

## Staff Briefing Papers

Meeting Date	January 13, 2022	Agenda Item 5**
Company	Minnesota Power	
Docket No.	<b>MPUC Docket No. E-999/AA-20-171</b> <b>OAH Docket No. 82-2500-37082</b>	
	<b>In the Matter of the Review of the July 2018-December 2019 Annual Automatic Adjustments Reports</b>	
Issues	Should the Commission adopt or modify the Administrative Law Judge's Findings of Fact, Conclusions of Law, and Recommendations?	
Staff	Ben Gustafson	<a href="mailto:Ben.gustafson@state.mn.us">Ben.gustafson@state.mn.us</a> 651-201-2247
	Jorge Alonso	<a href="mailto:Jorge.alonso@state.mn.us">Jorge.alonso@state.mn.us</a> 651-201-2258
	Jason Bonnett	<a href="mailto:Jason.bonnett@state.mn.us">Jason.bonnett@state.mn.us</a> 651-201-2235

---



### Relevant Documents

### Date

Minnesota Power- Initial Report (Non-Public)	March 2, 2020
Minnesota Public Utilities Commission- Order Accepting 2018-2019 Electric AAA Reports; Notice of and Order for Hearing	September 16, 2020

To request this document in another format such as large print or audio, call 651.296.0406 (voice). Persons with a hearing or speech impairment may call using their preferred Telecommunications Relay Service or email [consumer.puc@state.mn.us](mailto:consumer.puc@state.mn.us) for assistance.

The attached materials are work papers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless noted otherwise.





## Relevant Documents

## Date

### **Initial Briefs**

Minnesota Power	June 28, 2021
Department of Commerce	June 28, 2021
Large Power Intervenors	June 28, 2021

### **Reply Briefs**

Minnesota Power	July 12, 2021
Department of Commerce	July 12, 2021
Large Power Intervenors	July 12, 2021

### **Proposed Findings of Fact**

Minnesota Power	July 12, 2021
Department of Commerce	July 12, 2021
Large Power Intervenors	July 12, 2021

### **ALJ Report**

ALJ – Findings of Fact, Conclusions of Law, and Recommendations	August 11, 2021
---	-----------------

### **Exceptions to ALJ Report**

Minnesota Power	August 31, 2021
Department of Commerce	August 31, 2021
Large Power Intervenors	August 31, 2021

### **Reply to ALJ Exceptions**

Minnesota Power	September 10, 2021
Department of Commerce	September 10, 2021
Large Power Intervenors	September 10, 2021



## Table of Contents

I.	Statement of the Issues .....	1
II.	Introduction .....	1
III.	Background .....	1
	Fuel Clause Adjustment (FCA).....	1
	Initial AAA Report.....	2
	Contested Case Proceeding .....	2
IV.	Office of Administrative Hearing Report .....	3
	OAH Report .....	3
	1. ALJ Recommendation .....	3
	2. Discussion.....	4
	Exceptions to ALJ .....	11
	Reply to Exceptions.....	13
	Staff Analysis .....	14
V.	Decision Options .....	14



## I. Statement of the Issues

Should the Commission adopt or modify the Administrative Law Judge's Findings of Fact, Conclusions of Law, and Recommendations?

## II. Introduction

As allowed by Minn. Stat. § 216B.16, subd. 7 and prepared in accordance with Minn. R. 7825.2390 through 7825.2920 Minnesota Power (MP or the Company) submitted its Annual Automatic Adjustment (AAA) report on March 2, 2020. The report *inter alia* presented the Company's actual fuel costs for the covered period of July 1, 2018 to December 31, 2019, and the Company automatically adjusted their rates through the Fuel Clause Adjustment (FCA) including for costs related to its forced outages.

On September 16, 2020 the Commission largely accepted the Company's AAA report as "substantially complete", however, it found a genuine issue of material fact as to whether Minnesota Power's forced outage costs were reasonably and prudently incurred and, if not, what amount should be refunded to customers and referred the matter to the Minnesota Office of Administrative Hearings (OAH) for a contested case proceeding.<sup>1</sup> The Commission explicitly ordered that Minnesota Power had the burden to show that its costs were reasonably and prudently incurred applying "good utility practices."

During the instant AAA reporting period, Minnesota Power experienced 26 unique forced outage events, however, only three events were at issue and, of those three, only two event's costs were at issue in the proceeding. The actual forced outage costs plus interest for the two events (hot reheat (HRH) Line Failure- \$4,482,456; Phase Bushing Failure- \$1,764,694) are not at issue and neither is the methodology for how a refund would be provided to customers.

The Administrative Law Judge (ALJ) generally found that the Company did not use good utility practice in incurring forced outage costs for the HRH line failure but did incur costs reasonably and prudently for then Phase Bushing failure. The main issue for the Commission is to decide if the ALJ report should be adopted as recommended, resulting in a refund for the HRH line failure but not the Phase Bushing failure or whether it should be amended, as the Company requests resulting in no refund, or as the Department and the Large Power Intervenor's argue for a refund for both the HRH line failure and Phase Bushing failure.

## III. Background

### Fuel Clause Adjustment (FCA)

Minn. Stat. § 216B.16, subd. 7, authorizes the Commission to allow a public utility to automatically adjust charges for the cost of fuel and prepared in accordance with Minn. R.

---

<sup>1</sup> In the Matter of the Review of the July 2018–December 2019 Annual Automatic Adjustment Reports, Docket No. E-999/AA-20-171, ORDER ACCEPTING 2018–2019 ELECTRIC AAA REPORTS; NOTICE OF AND ORDER FOR HEARING at 4-5 (September 16, 2020).



7825.2390-7825.2920. Pursuant to this statute and rules, Minnesota's rate regulated electric utilities have automatically adjusted their rates monthly through a fuel clause adjustment (FCA) mechanism and subsequently filed monthly and annual reports, which the Commission has reviewed for accuracy and prudence.

Historically the Annual Automatic Adjustment (AAA) reports were based on a fiscal year from July 1 to June 30, however beginning January 1, 2020 the AAA reporting period was switched to a calendar year with filings due on March 1 of the year following the relevant calendar year.<sup>2</sup> To account for the transition from the fiscal year to calendar year approach the utilities were permitted to operate their FCA from July 1, 2018 to December 31, 2019.<sup>3</sup>

#### Initial AAA Report

Minnesota Power filed its AAA report in the instant docket on March 2, 2020 covering the period of July 1, 2018-December 31, 2019, consistent with the Commissions December 12, 2018 Order in Docket No. E-999/CI-03-802.

Minnesota Power and the Department filed various comments and responses between the initial AAA report filing and July 31, 2020. The culmination of the initial commenting period resulted in a Commission Order that found the Company's report was "substantially complete under Minn. R. 7825.2390 through 7825.2920".<sup>4</sup> However, the Commission did find "a genuine issue of material fact in dispute about whether Minnesota Power's forced outage costs for the period were reasonable and prudent" and referred that specific matter to the Minnesota Office of Administrative Hearings (OAH) for a contested case proceeding.<sup>5</sup>

#### Contested Case Proceeding

In its September 16, 2020, Order, the Commission referred the matter to the OAH for a contested case proceeding where Minnesota Power had the burden "to establish that any or all of the forced outage costs were reasonably and prudently incurred, applying good utility practices."<sup>6</sup> Additionally, the Commission ordered that, if Minnesota Power did not act reasonably and prudently in incurring those costs, the overcharge amount plus interest that should be returned to customers be determined

On September 30, 2020 the Large Power Intervenors (LPI)<sup>7</sup> petitioned to intervene in the Contested Case hearing citing to Minn. R. 1400.6200 for their request to be granted.

---

<sup>2</sup> See In the Matter of an Investigation into the Appropriateness of Continuing to Permit Electric Energy Cost Adjustments, Docket No. E-999/CI-03-802, ORDER REVISING IMPLEMENTATION DATE, ESTABLISHING PROCEDURAL REQUIREMENTS, AND VARYING RULE (December 12, 2018) Ordering Paragraph 1.

<sup>3</sup> *Id.* at Ordering Paragraph 2

<sup>4</sup> *Supra* note 1 at Ordering Paragraph 1.A.

<sup>5</sup> *Id.* at Ordering Paragraph 2

<sup>6</sup> *Id.*

<sup>7</sup> Consisting of the following companies: ArcelorMittal USA (Minorca Mine); Blandin Paper Company;



On October 15, 2020 Administrative Law Judge (ALJ) Barbara Case held a prehearing conference by phone.<sup>8</sup>

On October 22, 2020 the First Prehearing Order *inter alia* granted LPI's petition to intervene and set forth the schedule for the case.<sup>9</sup> Concurrently with the First Prehearing Order, the ALJ placed a protective order on documents in the proceeding to "facilitate the disclosure of documents and information...to protect trade secret information."<sup>10</sup>

On December 7, 2020 the Minnesota Department of Commerce, Division of Energy Resources (Department) requested an extension to the schedule that was agreed to by all parties.

On June 3, 2021 an evidentiary hearing was held in a virtual format.<sup>11</sup>

On June 28, 2021, Minnesota Power, the Department, and LPI filed initial briefs in the case.

On July 12, 2021, Minnesota Power, the Department, and LPI filed Reply Briefs and Proposed Findings of Fact, Conclusions of Law, and Recommendations.

On August 11, 2021 the ALJ filed her Findings of Fact, Conclusions of Law, and Recommendation's Report.

On August 31, 2021, Minnesota Power, the Department, and LPI filed Exceptions to the ALJ Report.

On September 10, 2021, Minnesota Power, the Department, and LPI filed reply to exceptions to the ALJ Report.

#### **IV. Office of Administrative Hearing Report**

##### **OAH Report**

##### **1. ALJ Recommendation**

The August 11, 2021 ALJ Report recommended that:

---

Boise Paper, a Packaging Corporation of America company, formerly known as Boise, 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

<sup>8</sup> See *Supra* note 1 at 7.

<sup>9</sup> See In the Matter of the Review of the July 2018-December2019 Annual Automatic Adjustment Reports, FIRST PREHEARING ORDER, October 22, 2021

<sup>10</sup> See In the Matter of the Review of the July 2018-December2019 Annual Automatic Adjustment Reports, PROTECTIVE ORDER, October 22, 2020 at 1.

<sup>11</sup> Evidentiary hearing transcripts are available electronically through the eDockets system.



1. The Commission find that the Hot Reheat Line forced outage at the Boswell Energy Center was inconsistent with good utility practice, and that Minnesota Power's incremental costs arising from that outage were not reasonably and prudently incurred.
2. Minnesota Power refund the incremental forced outage costs plus interest calculated and distributed to customers using the methodologies agreed upon by the parties and described in the Findings of Fact.
3. The Commission adopt the ALJ's Findings of Fact, Conclusions of Law, and Recommendations.<sup>12</sup>

## 2. Discussion

### a. Generation Maintenance Expenses & Forced Outage Expenses

As part of the AAA report, Minnesota Power was required to submit its generation plant maintenance expenses, including its final test year rates and actual expenses for the reporting years.<sup>13</sup> Minnesota Power's final generation maintenance test year budget, i.e., what the Company collected in rates, was approximately \$42 million annually, while its actual expenses were approximately \$36.1 million and \$29.6 million in 2018 and 2019, respectively. The actual expenses on average were \$32.8 million for 2018 and 2019, a 21.9% reduction in actual costs, as compared to what the Company charged its customers.<sup>14</sup> For comparison, the Department included a chart in its May 29, 2020 response to reply comments comparing the three IOUs budgeted and actual generation maintenance expenses shown in Table 1 below.

**Table 1.**  
**Comparison of Generation Maintenance Expense<sup>1</sup>**  
**(\$ Millions)**

	Test Year	Rate Case Budgeted	Actual 2018-2019 Average	Difference
Xcel	2016	184.7	167.3	-9.4%
OTP	2016	15.1	15.5	2.5%
MP*	2017	42.0	32.8	-21.9%

<sup>12</sup> See In the Matter of the Review of the July 2018-December 2019 Annual Automatic Adjustment Reports, FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATIONS, August 11, 2021 at 38.

<sup>13</sup> The Commission required this data in its February 6, 2008 Order in Docket No. E-999/AA-06-1208 due to the concern from Investor-Owned Utilities' (IOU) outage cost increases during the FYE06 and FEY07 budgets.

<sup>14</sup> See Minnesota Power Reply Comments in Docket E-999/AA-20-171, April 30, 2020, Attachment A



Minnesota Power was also required to provide its actual Forced Outage expenses for the AAA reporting period—the Company included 26 unique forced outage events with an incremental total cost of \$7.727 million.<sup>15</sup> The Department determined that the forced outage costs on an annualized basis were approximately 500% higher than the previous two AAA filing periods.<sup>16</sup> In response to the “underspending” on generation maintenance and increased forced outage expenses, the Department recommended the Commission require Minnesota Power to refund customers 50% of the forced outage costs, or \$3.864 million, as the Company already charged customers those costs.<sup>17</sup> Ultimately the Commission determined it did not have enough information to make a decision and referred the matter to the OAH to make a determination about the reasonableness and prudence of the forced outage costs.

Minnesota Power, in its initial brief, highlighted the fact that “the Department essentially abandoned its initial argument that the generation maintenance cost levels are evidence that Minnesota Power’s maintenance and inspection programs were not consistent with good utility practice.”<sup>18</sup> Additionally, Minnesota Power noted that using the 2017 test year without modifications was not appropriate and should be adjusted to better make a relevant comparison. With the stated modifications the Department’s 21.9% figure discussed above was reduced to 5.4%.<sup>19</sup> Additionally, Minnesota Power noted that, as a percentage of the Company’s energy costs, outage costs have been on a downward trend for several years and that, while 2019 saw an increase as compared to 2017 and 2018, it was still below the 10-year average of 4.14%.<sup>20</sup> Further, Minnesota Power noted that its testimony showed the Company “has made no reduction in the maintenance and inspection protocols related to the systems affected by unplanned outages during the applicable period.”<sup>21</sup>

The Department, in its testimony, disagreed with Minnesota Power’s analysis that using the 2017 test year as approved was inappropriate citing to the fact that test years need only be “reasonably representative” of typical expenses.<sup>22</sup> Further the Department does concede that it did “abandon” the test year v. actual costs comparison argument, which was entirely appropriate.<sup>23</sup> Ultimately, the Department’s focus is on whether Minnesota Power’s forced

---

<sup>15</sup> See Attachment 1, resulting in outages of 26 days in February, 29 days in March, 22 days June, and 20 days in July. Note the total actual cost for the Phase Bushing Failure was updated by Minnesota Power in the January 26, 2021, Direct Testimony of Leann Oehlerking-Boes from \$1,736,961 to \$1,764,64.96.

<sup>16</sup> *Supra* Note 12 at paragraph 42.

<sup>17</sup> *Id.* at paragraph 43.

<sup>18</sup> See Minnesota Power’s Initial Brief, In the Matter of the Review of the July 2018-December 2019 Annual Automatic Adjustment Reports, Docket No. E-999/AA-20-171; OAH Docket No. 82-2500-37082, June 28, 2021 at 13

<sup>19</sup> See Rostollan Direct Testimony at 17-19.

<sup>20</sup> *Id.* at 13-14.

<sup>21</sup> *Supra* note 18 at 18.

<sup>22</sup> See Campbell Direct Testimony at 24.

<sup>23</sup> See Reply Brief of the Minnesota Department of Commerce, Division of Energy Resources, In the Matter of the Review of the July 2018-December 2019 Annual Automatic Adjustment Reports, July 12,



outage expenses were reasonably and prudently incurred and the test year v. actual budget does not change that fact.<sup>24</sup>

## **b. Forced Outages in Dispute**

### **i. Summary**

The parties to the contested case all agree that good utility practice

[m]eans any of 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 accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good utility practice is not intended to be limited to the optimum practice, method, or act, to the exclusion of all others, but rather to refer to acceptable practices, methods, or acts generally accepted in the region in which the Project is located. Furthermore, “good utility practice” includes, but is not limited to, North American Reliability Corporation (NERC) criteria, rules, guidelines, and standards, Federal Energy Regulatory Commission (FERC) criteria, rules, guidelines, and standards, and Minnesota Public Utilities Commission criteria, rules, guidelines, and standards, where applicable, and as they may be amended from time to time, including the rules, guidelines, and criteria of any predecessor or successor organization to the foregoing entities.<sup>25</sup>

To determine if the Company did not follow good utility practices, the Department’s expert, GDS, reviewed the Company’s 26 forced outage events in the instant AAA reporting period.<sup>26</sup> GDS determined Minnesota Power failed to follow good utility practices related to three forced outages; (1) the hot reheat (HRH) line failure outage; (2) the extension of the spring 2019 outage to find and fix the leak in the hydrogen cooling system; and (3) the generator “A” phase bushing failure.<sup>27</sup>

Although GDS determined there were three outages where the Company did not follow good utility practices, the Department recommended Minnesota Power only be required to provide a refund for the forced outage costs arising from the HRH line failure and the phase bushing failure because failing to follow good utility practice to find the hydrogen leak did not

---

2021 at 2-3

<sup>24</sup> *Id.*

<sup>25</sup> *Supra* note 12 at paragraph 45.

<sup>26</sup> *Id.* at paragraph 54.

<sup>27</sup> *Id.* at paragraph 56.



significantly contribute to the extension of the spring 2019 outage.<sup>28</sup> Therefore, of the 26 forced outages Minnesota Power experienced in the instant AAA filing period, only three continue to be in dispute as to whether the Company used good utility practices in incurring those costs and, of those three, only two events' costs are at issue.

## **ii. Hot Reheat Line Failure**

### *Background*

The hot reheat (HRH) line is part of the Boswell Energy Center and is an approximately 33-inch diameter pipe with about 1.5-inch thick walls, is about 640 feet long spanning 20 floors, that carries about 1,000 °F high-pressure steam from the boiler to the turbine to generate electricity.<sup>29</sup> On February 6, 2019, the HRH line experienced a seam weld failure leaving a 2-foot-long crack in the vertical run of the HRH pipe which released high pressure steam leading to an immediate shut down process for Boswell Unit No. 4.<sup>30</sup> It was determined that the mechanism called "creep" was responsible for the seam weld failure.<sup>31</sup>

### *Minnesota Power*

Minnesota Power agreed that it has the burden in the instant case to show that its costs were reasonably and prudently incurred.<sup>32</sup> The Company argued that it has met this burden by following good utility practice in its maintenance of the Boswell Energy Center including Boswell Unit No. 4's HRH line. Overall, the maintenance programs for Boswell Unit No. 4 (and No. 3) fall into three categories; (1) preventative maintenance; (2) predictive maintenance; and (3) corrective maintenance.<sup>33</sup> In setting up the inspection process for the HRH system the Company relies on "past results, known areas of risk, industry bulletins, insurance carrier guidance, and third-party HEP (High Energy Piping) expert recommendations."<sup>34</sup>

The section of the HRH line that failed was located on a vertical run that had been previously designated a low stress area and thus the Company assigned it a 10-year inspection schedule. The Company argues this 10-year schedule was consistent with good utility practice because it relied on input from its independent consulting engineer, the relative risk in that section, the historic operating and metallurgical knowledge, and other sources. The Company's independent consulting engineering firm, Thielsch Engineering, Inc., told the Company its schedule was consistent with its other utility customers that operated coal fired generators.

---

<sup>28</sup> *Id.*

<sup>29</sup> *Id.* at paragraph 63.

<sup>30</sup> *Id.* at paragraph 64.

<sup>31</sup> *Id.* at paragraph 73.

<sup>32</sup> See *In re N. States Power Co.*, 416 N.W.2d at 723; *supra* note 1 at Ordering Paragraph 2.A.

<sup>33</sup> *Supra* note 18 at 26

<sup>34</sup> *Id.* at 55.



### *Department*

The Department argued that the 10-year inspection schedule the Company established for the HRH line was not consistent with good utility practice. The Department's expert witness, Mr. Polich with GDS, relied on the American Society of Mechanical Engineers (ASME) code Section 8 of Appendix V that called for a 5-year inspection schedule of "critical piping" systems. Additionally, the Department relied on the Electric Power Research Institute (EPRI) recommendations that called for a four-to-five-year inspection schedule of high energy piping systems like the HRH line at issue using a phased-array ultrasonic examination.<sup>35</sup>

The Department further argued that analysis done after the failure, by Structural Integrity, concluded that almost all the HRH line welds "had exceeded their predicted usable life, and that it was difficult to understand why Minnesota Power had not previously identified the cracks."<sup>36</sup> Additionally, the Department argued that inconsistent with good utility practice the Company relied almost exclusively on Thielsch's "unreliable hearsay" related to the actions of other utility customers' inspection schedules for similar HRH piping systems.

### *LPI*

LPI also argued that the 10-year inspection schedule the Company established for the HRH line was inconsistent with good utility practices. LPI stated that "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."<sup>37</sup>

### *ALJ Report*

The ALJ discussed this issue on pages 14-26 (Proposed Findings 63-115). As it relates to the HRH line the ALJ concluded that:

5. Based on the findings above and the record in this proceeding, Minnesota Power did not demonstrate by a preponderance of the evidence that its maintenance practices for its Hot Reheat Line were consistent with good utility practice, or that any deviation from good utility practice did not contribute to the outage.

5 (sic.). The Administrative Law Judge concludes that Minnesota Power did not reasonably and prudently incur forced outage costs resulting from the Hot Reheat Line at issue in this proceeding. The Company and the Department agree

---

<sup>35</sup> Department Initial Brief, June 28, 2021 at 13.

<sup>36</sup> *Id.* at 4

<sup>37</sup> See LPI Initial Brief, June 28, 2021 at 9



on the refund owed to customers. Interest should be calculated using the U.S. Federal Reserve Prime Rate<sup>38</sup>

### **iii. Hydrogen Cooling System Leak**

#### *Background*

Minnesota Power first identified Boswell Unit No. 3 was consuming a large amount of Hydrogen gas (used as the generator coolant) in November 2018.<sup>39</sup> Between November 2018 and June 2019 the Company along with the OEM (original equipment manufacturer), General Electric, attempted various repair and inspection processes to determine the root cause of the issue. Ultimately, the Company, on its own, determined the float valve had to be flooded above its normal operating level with oil to resolve the hydrogen leak, which lead to the Company ultimately replacing the float valve.

#### *Minnesota Power*

Minnesota Power argued that, in collaboration with the OEM, GE, it followed good utility practices in its inspection and testing protocol for the hydrogen cooling system.<sup>40</sup> After multiple rounds of troubleshooting and collaborating with GE and other third parties, the Company ultimately engineered a long-term solution in house. The Company noted that “since the outage, General Electric has not been able to replicate the float valve failure...nor other hydrogen leak specialty contractors were able to definitively identify what caused the BEC3 float vale to leak hydrogen.”<sup>41</sup> The Company highlighted this leads to the notion of the “novelty and complexity” of the issue, and thus its actions were consistent with good utility practices.

#### *Department*

The Department’s expert, Mr. Polich, determined that Minnesota Power did not follow good utility practices in the way in which it went about trying to troubleshoot and solve the leak. Although Mr. Polich noted that, while not consistent with good utility practices the extended time to solve the problem only resulted in a small extension of the forced outage and thus the Department did not recommend Minnesota Power refund costs related to this outage.<sup>42</sup>

#### *OAH Report*

---

<sup>38</sup> *Supra* note 12 at 37.

<sup>39</sup> *Id.* at 27.

<sup>40</sup> *Supra* note 18, at 37.

<sup>41</sup> *Id.* at 43.

<sup>42</sup> *Supra* note 12 at paragraph 56.



The ALJ discussed this issue on pages 26-30 (Proposed Findings 116-135) and found in her Findings of Fact that “Minnesota Power’s forced outage costs related to the hydrogen leak were reasonable and prudent.”<sup>43</sup>

#### **iv. “A” Phase Bushing Failure**

##### *Background*

Boswell Unit No. 3 has six bushings that insulate the conductor carrying electric current at high voltage helping prevent an electric field from causing excess current leakage or a flashover that could ultimately start a fire or damage the facility.<sup>44</sup> On July 8, 2019 the generator “A” phase bushing detected a ground fault which led to the generator being taken off-line, and ultimately a complete replacement of all six bushings.<sup>45</sup>

##### *Minnesota Power*

Minnesota Power did not dispute that its actions to solve the hydrogen leak, i.e., flooding the float valve with seal oil, resulted in seal oil soaking the bushings in Boswell Unit No. 3, rather it noted that it was not definitively determined that this caused the bushing failure.<sup>46</sup> The Company, in turn, pointed to other alternative causes of the failure, including sudden load changes, excessive vibration, overheating, overheating of the leads, and normal vibration over long periods of time.<sup>47</sup>

##### *Department*

The Department’s expert, Mr. Polich, determined that the Company did not follow good utility practices related to the bushing failure by not investigating whether seal oil had leaked into the generator when the Company was trying to solve the hydrogen leak issue. Mr. Polich posited that it would have been good utility practice to investigate whether seal oil had leaked into the generator and then cleaned it up contemporaneously with that event.<sup>48</sup>

##### *OAH Report*

The ALJ discussed this issue on pages 30-34 (Proposed Findings 136-154) and concluded that:

Minnesota Power made reasonable and prudent decisions in addressing the phase bushing failure. The Administrative Law Judge agrees that the phase

---

<sup>43</sup> *Id.* at paragraph 133.

<sup>44</sup> *Id.* at paragraphs 136-137

<sup>45</sup> *Id.* at paragraph 144.

<sup>46</sup> *Id.* at paragraph 147.

<sup>47</sup> *Id.*

<sup>48</sup> *Id.* at paragraph 146.



bushing failure was a consequence of the oil that was added to the float valve to address the hydrogen gas leak. However, with regard to the phase bushings, just as in responding to the hydrogen leak, the Company made the best decisions it was able to make based on the knowledge it had at the time. There was no evidence that there was an industry standard for testing of the improperly configured alarm or a specific schedule for anything related to the bushings' failure. The problem resulted from a failure to consider every possible undesired consequence of the hydrogen leak repair but not from a failure to perform advised maintenance or failure to adhere to industry standards.<sup>49</sup>

## Exceptions to ALJ

### *Minnesota Power*

Minnesota Power's August 31, 2021 Exceptions to the ALJ report argued "[t]he Company generally takes exception to those portions of the Report that find the HRH line inspection program was not (1) consistent with practices utilized or approved by a significant portion of the electric utility industry, or (2) reasonable and prudent given the information available at the time."<sup>50</sup> The Company continued to take issue with the Department's change in argument from the test year v. actual maintenance expenditures as well as the Department's conclusion that the Company's 10-year inspection program was not consistent with good utility practice.<sup>51</sup> As such, the Company took exception to the ALJ report's recommendation that a refund for the forced outage costs associated with the HRH be provided to customers.

Of note, the Company took exception to the ALJ conclusions about (1) the applicability of ASME Appendix V-8 (requiring a 5-year inspection schedule); (2) how the Company should have followed EPRI's recommended minimum 5-year inspection schedule for HRH lines; (3) the Company unreasonably relying upon unreliable hearsay from its engineering contractor Thielsch; and (4) the Company failing to meet its burden of showing its inspection program was reasonable, prudent, and consistent with good utility practice.<sup>52</sup>

Further the Company argued that implementing a five-year HRH line inspection (called for by EPRI) would have been a significant cost increase and that the ALJ's recommendations will significantly increase maintenance costs going forward.<sup>53</sup>

### *Department*

---

<sup>49</sup> *Id.* at paragraph 154.

<sup>50</sup> Minnesota Power's Exceptions to the Administrative Law Judge Report, August 31, 2021, at 6.

<sup>51</sup> *Id.* at 1-4.

<sup>52</sup> *Id.* at 5.

<sup>53</sup> *Id.* at 25-29.



The Department agreed with the ALJ's conclusion that the HRH line outage costs were not reasonably and prudently incurred; however, it took exception with the ALJ Report as it relates to the ALJ's application of the good utility practice standard to the Phase Bushing Failure.<sup>54</sup> Specifically, the Department contended the ALJ did not apply the second prong of the good utility practice standard appropriately and should have concluded that the Company did not meet the standard.<sup>55</sup> Taking the second prong into consideration, the Department argued the ALJ erred in determining Minnesota Power used good utility practice because the hydrogen leak was a novel issue. Rather, the Department contended the ALJ should have found the failure by Minnesota Power to track the amount of seal oil it used in the hydrogen leak issue shows a failure to exercise reasonable judgment to track the intentionally supplied excess seal oil into the system and removal of any excess.

The Department ultimately contended that the total cost (\$6,247,151.40) plus interest, from the forced outages in question that occurred during the instant AAA reporting period should be refunded. Specifically, forced outage costs for the HRH Line (\$4,482,456.44) and the Phase Bushing failure (\$1,764,694.96) should be refunded to customers in the manner agreed to by all parties to the proceeding.

#### *LPI*

LPI agreed with the Department's position that the ALJ correctly determined Minnesota Power's forced outage costs for the HRH line failure were not reasonably and prudently incurred and requests the specific dollar figure of \$4,482,456 plus interest be refunded to ratepayers. LPI, like the Department, also argued the ALJ erred by not adequately addressing the second prong of the Good Utility Practice standard. Specifically, LPI argued the Company failed the reasonable judgment test by not practicing good business practice nor the safety and reliability portion of the test and that the expedition portion was "no barrier" in this case.<sup>56</sup>

LPI further argued that it is "unreasonable for Minnesota Power and its shareholders to reap the benefits of its underspend when the record demonstrates significant questions with respect to its maintenance practices."<sup>57</sup> LPI contended that denying the Company the cost recovery for the forced outages would advance the Commission's existing policy of requiring utilities "to minimize unplanned facility outages through adequate maintenance...to guard against the possibility that a utility would seek to increase profits by skimping on maintenance—with the expectation that ratepayers would bear any financial consequences."<sup>58</sup>

---

<sup>54</sup> See Minnesota Department of Commerce, Division of Energy Resources Exceptions to the Report of the Administrative Law Judge, August 31, 2021, at 1.

<sup>55</sup> *Id.* at 2-3; the second prong states "practice, methods, and acts that accomplish the desired result using reasonable judgment with the facts known at the time at a reasonable cost consistent with good business practices, reliability, safety, and expedition."

<sup>56</sup> See Exceptions to the Findings of Fact, Conclusions of Law, and Recommendations of the Administrative Law Judge Submitted by the Large Power Intervenors, August 31, 2021, at 8-10.

<sup>57</sup> *Id.* at 14.

<sup>58</sup> *Id.* citing to *supra* note 1 at 3.



## Reply to Exceptions

### *Minnesota Power*

In its reply to the Department's and LPI's exceptions, Minnesota Power argued that the ALJ did in fact address the second prong of the Good Utility Practice standard arguing that the Department's argument is an ex post facto standard and that there is still no evidence the seal oil was the proximate cause of the phase bushing failure.<sup>59</sup> Related to the Policy Consideration that LPI argued in its exceptions, Minnesota Power argued "LPI did not offer any testimony or evidence in support of this claim", and highlighted that LPI is the only party still arguing a refund for the forced outage costs should be provided based on the underspent test year v. actual budget for generation maintenance.<sup>60</sup>

### *Department*

In its Reply to Exceptions, the Department clarified that Minnesota Power had misstated their argument related to the Thielsch testimony, they did not move to exclude the testimony, rather they argued it should not be afforded much weight. The Department contended the ALJ, as the trier of fact, correctly concluded the statements from Thielsch were unreliable hearsay and that the Company is not entitled to a "do-over" to provide a sworn statement from Thielsch to bolster their case.<sup>61</sup> Further, the Department highlighted that, while the Company took issue with various industry documents its expert, GDS, used in determining that Minnesota Power did not follow Good Utility Practice, the ALJ correctly was persuaded by the fact that GDS used a diverse range of industry sources as compared to the single Thielsch comment.<sup>62</sup>

The Department also took issue with the Company's assertion that the ALJ's Report requires all utilities to follow the EPRI five-year inspection schedule and the "doomsday" cost scenario.<sup>63</sup>

### *LPI*

In its Reply to Exceptions, LPI argued that the Company's issue with the Department's treatment of Thielsch's hearsay is "puzzling" and that the ALJ "weighed the evidence put forth by the parties and determined that it [the Company] offered minimal support because it was unreliable and the product of a feedback loop."<sup>64</sup> As it relates to the increased cost concerns asserted by the Company, LPI noted the Company had not presented any actual estimate of the

---

<sup>59</sup> See Minnesota Power's Reply to Exceptions, September 10, 2021 at 3-4.

<sup>60</sup> *Id.* at 1-2.

<sup>61</sup> See Minnesota Department of Commerce, Division of Energy Resources, Reply to Exceptions, September 10, 2021, at 3-4.

<sup>62</sup> *Id.* at 4-6.

<sup>63</sup> *Id.* at 8-10.

<sup>64</sup> See Large Power Intervenors' Reply to Exceptions, September 10, 2021 at 6-7.



cost of implementing a five-year inspection schedule and; regardless, it is irrelevant in this instant case.<sup>65</sup>

### Staff Analysis

Staff notes there are non-controversial edits to the ALJ report in the Findings of Fact paragraphs 39 and 72, and that the Conclusions of Law section includes two paragraph 5's. Additionally, no party contests the specific dollar figures the Department proposed to add to paragraph 159 in the Findings of Fact, however, Minnesota Power believes its inclusion is unnecessary because they argue no refund is necessary.

Staff also notes that a significant driver for the FCA reform that resulted in changes to how the FCA works starting January 1, 2020 (after the instant AAA reporting period) was the issue of automatic cost recovery for forced outages. Additionally, as Minnesota Power discussed in its July 1, 2020 Additional Comments, the Commission has generally taken one of three actions "(1) required refunds for forced outages only where it had sufficient evidence to conclude those outages were the result of imprudent activities of the utility; (2) reserved judgment on a proposed forced outage adjustment where the prudence of underlying activities was not fully determined; or (3) declined to order any refunds for forced outages. Minnesota Power submits that this is sound practice; cost recovery should not be disallowed based merely on assumptions."<sup>66</sup>

In response to the idea that the Company argued about the historical treatment of forced outages the Commission continued to follow this precedent in referring the case to the OAH to determine whether the Company acted reasonably and prudently. The Commission now has before it a fully contested case with a record that has made a determination about the prudence of the Company and is not "based merely on assumptions."

Staff further notes that, if any refund is ordered, the Company and the Department agree that the appropriate interest rate to be used is the U.S. Federal Reserve Prime Rate. However, Staff also notes that, in other proceedings where the Commission ordered refunds, the Commission ordered that higher interest rates be applied after twelve months. A recent example was in the Commission's October 21, 2020 Order related to Xcel's 2019 property tax refund.<sup>67</sup> Staff points this out for informational purposes only and notes that the information should not be misconstrued as an alternate Staff recommendation.

## V. Decision Options

1. Adopt the ALJ's Findings of Fact, Conclusions of Law, and Recommendations in its entirety. (ALJ)

---

<sup>65</sup> *Id.* at 10-11.

<sup>66</sup> See Minnesota Power Additional Comments in Docket No. E-999/20-171, July 1, 2020, at 10-11.

<sup>67</sup> Commission's October 21, 2020 Order in dockets E-002/GR-15-826, E,G-002/M-20-516, E-002/GR-92-1185 and G-002/GR-92-1186.



OR

2. Adopt the ALJ's Findings of Fact, Conclusions of Law, and Recommendations with modification to one or more of the following issues and to the extent the ALJ's Report is consistent with the decisions made by the Commission at this meeting.

AND

**Hot Reheat Line Failure**

3. Adopt the ALJ's recommendation and order that \$4,482,456 plus interest be refunded. (ALJ, Department, LPI)

OR

4. Adopt MP's recommendation, finding the Company used good utility practice and incurred costs reasonably and prudently in response to the HRH line failure and therefore no refund of its forced outage costs is necessary. [MP]

AND

**Hydrogen Cooling System Leak**

5. Adopt the ALJ's recommendation. [ALJ, MP]

OR

6. Adopt the Department and LPI's recommendations finding the Company did not act reasonably and prudently in response to the hydrogen leak, however no refund is necessary [Department, LPI]

AND

**"A" Phase Bushing Failure**

7. Adopt the ALJ's recommendation. [ALJ, MP]

OR

8. Adopt the Department and LPI's recommendations finding the Company did not act reasonably and prudently in incurring costs related to the Phase Bushing failure and order that \$1,764,694 plus interest be refunded. [Department, LPI]



AND

**Interest Rate**

9. If any refunds are approved, order that the U.S. Federal Reserve Prime Rate be used to calculate the interest amount owed to ratepayers. (ALJ, MP, DOC)

OR

10. Order that a different interest rate be used and determine what that rate should be.