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BEFORE THE MINNESOTA OFFICE OF ADMINISTRATIVE HEARINGS
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ST. PAUL, MINNESOTA 55101

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION
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Joseph Sullivan	Vice Chair
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Matthew Schuerger	Commissioner
John Tuma	Commissioner

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

REPLY BRIEF OF THE
MINNESOTA DEPARTMENT OF COMMERCE,
DIVISION OF ENERGY RESOURCES

July 12, 2021

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ARGUMENT

Minnesota Power has not shown that it should permanently retain provisionally charged costs relating to two forced outages. The Commission should, therefore, require Minnesota Power to refund $6,845,234 (assuming an October 2021 refund) of the forced outage costs. Minnesota Power failed to meet its burden of establishing "that any or all of the forced outage costs were reasonably and prudently incurred, applying good utility practices."[1] The record establishes that Minnesota Power's ten-year hot-reheat line inspection program did not comply with recommendations from respected industry and professional associations like the American Society of Mechanical Engineers (ASME) and Electric Power Research Institute (EPRI). The Department further introduced evidence documenting the high costs and deadly consequences of failing to inspect hot reheat lines adequately. Finally, Minnesota Power's own engineering reports reflect that more frequent inspections were warranted given the line's age and condition. Faced with guidance from professional organizations and engineering experts, Minnesota Power offered up self-serving hearsay and speculative causation theories. Considering the record, none of it demonstrates that Minnesota Power's practices comply with good utility practice. For the phase bushing outage, Minnesota Power came up with new theories based on previously ignored details. But Minnesota Power's last-minute theories include other failures to follow good utility practice and ignore the Department's primary conclusions.

With no viable alternative, Minnesota Power now attempts to distract or confuse the issue, twist the definition of good utility practice, improperly shift the burden to the Department, and

[1] MP Ex. 1 at 8 (ORDER ACCEPTING 2018–2019 ELECTRIC AAA REPORTS; NOTICE OF AND ORDER FOR HEARING (Sept. 16, 2020) (eDocket No. 20209-166630-01) (Order).

propose new theories based on previously ignored facts. The Commission should ignore these attempts.

I. MINNESOTA POWER'S ARGUMENTS RELATING TO MAINTENANCE AND INSPECTION PROGRAMS ARE IRRELEVANT.

The issue before the Commission is narrow. The Commission asked the parties and the ALJ to consider whether Minnesota Power met its "burden to establish that any or all of the forced outage costs were reasonably and prudently incurred, applying good utility practices."[2] Minnesota Power recommended this standard to the Commission:

> [T]he industry standards that we would typically apply in a contract or [power purchase agreement] is "good utility practices." So, if there's a referral to an ALJ, then we think applying good utility practices should be the standard that we should have to meet, or the ALJ should review whether we met that or not.[3]

Yet, Minnesota Power devoted 21 pages of its brief attacking a straw-man argument comparing actual and test-year generation maintenance expenses and then drawing conclusions about the merits of its overall generation maintenance and inspection programs.[4] Neither of these topics, however, are at issue.

Minnesota Power's lengthy critiques confuse this proceeding's scope. Minnesota Power states the Department "abandoned" its comparison of actual and test year generation maintenance expenses.[5] That's true and doing so was appropriate.[6] The Department listened to the Commission

[2] *Id.* at 8.
[3] David R. Moeller, Agenda Meeting, Minn. Pub. Utils. Comm'n (Aug. 20, 2020, 1:00:01), *available at* minnesotapuc.granicus.com/MediaPlayer.php?view_id=2&clip_id=1264.
[4] MP Initial Br. at 13–20, 20–34.
[5] *Id.* at 20.
[6] DER Ex. 10 at 13–14 (Polich Direct) ("A regulatory proceeding such as this one, in which the review is for an 18-month period, is a good starting point for determining if adequate maintenance is being performed at a plant."); DER Ex. 12 at 12 (Campbell Direct) ("I understand from the Commission's referral order that costs arising from maintenance activities and forced outage

and focused on whether Minnesota Power demonstrated that its forced outage expenses were reasonably and prudently incurred, applying good utility practice.[7] To be clear, no party supports this "actual to test year" comparison.

Minnesota Power also claims that the Department argued "for the first time in this proceeding through its expert's direct testimony" about whether the company complied with good utility practice.[8] Minnesota Power further states, "The Department neither produced nor pointed to any evidence of maintenance or inspection program reductions."[9] This criticism is odd. Again, when the Commission referred this case to Office of Administrative Hearings, it directed the Department to hire an engineering expert and evaluate whether Minnesota Power demonstrated its forced outages were consistent with good utility practice.[10] The Department has done just that. The expansive review that Minnesota Power appears to seek of its budget and accounting decisions is simply beyond the scope of this proceeding. Commissioner Tuma explained that accounting questions or concerns are sufficient to warrant a contested case proceeding.[11] Yet, the prudency of Minnesota Power's outage decision-making is ultimately "an engineering question."[12] It's why the Commission directed the Department to hire an engineer, not a forensic accountant.

Finally, Minnesota Power devotes a substantial portion of its brief to generally discussing its generation maintenance and engineering programs, its long-term outage plans, and its forced

events that are inconsistent with 'good utility practice' are not 'reasonable and prudent' . . . [and] should not be charged to customers.").
[7] *See generally* DER Initial Br.
[8] MP Initial Br. at 20.
[9] MP Initial Br. at 18.
[10] Order at 8.
[11] Comm'r John Tuma, Agenda Meeting, Minn. Pub. Utils. Comm'n (Aug. 20, 2020, 1:09:38).
[12] *Id.* at 1:13:40 ("[N]ow the questions are things like were the company's ongoing review cycle for a particular weld prudent or not prudent. That's an engineering question.").

outages compared to the industry.[13] Minnesota Power concludes "the Company has provided more than sufficient evidence in the record to establish that its methods for developing its generation maintenance and inspection programs are consistent with good utility practice."[14] This does not answer the question the Commission asked—whether "Minnesota Power's *forced outage* costs for the period were reasonable and prudent."[15] This case is about whether Minnesota Power applied good utility practice related to 26 *unplanned* outages.[16] Minnesota Power cannot prevail merely based on generalized conclusions about how it develops its *planned* outages and maintenance programs, if its failure to follow good utility practice contributed to an unplanned outage. A driver in an accident is not absolved from liability by claiming she drives safely 99% of the time, if she was texting in the moments preceding the collision. Likewise, the focus in this case should be on Minnesota Power's conduct relating to the unplanned outages. [17]

Unfortunately, Minnesota Power continues highlight these irrelevant issues. They provide no guidance to the Commission. They only serve as a distraction from the question before the ALJ: whether Minnesota Power has demonstrated compliance with good utility practice relating to the 26 forced outages. The Department will not waste time by providing any further refutation of these sideshows.

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[13] MP Initial Br. at 20–34.
[14] *Id.* at 34.
[15] Order at 5 (emphasis added).
[16] Minnesota Power claimed that the Department did not specifically address 23 of these outages. MP Initial Br. at 35. This is false. Mr. Polich discusses GDS Associates' review of these 23 outages in his testimony, including critiques Minnesota Power's blowdown flash tank leak assessment. *See* DER Ex. 10 at 16–19 (Polich Direct). Mr. Polich concluded that Minnesota Power's maintenance and repair practices leading up to these outages were consistent with good utility practice. *Id.*
[17] Comm'r John Tuma, Agenda Meeting, Minn. Pub. Utils. Comm'n (Aug. 20, 2020, 2:23:33) ("They may not have systematic issues, but that they may have made three bad calls that cost ratepayers money. . . . Someone made a bad call when it came time to change the bushings, someone made a bad call when they should have looked at the weld.").

II. MINNESOTA POWER FAILED TO PROVE THAT ITS TEN-YEAR HOT-REHEAT-LINE INSPECTION PROGRAM MET GOOD UTILITY PRACTICE.

Having failed to introduce evidence sufficient to show its ten-year inspection program for Boswell 4's hot reheat line complies with good utility practice, Minnesota Power pivots to burden shifting and mischaracterization. First, Minnesota Power alone bears the burden to show its hot reheat line inspection program was consistent with good utility practice, and it failed to introduce more than unreliable hearsay claims to support its claimed good utility practice standard for these inspections. Second, Minnesota Power misrepresents the basis for the Department expert's conclusions. Third, Minnesota Power wrongly claims that a relevant ASME code section is inapplicable to the hot reheat line while failing to properly apply its selected code provision. Finally, Minnesota Power ignores EPRI's explicit statements to wrongly claim that EPRI's Guidelines do not support a five-year inspection schedule.

A. Minnesota Power Has the Burden of Proving It Followed Good Utility Practice.

Minnesota Power ignores that it has the "burden to establish that any or all of the forced outage costs were reasonably and prudently incurred, applying good utility practices."[18] Indeed, the utility always retains the burden of proving the reasonableness of costs the utility seeks to charge ratepayers.[19] Submitting evidence on an issue does not create a rebuttable presumption of reasonableness.[20] Nor does it protect the utility from scrutiny of the evidence it presented.

Minnesota Power implies that submitting generalized evidence creates a rebuttal presumption. The company then shifts the burden the Department, arguing the Department failed

[18] Order at 8.
[19] *In re N. States Power Co.*, 416 N.W.2d 719, 722 (Minn. 1987).
[20] *Id.* at 725–26.

to show that its recommendations were good utility practice.[21] For example, Minnesota Power repeatedly faults the Department for not showing that its expert's recommended hot-reheat-line inspection protocols were the "common practice" in the industry.[22] Yet, Minnesota Power, not the Department, must show that a significant portion of utilities only inspect longitudinal seam-welds with a creep-detection method every ten years.[23] Even so, the Department's evidence showed that Minnesota Power inspection practices fell short of industry recommendations.

Minnesota Power has fallen far short of meeting its burden to show that its hot reheat line inspection program was consistent with good utility practice. Instead, Minnesota Power offers up a vague and unsupported claim:

> The 10-year inspection frequency was selected based on significant input from our independent consulting engineer and based on the risk and stress in that section of the piping as well as historic operating and metallurgical knowledge.[24]

This is hardly evidence of *good* utility practice. It is simply evidence of Minnesota Power's practices. Minnesota Power does not cite any applicable rules and guidance from government regulators, standard-setting organizations, professional and industry associations, or original equipment manufacturers.

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[21] *See, e.g.*, MP Initial Br. at 73 ("But Mr. Polich does not really address, much less disprove, Minnesota Power's position that its [high-energy piping] inspection program was consistent with the common practice in the industry at that time.").
[22] *See id.*
[23] Alternatively, Minnesota Power could have shown that its ten-year inspection program could be expected to accomplish the desired result exercising reasonable judgment at reasonable costs consistent with good business practices, reliability, safety, and expedition. *See* DER Ex. 10 at 6–7 (Polich Direct). Minnesota Power has also failed to show it followed good utility practice using this second definition.
[24] MP Ex. 7 at 18 (Undeland Direct); MP Initial Br. at 56 (citing this passage of Mr. Undeland's direct testimony).

Instead, Minnesota Power relies on unreliable hearsay from Thielsch Engineering, which advised it to institute that program.[25] Minnesota Power appears to rely—almost exclusively—on the claim that none of Thielsch's clients fully inspect their longitudinal seam welds using ultrasonic examination on a five-year cycle. Even if this unreliable hearsay statement is true,[26] it alone is not evidence of good utility practice because it is the product of a feedback loop. Thielsch likely gives similar advice to all clients with similar facilities, which then encourages other clients to adopt similar practices.[27] In conjunction with specific guidance from *other* respected sources, Thielsch's advice might inform Minnesota Power's understanding of good utility practice. But alone and without context, it provides little guidance.

In contrast to Minnesota Power's dearth of evidence, the Department introduced expert testimony that a five-year inspection program was consistent with good utility practice.[28] The Department's engineering expert has extensive experience with high-energy piping systems.[29] The Department's expert supported his opinion with recommendations from ASME, guidelines from the EPRI utility trade organization, and statements and conclusions from Minnesota Power's own contractors.[30] Despite Minnesota Power's claims, EPRI's Guidelines are substantially followed by a significant portion of the utility industry.[31] In addition, the Department provided evidence

[25] MP Ex. 7 at 18 (Undeland Direct); Evid. Hrg. Tr. at 24–25 (Undeland) (acknowledging there is no documentation from Thielsch describing its customers' practices in the record).
[26] DER Initial Br. at 15.
[27] Evid. Hrg. Tr. at 28–29 (Undeland) (acknowledging that Thielsch likely provides similar advice to all its clients).
[28] DER Initial Br. at 10–15; DER Ex. 10 at 28–29 (Polich Direct)
[29] *See* Evid. Hrg. Tr at 51–52; DER Ex. 10 at 4–5, RAP-1 (Polich Direct); MP Ex. 14, PJU-1 at 1–3 (Undeland Direct).
[30] Evid. Hrg. Tr. at 52 (Polich); DER Ex. 10 at 20–41 (Polich Direct).
[31] MP Ex. 14, PJU-1 at 3, 33 (Undeland Rebuttal) (EPRI, *Guidelines for Evaluation of Seam-Welded High-Energy Piping* (EPRI Guidelines)). EPRI's survey results showed, "Almost 50% of respondents followed the EPRI Guidelines related to ultrasonic flaw 'detection,'" although some deviate with respect to crack 'sizing.'" *Id.* at 33. Minnesota Power's argument that only 2% of

that the high-potential costs of a hot reheat line failure, potential for worker injuries and fatalities, and the age of the line favored more frequent inspections than Minnesota Power performed.[32]

Minnesota Power claimed that the Department's recommendation would be too expensive. But Minnesota Power did not introduce any specific cost estimates to support its claim these costs were unreasonable. Minnesota Power instead baldly declared that "the cost associated with such an inspection protocol . . . would be significantly higher than the potential benefit."[33] Unsupported declarations are not a substitute for evidence. A party with the burden of proof must instead introduce evidence showing it acted reasonably, prudently, and in line with good utility practice.[34]

The hot reheat line failure could likely have been avoided had Minnesota Power inspected the longitudinal seam-welds more often for creep damage. The contractor who helped Minnesota Power design its high-energy piping inspection program estimated that the creep damage first appeared 7.5-8.9 years before the failure.[35] Even if Minnesota Power had inspected this critical pipe fully on a seven- or eight-year schedule, instead of every ten years, it would have had a better shot at preventing the failure.

Minnesota Power has the burden to prove it followed good utility practice in relation to these forced outages. It has failed to come anywhere close to meeting that burden for the hot reheat line rupture. Ratepayers should not be saddled with approximately $4.48 million in associated

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the utilities surveyed by EPRI followed the guidelines is based on fuzzy math. MP Initial Br. at 69–70. This issue is discussed more fully in the Department's initial brief at pages 14–15.

[32] Department Initial Br. at 16–19. DER Ex. 10 at 22, 34, RAP-11 at 56 (Polich Direct); DER Ex. 11 at 36, RAP-13 at 13 (Polich Direct) (TRADE SECRET); MP Ex. 14, PJU-1 at 399–432 (Undeland Rebuttal) (EPRI, *30-Plus Years of Long-Seam Weld Failures in the Power Generation Industry* (EPRI 30 Year Report)).

[33] MP Initial Br. at 72 (citing MP Ex. 14 at 28 (Undeland Rebuttal)).

[34] *See* Order at 8.

[35] DER Ex. 10 at 31–32 (Polich Direct); DER Ex. 10, RAP-6 at 7 (Polich Direct) (Feb. 20, 2019 Thielsch Report).

forced outage costs. That money should be refunded to Minnesota Power's customers with interest.

B. The Department's Expert Ascertained the Good Utility Practice Applicable to Hot Reheat Lines By Considering Guidance from Numerous Sources.

Minnesota Power attempts to discount the Department engineering expert's credibility by emphasizing that he has reviewed only three power plant high energy piping inspection programs.[36] Yet, the Department's engineering expert did not solely rely on this experience, as Minnesota Power suggests, in concluding that Boswell 4's hot reheat line longitudinal seam welds should have been inspected with phased array ultrasonic examination more regularly than every ten years.[37] The Department expert's has more than 40 years of utility-industry experience.[38] He also has worked extensively with thermal power plants, which includes direct experience with high-energy piping systems.[39] All this experience, in addition to reviewing high-energy piping inspection programs, informed his conclusions. In developing his conclusions, the Department's expert ascertained the relevant good utility practice by 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 sources, including:

1. ASME Code B31.1, which provides specific engineering recommendations necessary for the safe design, construction, operation, and maintenance of pressure piping.[40]

[36] MP Initial Br. at 63.
[37] Discussion of the three power plants is from an Information Request response offered by Minnesota Power into the record, which the Department did not offer. *See* MP Ex. 15, PJU-1 at 5 (Department Response to MP IR 05).
[38] *See* Evid. Hrg. Tr at 51–52; DER Ex. 10 at 4–5, RAP-1 (Polich Direct); MP Ex. 14, PJU-1 at 1–3 (Undeland Direct).
[39] *Id.*
[40] DER Ex. 10 at 24 (Polich Direct)

2. EPRI's *Guidelines for the Evaluation of Seam-Welded High-Energy Piping* that state, "The recommended approach is to perform, as a minimum, a conventional ultrasonic examination of the seam welds."[41]

3. EPRI's *High Energy Piping Systems. Still a Clear and Present Danger* presentation, which states, **[TRADE SECRET INFORMATION BEGINS:**

TRADE SECRET INFORMATION ENDS.][42]

4. Structural Integrity's *Hot Reheat Piping Inspections Spring 2019 Outage* report, which states, "On the first issue of how the cracks got there in the first place, given the response levels produced by the noted condition, it is difficult to understand how they would not have been identified and reported previously" and "Seam weld failures can have serious consequences."[43]

5. Thielsch's February 2019 inspection report acknowledging that "phased array ultrasonic testing procedures should identify similar mid-wall cracking issues."[44]

6. EPRI's report on *30-Plus Years of Long-Seam Weld Failures in the Power Generation Industry—Perspective and Continuing Challenges with Life Management* that recommends "a five-year inspection interval . . . for a single [hot reheat] piping system."[45]

By carefully reviewing a range of industry sources, Minnesota Power's performance, and his own industry experience, the Department's expert drew reasonable conclusions about what constitutes good utility practice for hot reheat lines. Minnesota Power, in contrast, continues to rely on vague claims and the unverified practices of Thielsch's clients.

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[41] *Id.* at 25; MP Ex. 14, PJU-1 at 183 (Undeland Rebuttal) (EPRI Guidelines).
[42] 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).
[43] DER Ex. 10 at 30 (Polich Direct); DER Ex. 10, RAP-11 at 61–62 (Polich Direct) (Structural Integrity Report).
[44] DER Ex. 10 at 32 (Polich Direct); DER Ex. 10, RAP-6 at 13 (Polich Direct) (Feb. 20, 2019 Thielsch Report).
[45] DER Ex. 10 at 32 (Polich Direct); MP Ex. 14, PJU-1 at 427 (Undeland Rebuttal) (EPRI 30 Year Report).

C. Section 8 of the ASME Recommendations Applies to Hot Reheat Lines and Minnesota Power Failed to Follow Its Cited Recommendations in Section 12.

Minnesota Power claims that Section 8 of the ASME Code does not apply to Boswell 4's hot reheat line because it is not susceptible to erosion/corrosion and because creep caused the failure.[46] This is incorrect. Also, Minnesota Power's emphasis on Section 12's creep detection recommendations do not assist the company, because it failed to adequately incorporate industry experience as dictated by ASME.

ASME recommends that high energy piping subject to Section 8 be inspected at intervals not exceeding five years.[47] The Department thoroughly explained why Section 8 applies in its initial brief. First, high-fluid velocity makes the line subject to erosion or corrosion.[48] Second, Minnesota Power's reliance on the examples of pipe-types from the code is misplaced because the examples are not definitive.[49] That the hot reheat line ultimately failed for another reason does not change the fact that Minnesota Power was not complying with good utility practice. For example, it is little comfort to a hurricane victim that an ignored safety code that might have identified the shelter's structural flaw was promulgated to address tornados. Had Minnesota Power been following Section 8's recommendation for a five-year inspection schedule, it likely would have located the creep damage that caused the failure.[50]

Minnesota Power argued that it only needed to follow Section 12 of ASME's recommendations, which discusses inspections specifically for creep.[51] But Minnesota Power was

[46] MP Initial Br. at 64–65.
[47] MP Ex. 15, PJU-2 at 5 (Undeland Rebuttal) (ASME Code Excerpt) (TRADE SECRET).
[48] *See* Department Initial Br. at 11–13; MP Ex. 14 at 20 (Undeland Rebuttal); Evid. Hrg. Tr. at 78–79 (Polich).
[49] *See* DER Initial Br. at 11–13; MP Ex. 14 at 20–21 (Undeland Rebuttal).
[50] *See* DER Ex. 10 at 39 (Polich Direct).
[51] MP Initial Br. at 65–67.

not even following the ASME recommendation it now cites. Section 12.2.2 states that "a procedure should be developed to select piping areas more likely to have greater creep damage" and "[t]he frequency of examination, determined by the Operating Company, should be based on previous evaluation results and *industry experience*."[52] Longitudinal seam-welds failures in high-energy piping are a known industry problem.[53] The most catastrophic of these failures have been in what Minnesota Power concluded were "low-stress" areas.[54] Industry experience with high-cost, catastrophic longitudinal seam-weld failures therefore suggests that Minnesota Power should have inspected the longitudinal seam-welds more often than every ten-years.

Both Section 8 and Section 12 of the ASME code recommendations show that Minnesota Power should have inspected the longitudinal seam-welds more often than every ten-years.

D. EPRI Guidelines Support the Department's Recommended Inspection Period.

Minnesota Power appears to argue that EPRI's Guidelines do not support a five-year inspection interval for the Boswell 4 hot reheat line. This argument ignores statements from EPRI itself and brushes off the Department's expert testimony. Specifically, Minnesota Power claims that the 2003 version of the EPRI Guidelines, which the Department relied on, does not support the Department's expert recommendation that hot reheat lines should be inspected with phased array ultra-sonic examination every five-years.

Minnesota Power lacks record support for its suggestion that EPRI does not recommend a five-year inspection program for hot reheat lines. EPRI documents discussing Boswell 4 specifically state this recommendation. Following the hot reheat line rupture, EPRI offered

[52] MP Ex. 15, PJU-2 at 6–7 (Undeland Rebuttal) (ASME Code) (emphasis added).
[53] MP Ex. 6 at 12–13 (Poulter Direct); MP Ex. 15, PJU-1 at 399–432 (Undeland Rebuttal) (EPRI 30 Year Report).
[54] DER Ex. 21 at 4 (MP IR Attach 05.05: Cohn et al, *A Qualitative Approach to a Risk-Based Inspection Methodology of Main Steam and Hot Reheat Piping Systems*).

Minnesota Power assistance in determining the rupture's cause.[55] In presenting its findings, EPRI stated, **[TRADE SECRET INFORMATION BEGINS**

TRADE SECRET INFORMATION ENDS][56] EPRI's presentation concludes there was a basis for more frequent inspections of the Boswell 4 hot-reheat-line seam-welds and that the seam-welded pipe should have been examined every four to five years.[57] In addition to EPRI's presentation on Boswell 4's rupture, a line frequently cited by Minnesota Power in EPRI's 30 Year Report states that "a five-year inspection interval is viewed as cost-prohibitive" and cites to EPRI's Guidelines[58]

Moreover, the Department's expert explained that while the 2003 EPRI guidelines may not succinctly describe the 100 percent five-year inspection using ultrasonic phased array examination recommendation, other EPRI documents do.[59] He also noted that EPRI's recommendation is based on the "expected life of the materials."[60] As EPRI recognized, the Boswell 4 hot reheat line was at the end of its expected life, and **[TRADE SECRET INFORMATION BEGINS**

[55] DER Ex. 10 at 30, RAP-8 (Polich Direct).
[56] DER Ex. 11, RAP-13 at 13 (Polich Direct) (EPRI Presentation) (TRADE SECRET).
[57] DER. Ex. 10 at 37–38 (Polich Direct).
[58] MP Ex. 14, PJU-1 at 427 (Undeland Rebuttal) (EPRI 30 Year Report).
[59] Evid. Hrg. Tr. at 66–67 (Polich). *See* MP Ex. 14, PJU-1 at 413 (Undeland Rebuttal) (EPRI 30 Year Report); DER Ex. 11, RAP-13 at 13 (Polich Direct) (EPRI Presentation) (TRADE SECRET).
[60] Evid. Hrg. Tr. at 66 (Polich).

TRADE SECRET INFORMATION ENDS][61] Minnesota Power cannot escape established good utility practice by highlighting one ERPI document to the exclusion of others.

The Department's expert concluded that EPRI's recommended five-year inspection schedule was appropriate for Boswell 4's aging line based on his knowledge of the industry and high-energy piping systems and statements from EPRI itself.

IV. MINNESOTA POWER'S NEW THEORIES REGARDING ITS PHASE BUSHING OUTAGE DO NOT CHANGE ITS FAILURE TO MONITOR OR CLEAN UP THE SEAL OIL.

In its initial brief, Minnesota Power introduced new theories and arguments for why it followed good utility practice related to Boswell 3's phase bushing outage. These novel theories do not overcome both the commonsense and expert conclusions that its phase bushings failed because they were full of seal oil. Minnesota Power introduced seal oil into the system to try to locate the hydrogen leak, but it did not measure or monitor the seal oil and failed to ensure it was properly cleaned up before restarting Boswell 3.

Minnesota Power's argument that it exhibited good utility practice in assuring that seal oil did not leak into the generator rests heavily on the proposition that it was "unaware" that seal oil had gotten into the system.[62] In its brief, Minnesota Power points to "an alarm failure" for the first time as an explanation for why it did not detect the seal oil leaking into the generator.[63] But Minnesota Power admits that the alarm failed because it "was not properly configured at the time."[64] Minnesota Power owns and operates Boswell 3, which includes the responsibility to

[61] *See* DER Ex. 11, RAP-13 at 13 (Polich Direct) (EPRI Presentation) (TRADE SECRET).
[62] MP Initial Br. at 8, 53.
[63] *Id.*at 8, 50, 53.
[64] *Id.* at 50.

properly configure alarms. Minnesota Power cannot absolve itself from its obligation to follow good utility practice by blaming an alarm that it failed to properly configure.

Minnesota Power also argues that it followed good utility practice because a "visual inspection of the system did not indicate that the oil had entered the phase bushings, as the leadbox area was clean and dry."[65] But Minnesota Power's primary failure to follow good utility practice was its failure to record the amount of seal oil used in testing and track any leakage.[66] In other words, Minnesota Power should have ensured that any additional oil that was put in, came out.

Lastly, Minnesota Power's claims that its "innovative testing and repair of the hydrogen leak reduced that outage by approximately fourteen weeks" and, therefore, it should not be punished by having to refund forced outage costs to customers. But Minnesota Power's claims of innovation appear to primarily relate to a makeshift float valve its employees created to avoid purchasing a new part.[67] Innovation is not an excuse for not following good utility practice. The touted innovation also would not be hindered by recording the amount of additional oil introduced into the system to make sure the appropriate additional amount was removed.[68]

Ratepayers should not have to reward Minnesota Power's claimed innovation when it failed to follow good utility practice while implementing an arguably creative solution. Minnesota Power should be required to refund the forced outage cost related to the phase bushings outage.

[65] *Id.* at 51.
[66] DER Ex. 10 at 44 (Polich Direct).
[67] *Id.* at 42–43.
[68] Minnesota Power may be implying that its MacGyvered float valve is the cause of the phase bushings becoming soaked with oil. If that is the case, this "innovative" idea is even less prudent and shows that Minnesota Power's misfeasance caused the phase bushing failure.

CONCLUSION

In its initial brief, Minnesota Power expended dozens of pages asking the ALJ to do everything except for apply the clear standard set forth by the Commission: To determine whether Minnesota Power met its burden to show that it applied good utility practice and its forced outage costs were reasonably and prudently incurred. Applying this standard and appropriately allocating the burden, Minnesota Power has not shown that it exhibited good utility practice in its inspection of Boswell 4's hot reheat line and in addressing Boswell 3's hydrogen leak, which led to the phase bushings failing after being saturated in seal oil. The Department respectfully requests the ALJ follow the Commission's directions and recommend that Minnesota Power be required to refund $6,845,234 (assuming an October 2021 refund).

Dated: July 12, 2021

Respectfully submitted,

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