⁴

Lastly, having an accurate picture of costs is imperative not only to ensure ratepayers are not financing imprudent forced outage costs, but also to ensure that generation units are being appropriately modeled in utilities’ integrated resource plans. Looking solely at inspection costs without adequately considering the inspection’s value in preventing costs from catastrophic failures could allow old units to remain online long after they are uneconomic.⁴⁵

The ALJ, therefore, appropriately determined that Minnesota Power failed to support the high costs it continues to claim.

CONCLUSION

For these reasons, the Department respectfully requests that the Commission reject Minnesota Power’s proposed revisions to the ALJ Report. The Department further requests that the Commission require Minnesota Power to refund the incremental costs associated with Boswell Unit No. 4’s hot reheat line outage and Boswell Unit No. 3’s phase bushing failure, or \$6,247,151 not including interest.

⁴³ *Id.* ¶ 50 (citing *In re 2006 Annual Automatic Adjustment of Charges for All Elec. & Gas Utils.*, MPUC Docket No. E-999/ AA-06-1208, Order Acting on Electric Utilities’ Annual Reports at 5 (Feb. 6, 2008)).

⁴⁴ *Id.* ¶ 104 (citing DER Ex. 10 at 14–15 (Polich Direct)).

⁴⁵ Minn. R. 7843.0500, subp. 3 (2019) (directing the Commission to evaluate resources options in part on their ability to “keep customers’ bills and the utility’s rates as low as practicable”).

Dated: September 10, 2021

Respectfully submitted,

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