BEFORE THE MINNESOTA OFFICE OF ADMINISTRATIVE HEARINGS
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FOR THE PUBLIC UTILITIES COMMISSION OF THE STATE OF MINNESOTA
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In the Matter of the Review of the July 2018-December 2019 Annual Automatic Adjustment Reports	OAH Docket No. 82-2500-37082 PUC Docket No. E-999/AA-20-171

POST-HEARING BRIEF OF THE LARGE POWER INTERVENORS

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I. INTRODUCTION

Blandin Paper Company; Boise Paper, a Packaging Corporation of America company, formerly known as Boise, Inc.; Cleveland-Cliffs Minorca Mine Inc.; Enbridge Energy Limited Partnership; Gerdau Ameristeel US Inc.; Hibbing Taconite Company; Northern Foundry, LLC; Sappi Cloquet, LLC; USG Interiors, Inc; United States Steel Corporation (Keetac and Minntac Mines); and United Taconite, LLC (collectively, the "Large Power Intervenors" or "LPI") submit the following brief in support of its recommendations.

LPI appreciates the Minnesota Department of Commerce, Division of Energy Resources' ("Department") ongoing work to review the automatic adjustment filings submitted by the utilities and particularly its efforts on behalf of ratepayers in this matter. The evidence and testimony in this proceeding shows that Minnesota Power (also referred to herein as "MP" or the "Company") failed to adhere to Good Utility Practice in its maintenance efforts, thereby causing multiple forced outages and associated costs. The record provided by the Department supports disallowance of $6,247,151 of rate recovery by Minnesota Power based on the Company's imprudently incurred replacement power costs resulting from multiple forced outage events. As will be explained further in this brief, Minnesota Power failed to meet its burden to show that its maintenance activities conformed with Good Utility Practice. Therefore, LPI respectfully requests that the Administrative Law Judge ("ALJ") recommend that the Minnesota Public Utilities Commission ("Commission") order Minnesota Power to refund customers the $6,247,151 (plus interest), consistent with the Department's findings.

II. BACKGROUND

Minn. Stat. § 216B.16, subd. 7, allows utilities to automatically adjust charges related to the cost of fuel and other energy-related costs.[1] To make these adjustments, Minnesota utilities use a monthly fuel clause adjustment ("FCA"), and then subsequently file monthly and annual reports (the "Annual Automatic Adjustment" or "AAA" reports), which are reviewed by stakeholders for accuracy and prudence.[2] The Commission recognized that this process creates

[1] *In the Matter of an Investigation into the Appropriateness of Continuing to Permit Electric Energy Cost Adjustments*, PUC Docket No. E-999/CI-03-802, Order Approving Additional Details of New Fuel Clause Adjustment Process at 1 (June 12, 2019) ("2019 FCA Order").

[2] *Id.*

perverse incentives for utilities, because they are allowed to pass along energy-related charges through a rider while simultaneously reducing costs on budget items to levels below previously approved (and thereby automatically recoverable) levels without the opportunity for a refund for ratepayers.[3] The 2019 FCA Order and its corresponding docket were part of an extensive effort to reform this process to implement additional regulatory safeguards to prevent the utilities from shifting costs in an effort to gain additional shareholder windfalls, such as those at issue in this proceeding;[4] however, the updated process was not implemented until 2020.[5] As such, the instant docket reflects the final AAA reporting considered under the old process.

In March 2020, Minnesota Power submitted its AAA report covering adjustments from July 1, 2018 to December 31, 2019 (the "Reporting Period"), pursuant to Minn. Rules 7825.2800 through 7825.2840.[6] In its review of Minnesota Power's report, the Department found that Minnesota Power's "significant underspending of generation maintenance expense in 2019 of $12.4 million … put ratepayers at risk of paying higher costs due to forced outages and in fact caused a significant increase in forced outage costs."[7] The Department concluded that Minnesota Power failed to show that it was reasonable for it to keep the excess maintenance funds allocated to it (and in turn provide shareholders a windfall of $12.4 million) while passing along an additional $7.4 million to ratepayers in the form of forced outage costs.[8] As such, the Department

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[3] Ex. 12 at 5:5-6:17 (Campbell Direct) (citing *In re 2006 Annual Automatic Adjustment of Charges for All Elec. & Gas Utils.*, PUC Docket No. E,G-999/AA-06-1208, Order Acting on Electric Utilities' Annual Reports at 5 (Feb. 6, 2008)).

[4] *See In the Matter of an Investigation into the Appropriateness of Continuing to Permit Electric Energy Cost Adjustments*, PUC Docket No. E-999/CI-03-802, Order Approving New Annual Fuel Clause Adjustment Requirements and Setting Filing Requirements at 1-4 (Dec. 19, 2017).

[5] 2019 FCA Order at A-1.

[6] Minnesota Power's Annual Report 2018-2019 AAA Charges (Mar. 2, 2020) (eDocket No. 20203-160872-01) ("Initial Filing").

[7] Comment by the Department at 12-13 (May 29, 2020) (eDocket No. 20205-163578-01) ("Department May 2020 Comment"). A forced outage is a situation where a generating unit is removed from service (not operational) due to an emergency or component failure, requiring maintenance in excess of a utility's planned maintenance or outages for that period. Additionally, a forced outage expense is the cost incurred by a utility when its own generation resources are not in service, including replacement power costs. *See* Ex. 12 at 6:19-7:8 (Campbell Direct).

[8] Department May 2020 Comment at 13. The Department, and indeed the Commission, recognize the perverse incentive created by the relationship between utility maintenance expense and forced outage costs. To be sure, the Commission notes that "facility outage costs merit careful scrutiny, given their potentially substantial impact on ratepayers … [and] utilities have a duty to . . . minimize the costs of scheduled outages." *In re 2006 Annual Automatic Adjustment of Charges for all Elec. & Gas Utilities*, PUC Docket No. E,G-999/AA-06-1208, Order Acting on Electric Utilities' Annual Reports at 5 (Feb. 6, 2008); *see also*, Ex. 12 at 5-6 (Campbell Direct).

recommended that the Commission deny recovery of 50% of Minnesota Power's forced outage costs.[9]

Both Minnesota Power and the Department submitted additional comments on Minnesota Power's forced outage expenses prior to the Commission hearing.[10] The additional comments identified three significant forced outages that occurred during the Reporting Period: (1) the Boswell Unit 4 hot reheat ("HRH") steam line outage caused by an HRH steam line longitudinal seam weld failure (the "Boswell 4 Forced Outage"); (2) the Boswell Unit 3 outage due to a hydrogen leak; and (3) the Boswell Unit 3 forced outage caused by a phase bushings failure (the "Boswell 3 Forced Outage" and collectively, the "Forced Outages").[11]

After rounds of comments, the Commission heard this matter on August 20, 2020,[12] and issued a written order on September 16, 2020, referring it to this contested case proceeding.[13] The Referral Order found "a genuine issue of material fact in dispute about whether [MP]'s forced outage costs … were reasonable and prudent—and, if not, the amount of overcharges (plus interest) that should be returned to ratepayers through the FCA."[14] Therefore, the matter was referred to the Minnesota Office of Administrative Hearings before an ALJ.[15] In the Referral Order, the Commission specified that "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."[16]

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9 Department May 2020 Comment at 13.

10 *See, e.g.*, Additional Comment by Minnesota Power (July 1, 2020) (eDocket No. 20207-164474-01); Additional Response Comment by the Department (July 24, 2020) (eDocket No. 20207-165268-01) ("Department Additional Response"). The Department's Additional Response adds further perspective on the relationship between Minnesota Power's forced outage costs and generation maintenance underspend noting that: (1) Minnesota Power's outage costs were approximately 500 percent higher in the Reporting Period than the previous two periods; (2) during the Reporting Period, Minnesota Power spent approximately 22 percent less on maintenance than its allotted amount ($29.6 million compared to $42 million); and (3) Minnesota Power's shareholders may receive a $12.4 million benefit in unspent maintenance expense while Minnesota Power intends to charge ratepayers $7.727 million in forced outage costs. Department Additional Response at 2; *see also*, Ex. 12 at 9:11-18 (Campbell Direct).

11 Department Additional Response at 6-7.

12 Notice of Commission Meeting (Aug. 7, 2020) (eDocket No. 20208-165658-03).

13 Order Accepting 2018-2019 Electric AAA Reports; Notice of and Order for Hearing (Sept. 16, 2020) (eDocket No. 20209-166630-01) (the "Referral Order").

14 *Id.* at 4 (emphasis added). The Referral Order also requests that the Department seek authorization to incur costs for specialized services required to assist in this matter. *Id.* at 5.

15 *Id.*

16 *Id.* at 4.

Through the development of the record in this proceeding, experts appear to be in agreement on various aspects of the issues outlined in the Referral Order. First, as discussed in Section III.A below, the experts agree that the applicable standard is Good Utility Practice and generally agree on what that means. Additionally, the experts are in agreement that the potential refund to ratepayers is $6,247,151 plus interest, if the Commission (considering the ALJ's recommendation) determines that Minnesota Power's forced outage costs related to the events identified by the Department fail to meet the Good Utility Practice standard.[17] Lastly, with regard to determining whether Minnesota Power's maintenance practices satisfy the Good Utility Practice standard, the parties, and indeed the ALJ, already recognize that Minnesota Power bears the burden in this matter.[18] As such, the question for consideration by the ALJ is narrow: whether Minnesota Power has satisfied its high burden to show that its maintenance practices conformed to the Good Utility Practice standard, thereby justifying the Company's purchased power costs associated with the Forced Outages. Minnesota Power has not met its burden in this proceeding, and, therefore, ratepayers are entitled to a refund from the imprudently incurred replacement power costs associated with the Forced Outages.

III. ANALYSIS

A. Minnesota Power Bears the Burden of Proof to Demonstrate That Its Maintenance Practices Satisfy the Good Utility Practice Standard

It is undisputed that Minnesota Power bears the burden to show that the costs associated with the Forced Outages were reasonable based on its maintenance practices complying with the Good Utility Practice standard.[19] "Good Utility Practice" is defined as

> the practices, methods, and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods, and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to

[17] Ex. 12 at 17:8-11 (Campbell Direct); Ex. 16 at 2:25-27 (Oehlerking-Boes Rebuttal).

[18] Evidentiary Hearing Transcript (Vol.) 1 at 7:16-18 (June 3, 2021) ("Hearing Tr."). During the evidentiary hearing Judge Case noted that "[t]he burden is on Minnesota Power in this matter to show … [that] the forced outage cost[s were] reasonable and prudent."

[19] *See, e.g.*, Hearing Tr. at 16:1-7 (Rostollan).

> accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition.[20]

Additionally, Minnesota Power's forced outage costs must be considered in the context of a utility change in rates.[21] As such, Minnesota Power must show that its proposed rate is just and reasonable with any doubt being resolved in favor of ratepayers.[22] The Commission also recognizes that

> [u]tilities seeking rate changes must…prove not only that the facts they present are accurate, but that the costs they seek to recover are rate-recoverable, that the rate recovery mechanisms they propose are permissible, and that the rate design they advocate is equitable, under the "just and reasonable" standard.[23]

The CenterPoint Order also recognizes that this burden is only met when a utility can demonstrate reasonableness by a preponderance of the evidence.[24] This standard is a high burden, that the utility always retains,[25] and one that is different from a civil case. The Minnesota Supreme Court has previously explained this distinction as follows:

> The "weighing" by court in a civil case applying the "fair preponderance" standard involves a determination by the court whether the proponent of the conclusion has produced sufficient credible evidence to sustain that conclusion. *In contrast*, the task of the MPUC is not so much concerned with the sufficiency and credibility of the evidence, as it is concerned with whether the

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20 Ex. 10 at 6:19-7:2 (Polich Direct); *see* Ex. 14 at 8:10-13 (Undeland Rebuttal) (generally agreeing with the definition of the Good Utility Practice standard articulated by Mr. Polich).

21 *See* Ex. 12 at 4:13-18 (Campbell Direct) (confirming that the recovery of fuel costs due to planned and forced outages collected pursuant to Minn. Stat. § 216B.16, subd. 7(1), are "tools for allowing rate recovery outside of a general rate case"). *See also In the Matter of the Petition of Northern States Power Company, d/b/a Xcel Energy, for Approval of a Gas Utility Infrastructure Cost Rider True-up Report for 2016, Forecasted 2017 Revenue Requirement, and Revised Adjustment Factors*, PUC Docket No. G-002/M-16-891, Order Approving Rider with Modifications at 2 (Feb. 8, 2018) (holding that "[g]enerally a public utility may not change its rates without undergoing a general rate case … However, the Legislature has created exceptions to this general policy, allowing utilities to implement a rate adjustment mechanism [i.e., a rider like the automatic adjustment at issue in this proceeding] to expedite recovery of certain costs not already reflected in base rates").

22 Minn. Stat. § 216B.03.

23 *In the Matter of the Application of CenterPoint Energy Resources Corp. d/b/a CenterPoint Energy Minnesota Gas for Authority to Increase Natural Gas Rates in Minnesota*, PUC Docket No. G-008/GR-15-424, Findings of Fact, Conclusions, and Order at 4-5 (June 3, 2016) ("CenterPoint Order") (emphasis added).

24 CenterPoint Order at 5 (citing *In re Minn. Power & Light Co.*, 435 N.W.2d 550, 554 (Minn. App. 1989)).

25 *In the Matter of a Commission Investigation into Xcel Energy's Monticello Life Cycle Management/Extended Power Uprate Project and Request for Recovery of Cost Overruns*, PUC Docket No. E-002/CI-13-754, Order Finding Imprudence, Denying Return on Cost Overruns, and Establishing LCM/EPU Allocation for Ratemaking Purposes, at 12-13, 13 n.20 (May 8, 2015) (citing Minn. Stat. § 216B.16 subd. 6).

> evidence submitted, even if true, justifies the conclusion sought by the petitioning utility when considered together with the Commission's statutory responsibility to enforce the state's public policy that retail consumers of utility services shall be furnished such services at reasonable rates.[26]

In other words, the utility's burden in a proceeding such as this is a two-step process. First, the Company must establish the amount of a given cost as a judicial fact.[27] Second, even once established, the Company must demonstrate that it is just and reasonable for ratepayers (as opposed to the Company's shareholders) to bear those costs.[28] Applied here, and given the amount at issue ($6,247,151 plus interest) is undisputed, the focuses of the inquiry are whether Minnesota Power's maintenance practices associated with the Forced Outages comported with Good Utility Practice and, even if so, whether it is just and reasonable for ratepayers to bear the associated costs.

B. Minnesota Power Failed to Meet Its Burden to Show That Its Maintenance Practices Conform to the Good Utility Practice Standard

1. Minnesota Power Did Not Employ Good Utility Practice in Its Maintenance Practices Pertaining to the Boswell 4 Forced Outage

The evidence demonstrates that Minnesota Power failed to adequately inspect the HRH steam line at Boswell 4, which led to the outage at issue here and narrowly avoided a far more catastrophic failure than the one that occurred.[29] Specifically, Good Utility Practice dictates that Minnesota Power inspect the HRH line with more frequency than it did, particularly in light of its age and the potential consequences of a failure, and had Minnesota Power done so, it could have prevented the forced outage at issue here.

By way of background, Boswell 4 is Minnesota Power's largest baseload generator with a net generating capability of 585 MW, and it was commissioned in 1980.[30] On February 6, 2019, a section of the HRH steam line at Boswell 4, which had not been inspected since 2010,

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26 *In re Petition of N. States Power Co.*, 416 N.W.2d 719, 722 (Minn. 1987) (emphasis added).

27 *Id.*

28 *Id*. at 722-23 (finding that "by merely showing that it has incurred, or may hypothetically incur, expenses, the utility does not necessarily meet its burden of demonstrating that it is just and reasonable that the ratepayers bear the costs of those expenses").

29 "In June 1985, failure of a 30-inch diameter, seam-welded HRH pipe at the Southern California Edison Mohave Generation Station caused six deaths, 10 injuries, and an estimated $155 million in damage." Ex. 10 at 22:7-9 (Polich Direct).

30 Ex. 6 at 3:1-6 (Poulter Direct).

experienced a weld failure, causing steam to release.[31] Minnesota Power was forced to immediately take Boswell Unit 4 offline, due to the dangerous conditions created by the failure.[32] And, during the course of the outage, Minnesota Power also identified six other areas that required repairs.[33] Ultimately, Boswell 4 was forced out of service for seven weeks while the weld failures were remedied.[34] Ms. Campbell estimates the cost of the Boswell 4 Forced Outage to be approximately $4,482,456.[35]

In its investigation of the Boswell 4 Forced Outage, the Department found evidence of poor maintenance practices, inconsistent with the Good Utility Practice standard. Specifically, the Department concluded Minnesota Power failed to properly inspect the HRH piping,[36] finding, at a minimum, this system should have been inspected every four to five years, using ultrasonic examination.[37] The Department's expert, Mr. Polich, observed that seam-welded pipe for high pressure and temperature steam (which is considered "high energy") has been used by generating facilities since the 1940s, and by 2017, the Electric Power Research Institute ("EPRI") had more than 42 studies on such pipe failures.[38] Indeed, Mr. Polich testified during the hearing that "this type of high-energy piping failure is extremely well-known in our industry, it's well documented, it's well understood, and it is preventable."[39] This history led both EPRI and the American Society of Mechanical Engineers ("ASME") to "recommend that 100% of seam-welded pipe used in high energy processes be inspected at least once every five years."[40]

The Good Utility Practice standard takes into account the facts known at the time, one of which was the age of the HRH line. In reaching his conclusion, Mr. Polich cited multiple findings

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31 Ex. 7 at 15:21-16:11 (Undeland Direct). The HRH line is an insulated, 640-foot line, spanning 20 floors. Minnesota Power previously deemed the area of the failure to be "low stress" and characterized it as due for inspection every five to ten years. *Id.* at 16:4-8.

32 *Id.* at 15:21-30.

33 *Id.* at 15:28-30.

34 *Id.* at 15:30-16:1.

35 Ex. 12 at 16, Table 2 (Campbell Direct).

36 *See generally*, Ex. 10 at 33-39 (Polich Direct).

37 *Id.* at 38:1-40:1.

38 *Id.* at 22:1-11.

39 Hearing Tr. at 53:22-25 (Polich).

40 Ex. 10 at 22:3-11 (Polich Direct). Mr. Polich further clarified the applicability of the ASME recommendation by explaining that high-energy steam piping "will develop certain innate oxide layers on the surface of the piping [(rust)]… [a]nd what the high velocity fluids do is they will strip that rust away exposing [bare] piping underneath causing erosion of that piping." Hearing Tr. at 78:11-79:8 (Polich). This explanation demonstrates the applicability of ASME Code V-8.5.2, recommending examination at intervals "not to exceed 5 [years]." *See* Ex. 10 at 24:24-27 (Polich Direct).

indicating the deteriorated condition of Boswell 4's HRH piping. For example, Thielsch Engineering, Inc. ("Thielsch"), which is an engineering firm retained by Minnesota Power, found that the stress rupture life of the HRH piping was "basically exhausted." Additionally, Structural Integrity Associates, Inc. ("SI"), which was also contracted by Minnesota Power to inspect piping welds during the Boswell 4 Forced Outage, found that nearly all welds exceeded their life fraction consumed values (meaning they had exceeded their usable life).[41] Taken in its entirety, the substantial evidence (including knowledge of other catastrophic HRH pipe failures at other facilities and the age of the specific HRH pipe in Boswell Unit 4) supports Mr. Polich's conclusion that Minnesota Power had sufficient knowledge to determine that inspection on a 10-year basis was insufficient to comply with Good Utility Practice. Furthermore, had Minnesota Power inspected the pipe every five years as recommended, it likely would have discovered the cracks prior to an outage occurring. Relying on Thielsch's estimates, Mr. Polich believes that cracks in the Boswell 4 HRH piping likely appeared between 7.5-8.9 years prior to the rupture.[42] Indeed, SI noted that "it is difficult to understand how [the cracks] would not have been identified and reported previously."[43]

In response to Mr. Polich's findings, Minnesota Power makes arguments focused on generalities, while ignoring the facts in the record. For example, Minnesota Power argues that more frequent inspections would not be cost effective.[44] Minnesota Power claims that more regular, ultrasonic testing would have cost ratepayers $20 million from 2010-2020.[45] However, under cross-examination, Minnesota Power's witness, Mr. Undeland, admitted that Minnesota Power had not submitted any estimates of the specific costs involved in such an inspection.[46] Minnesota Power then justifies foregoing this cost by "extrapolating" to reach the conclusion this procedure would cost ratepayers more than the forced outage costs in this proceeding.[47] While cost is an element to be considered when determining if the Good Utility Practice standard was met, it is not the only factor. Indeed, Minnesota Power's expert admitted that there would also be

41 Ex. 10 at 33:25-34:12 (Polich Direct).
42 *Id.* at 32:8-11.
43 *Id.* at 34:5-6.
44 *See* Ex. 14 at 27:23-30:3 (Undeland Rebuttal).
45 *Id.* at 29:1-13.
46 Hearing Tr. at 33:4-35:19 (Undeland).
47 Ex. 14 at 29:15-30:3 (Undeland Rebuttal).

repair costs and costs associated with potential injuries.[48] Minnesota Power's focus on cost implies either ignorance or dismissal of the potential severity of the HRH line failures, which LPI finds troubling. As noted by Mr. Polich, similar failures have resulted in multiple deaths and hundreds of millions of dollars in damage—costs significantly higher than the extrapolated $20 million referenced by Mr. Undeland.[49] Further, Mr. Polich, relying on Thielsch's analysis, testified that Minnesota Power's piping did not guarantee a leak before burst (in other words, Minnesota Power was lucky to have experienced only a leak and not a far more serious event).[50] Given the potential safety and reliability concerns associated with similar failures, Minnesota Power's cost extrapolations fail to adequately rebut the Department's findings regarding Minnesota Power's maintenance practices as they relate to the Boswell 4 Forced Outage.

LPI will not repeat and summarize the Department's full analysis here. It is evident from review of this record that the Boswell 4 Forced Outage caused by the HRH failure was the result of a well-known, slowly developing process that would have been discovered had Minnesota Power conducted more regular and thorough testing of the Boswell 4 facility, consistent with Good Utility Practice, as described by Mr. Polich. Additionally, given the potentially catastrophic results associated with HRH line failures and age of the equipment, there is ample justification for the costs Minnesota Power would have incurred for more thorough testing. Plainly stated: Minnesota Power has not and cannot demonstrate that the actions it took with respect to the Boswell 4 Forced Outage comport with Good Utility Practice, and ratepayers should not be responsible for the consequences of MP's failure to do so. Therefore, LPI urges the ALJ to recommend that the Commission disallow cost recovery of the approximately $4,482,456 associated with the Boswell 4 Forced Outage.

2. Minnesota Power Did Not Employ Good Utility Practice in Its Maintenance Practices Pertaining to the Boswell 3 Forced Outage

The phase bushing outage at Boswell 3 was similarly the result of Minnesota Power's failure to apply Good Utility Practice. Boswell Unit 3 is a coal-fired generating unit that was commissioned in 1973. The generating capacity of Boswell 3 is 355 MW.[51] In July 2019, several

48 Hearing Tr. at 36:20-39:12 (Undeland).
49 *See* Ex. 10 at 22:7-9 (Polich Direct).
50 *Id.* at 33:21-23.
51 Ex. 6 at 3:1-6 (Poulter Direct).

phase bushings at the Boswell 3 unit failed.[52] As explained below, the bushings failure in Boswell 3 was the result of Minnesota Power's failure to apply Good Utility Practice in its efforts to address a hydrogen leak in Boswell 3. Prior to the phase bushing failure, during the winter of 2018-2019, Boswell 3 had experienced a leak in its hydrogen cooling system.[53] The hydrogen seal oil system is responsible for preventing leaks of this kind.[54] Part of Minnesota Power's testing to determine the cause of the leak involved pouring "several barrels" of oil into the seal oil system.[55] Ultimately, this led to the discovery that the float trap valve in the seal oil system was leaking.[56] Minnesota Power, however, did not record the amount of seal oil that had been used during the testing process, and it did not inspect to determine if the oil had contaminated portions of the generator.[57] Mr. Polich observed that Minnesota Power should have removed the float valve to test it instead of overfilling the seal oil system, and that it would have been Good Utility Practice to "keep track of the amount of seal oil used in any testing process, track any leakage, and clean up any leaked seal oil so it does not cause damage to other components of the generator."[58] While Mr. Polich concludes that Minnesota Power's actions did not constitute Good Utility Practice, the Department concludes that the hydrogen leak itself did not significantly extend the associated planned outage that was already in progress.[59] However, Minnesota Power's actions with respect to the hydrogen leak ultimately caused the more significant outage related to the phase bushings failure.

The phase bushing outage was discovered in July 2019, when a relay on generator A phase bushing detected a ground fault, forcing operators to take the plant offline. The Company subsequently determined that the A phase line-side bushing had failed.[60] In response, Minnesota Power consulted General Electric ("GE") to further investigate the failure.[61] Despite the fact that the bushings had been tested earlier in 2019, Minnesota Power reported to GE that there were large

52 Ex. 10 at 46:5-11 (Polich Direct).
53 *Id.* at 42:7-8.
54 *Id.* at 41:13-42:5.
55 *Id.* at 43:4-16.
56 *Id.*
57 *Id.* at 43:13-16.
58 *Id.* at 44:13-20.
59 *Id.* at 45:13-46:3.
60 *Id.* at 46:7-11.
61 *Id.*

amounts of oil that had entered the unit as a result of the previously mentioned hydrogen leak.[62] GE subsequently found that the insulation surrounding the bushings was, indeed, soaked with oil and the bushings themselves were full of oil upon disassembly.[63] GE pumped approximately five gallons out of each of the bushings, almost half a drum in total.[64] Mr. Polich testified that in normal circumstances there is no seal oil in the bushings and that the oil blocked proper cooling of the bushings causing the failure.[65]

Based on the facts presented and the findings by GE, Mr. Polich determined that "MP's improper overfilling of the hydrogen seal oil system likely led to seal oil leaking into the generator,"[66] and caused the phase bushing forced outage.[67] Mr. Polich concluded that Minnesota Power failed to follow Good Utility Practice by overfilling the seal oil system, failing to track the amount of oil it used while repairing the hydrogen leak, and failing to investigate whether the oil had leaked into the generator.[68] Mr. Polich further explains that had MP followed Good Utility Practice in even one of these respects, it could have either prevented the bushings from being filled with seal oil or found the seal oil prior to start-up, allowing the bushings to be cleaned.[69] In short, Minnesota Power's failure to follow Good Utility Practice in addressing the hydrogen leak led to the forced outage associated with the bushings failure.

Minnesota Power's witness, Mr. Undeland, attempts to counter Mr. Polich's findings by claiming that Mr. Polich offers "no evidence" in support of the claim that the phase bushings failure was due to the presence of seal oil.[70] Despite admitting that it could not definitively point to or identify the root cause of the outage,[71] Minnesota Power seeks to undermine Mr. Polich's conclusion by speculating about "a number of reasons a phase bushing could fail."[72] LPI

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62 *Id.* at 46:13-47:20. Minnesota Power's response to discovery further confirms this, that "[i]t was apparent to plant personnel and our third-party expert consultants that the oil present in the phase bushings was seal oil. This oil was introduced into this area during the float trap valve testing and repairs." *Id.* at 47:13-18 (*citing* Minnesota Power Response to Department Information Request No. 37).

63 *Id.* at 46:23-24.

64 *Id.* at 47:4-8; Hearing Tr. at 54:18-21 (Polich).

65 Ex. 10 at 47:5-6 (Polich Direct); Hearing Tr. at 54:21-23 (Polich).

66 Ex. 10 at 44:16-18 (Polich Direct).

67 *Id.* at 45:15-17.

68 *Id.* at 47:22-48:12.

69 *Id.*

70 Ex. 14 at 34:18-20 (Undeland Rebuttal).

71 *Id.* at 36:13-14.

72 *Id.* at 35:14.

respectfully asserts that Minnesota Power's speculation as to the cause of the Boswell 3 Forced Outage does not satisfactorily rebut the Department's findings. Mr. Polich testified that speculation regarding any other cause of the failure is not reasonable because GE had inspected these particular bushings just prior to the failure and the bushings passed all tests.[73] Further, and most importantly, it is not the Department's burden to show that Minnesota Power's maintenance practices failed to meet the Good Utility Practice standard. Minnesota Power itself bears the burden of showing that its practices comport with the Good Utility Practice standard. With respect to both the Boswell 3 and Boswell 4 Forced Outages, Minnesota Power has not made an affirmative showing that its maintenance practices comport with the Good Utility Practice standard nor has it done enough to rebut the substantial evidence submitted by the Department that Minnesota Power did, in fact, fail to exercise Good Utility Practice.

In sum, based on the substantial evidence submitted by the Department as well as a lack of affirmative evidence submitted by Minnesota Power, LPI respectfully contends that Minnesota Power has not met its burden to demonstrate its maintenance practices comport with the Good Utility Practice standard thereby justifying recovery of the forced outage costs from ratepayers.

C. Because Minnesota Power Failed to Show That It Employed Good Utility Practice, Ratepayers Are Entitled to a Refund of $6,247,151 Plus Interest

Minnesota Power cannot demonstrate that its actions associated with the HRH line and phase bushings outages complied with Good Utility Practice and there is substantial evidence in the record that its failure to exercise Good Utility Practice resulted in the preventable Forced Outages at issue here. As such, Minnesota Power's incremental expenses for purchased power during the outages were not reasonable or prudent. Ratepayers are therefore entitled to a refund of those costs. Incrementally, $4,482,456 is attributable to the Boswell 4 Forced Outage and $1,764,695 is attributable to the Boswell 3 Forced Outage.[74] As described above, the experts agree that the potential refund amount that may be returned to ratepayers is $6,247,151 plus interest.[75] The experts also appear to agree that any such refund should include interest at the U.S. Federal Reserve prime rate,[76] and, at the time Rebuttal testimony was filed, Minnesota Power calculated

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73 Hearing Tr. at 54:23-55:2 (Polich).
74 Ex. 12 at 16 (Campbell Direct).
75 Ex. 12 at 17:8-11 (Campbell Direct); Ex. 16 at 2:25-27 (Oehlerking-Boes Rebuttal).
76 *See* Ex. 12 at 18:12-18:16 (Campbell Direct); Ex. 16 at 2:8-20 (Oehlerking-Boes Rebuttal).

the existing $6,247,151 amount plus interest to reach a current projected potential refund of $6,845,234.[77] Therefore, upon a finding that either or both of Minnesota Power's Forced Outages investigated by the Department resulted from a failure to adhere to the Good Utility Practice standard, the experts agree on the amount that should be refunded to ratepayers.

D. Even if the ALJ Determines Minnesota Power's Maintenance Comports with Good Utility Practice, the ALJ Should Recommend Denial of Cost Recovery

Even if Minnesota Power establishes Good Utility Practice, it still bears the burden of demonstrating that it is just and reasonable for ratepayers (as opposed to the Company's shareholders) to bear those costs.[78] Minn. Stat. § 216B.03 is applicable here because the FCA process is a rate-adjusting mechanism, allowing rates to be altered outside a traditional utility rate case.[79] As a rate-change proceeding, the analysis in this proceeding must consider "whether the evidence submitted, even if true, justifies the conclusion sought by the petitioning utility when considered together with the Commission's statutory responsibility to enforce the state's public policy that retail customers of utility services shall be furnished such services at reasonable rates."[80] Allowing cost recovery for the Forced Outages costs would result in unjust and unreasonable rates.

Minnesota Power's existing test year budgets $42 million for generation maintenance in 2018 and 2019. But Minnesota Power only spent $29.6 million on generation maintenance during 2019, meaning it collected $12.4 million more than it spent. Additionally, Minnesota Power passed along *another $7.727 million in forced outage costs to ratepayers on top of what was collected in base rates*.[81] Regardless of whether Minnesota Power exercised Good Utility Practice, it would be unjust and unreasonable to allow Minnesota Power to pocket $12.4 million in maintenance cost savings while simultaneously forcing ratepayers to incur an additional $7.727 million for forced outage costs. Because the maintenance cost savings exceed the forced outage costs, these figures can and should be netted against each other such that ratepayers bear no

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77 Ex. 16 at 3:14-19 (Oehlerking-Boes Rebuttal).

78 *In re Petition of N. States Power Co.*, 416 N.W.2d at 723 (finding that "by merely showing that it has incurred, or may hypothetically incur, expenses, the utility does not necessarily meet its burden of demonstrating that it is just and reasonable that the ratepayers bear the costs of those expenses").

79 Ex. 12 at 4:13-18 (Campbell Direct).

80 CenterPoint Order at 5 (citation omitted).

81 Ex. 12 at 9:7-18 (Campbell Direct).

responsibility for the forced outage costs, which would only serve to reduce (but not eliminate) the $12.4 million in maintenance cost savings realized by Minnesota Power. Performing this netting adjustment would not harm Minnesota Power, would protect Minnesota Power's customers, and would better align incentives in the FCA in the pursuit of just and reasonable rates under Minn. Stat. § 216B.03.

IV. CONCLUSION

Minnesota Power bears a heavy burden to demonstrate that cost recovery for the forced outage costs would result in just and reasonable rates. LPI has carefully reviewed the results of the Department's investigation and does not believe that ratepayers should be forced to shoulder the burden of approximately $7 million in forced outage costs in light of the substantial evidence introduced by the Department that the Forced Outages were avoidable had Minnesota Power exercised Good Utility Practice. Based on the Department's findings and other evidence in the record, Minnesota Power has not met its burden to show that its maintenance practices leading up to the Forced Outages comported with Good Utility Practice. Even if Minnesota Power met its burden, cost recovery would be inappropriate under Minn. Stat. § 216B.03 given the significant maintenance savings Minnesota Power realized.

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Respectfully submitted,

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