

December 14, 2016

Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: **Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. E015/D-16-797

Dear Mr. Wolf:

Attached are the Comments of the Minnesota Department of Commerce, Division of Energy Resources (Department), in the following matter:

Minnesota Power's 2016 Remaining Life Depreciation Petition.

The petition was filed on September 30, 2016 by:

Debbra A. Davey
Supervisor, Accounting
Minnesota Power
30 West Superior Street
Duluth, MN 55802

The Department recommends **approval** and is available to answer any questions the Minnesota Public Utilities Commission may have.

Sincerely,

/s/ CRAIG ADDONIZIO
Financial Analyst

CA/It
Attachment

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

COMMENTS OF THE
MINNESOTA DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES

DOCKET No. E015/D-16-797

I. SUMMARY OF THE UTILITY'S PROPOSAL

On September 30, 2016, Minnesota Power (MP or the Company) submitted to the Minnesota Public Utilities Commission (Commission) its 2016 Remaining Life Depreciation Petition (Petition). The Company reviewed its remaining lives for its thermal, hydroelectric, and wind production facilities and proposed one-year passage-of-time adjustments for all of its generation facilities. MP also proposed to establish a 25-year remaining life for a new 40 kilowatt (kW) solar production facility the Company expects to put in-service by the end of 2016. Additionally, the Company proposed new salvage rates for generation facilities based on updated decommissioning studies. Finally, for its general plant accounts for which it uses remaining-life depreciation, the Company proposed one-year passage-of-time remaining life adjustments and no changes to salvage rates.

The effect of MP's proposed depreciation rates is a decrease in annual depreciation expense of \$0.7 million, or approximately 0.7 percent, relative to what depreciation expense would be if the Company were to retain its current depreciation parameters.

II. DEPARTMENT ANALYSIS

A. DEPRECIATION RULES

Minnesota Statutes Section 216B.11 and Minnesota Rules, parts 7825.0500-7825.0900 require public utilities to seek Commission certification of their depreciation rates and methods. Utilities must use straight-line depreciation unless the utility can justify a different method. Additionally, utilities must review their depreciation parameters and rates annually to determine if they are generally appropriate, and must file depreciation studies at least once every five years. Once certified by order, depreciation parameters remain in effect until the next certification.

As required, MP employs a straight-line depreciation method, and files annual depreciation studies for its generation assets. Thus, MP has complied with these requirements.

B. PRIOR COMMISSION ORDERS AND RELATED PROPOSAL

1. *Comparison of Depreciation Remaining Lives and Resource Planning Remaining Lives*

The Commission's September 19, 2016 Order in Docket No. E015/D-15-711 (MP's 2015 Depreciation Docket), required MP to include in its Petition "a comparison of the remaining lives used in its depreciation filing and current resource plan and an explanation of any differences." The Company provided this information on pages 8-15 of its Petition. The Department concludes that MP has reasonably satisfied this requirement.

The Department recommends that the Commission require MP to continue to provide in future remaining life depreciation studies a comparison of the remaining lives used in its depreciation filing and in the utility's then-current resource plan, and an explanation of any differences.

2. *Depreciation Expense Calculated Without Decommissioning Uncertainties*

The Commission's Order in MP's 2015 Depreciation Docket required MP to include in its Petition an estimate of what its depreciation expense would be with 100 percent decommissioning probabilities. Appendix B to the Company's Petition includes a calculation of this estimate. MP's depreciation expense would be approximately \$2.3 million higher if the Company did not use decommissioning probabilities. The Department concludes that MP met this requirement.

On October 26, 2015, the Commission issued its Order in Docket No. E,G999/CI-13-626, the Commission's *Inquiry into Decommissioning Policies Related to Depreciation*. In that Order, the Commission required MP to stop using decommissioning probabilities when it files its next rate case, or by January 1, 2020, whichever comes first. MP filed a general rate case on November 2, 2016, and complied with the Commission's Order in calculating test year depreciation expense, and therefore there is no reason to maintain this reporting requirement.¹

3. *Supplemental Depreciation*

The Commission's Order in MP's 2015 Depreciation Docket required the Company to provide in its 2016 Depreciation Petition a schedule of supplemental depreciation expense recorded during 2015, as well as supplemental depreciation expense to be recorded in the future, pursuant to the Commission's Order in Docket No. E015/D-12-378 (the 2012 Order). Appendix C to MP's Petition includes the required information. The Department reviewed Appendix C and concludes that MP has reasonably complied with this requirement.

¹ See the Direct Testimony of Steven W. Morris in Docket No. E015/GR-16-664, pages 48-49.

The Department notes that the Commission's 2012 Order required MP to record supplemental depreciation expense over a 36-month period, which began in September 2013. Thus, August 2016 was the last month during which the Company recorded supplemental depreciation expense pursuant to the Commission's 2012 Order.

The Department recommends that the Commission require MP to provide in its next remaining life depreciation filing a summary of supplemental depreciation expense recorded during 2016.

C. REASONABLENESS OF PROPOSED DEPRECIATION PARAMETERS

1. Remaining Lives

a. Production Plants and General Plant Accounts 390.0 (Structures and Improvements) and 392.8 (Transportation Equipment, Fixed-Wing Aircraft)

As noted above, MP proposed to adjust the remaining lives of all of its production plants, as well as the two general plant accounts for which the Company uses remaining-life depreciation, by one year to reflect the passage of time. After review, the Department concludes that MP's proposal is reasonable. The Department offers further discussion of the proposed depreciation treatment of MP's Boswell Energy Center below.

b. Solar Garden Facility

As noted above, in its Petition, MP proposed to establish a 25-year remaining life for a new 40 kW solar production facility that the Company expects to put in-service by the end of 2016.

In its response to Department Information Request (IR) No. 1, the Company provided an analysis from Burns and McDonnell supporting the proposed 25-year life.² In addition, the Department notes that MP's proposed life is consistent with the life assumptions used in Minnesota's Value of Solar Methodology and for Northern States Power Minnesota's solar garden contracts.³ It is also consistent with National Renewable Energy Laboratory's estimate of the useful life of photovoltaic systems.⁴ Based on these supporting estimates, the Department concludes that MP's proposed remaining life for its new solar facility is reasonable, and recommends that the Commission approve it.

c. Boswell Energy Center

Boswell Energy Center consists of four generating units, as well as some common facilities that are used by all four units. Currently, the remaining lives of each of the four units are determined separately, and each unit's depreciation expense is calculated independently.

² See Department Attachment 1.

³ See, e.g., the Commission's *Order Approving Solar-Garden Plan with Modifications*, Docket No. E002/M-13-867 (September 17, 2014).

⁴ See http://www.nrel.gov/analysis/tech_footprint.html.

The remaining life used to calculate depreciation expense for the common facilities is an average of the remaining lives of the four generating units. In its Petition, MP proposed to adjust the remaining lives of Boswell's four generating units by one year, to reflect the passage of time. There have been, however, several recent developments that impact the expected remaining lives of three of Boswell's units.

The Commission's Order on MP's most recent Integrated Resource Plan (the 2015 IRP) required MP to "retire Boswell Energy Center Units 1 and 2 when sufficient energy and capacity are available, but no later than 2022," when MP is expected to bring a new generation resource online.⁵ In the same Order, Commission also found that MP had not demonstrated that a proposed capital investment required to keep BEC 1&2 operating past 2018 is reasonable.⁶ On page 12 of its Petition, MP stated that it was considering retiring BEC 1&2 in 2018 as a result of the Commission's lack of support for the needed capital investment. Since filing its Petition, MP decided to retire the two units by the end of 2018.⁷ Based on the Commission's Order and MP's announced decision, a remaining life shorter than MP's proposed life of nine years (corresponding to a 2024 retirement date) would be justified.

Additionally, the Department notes that a significant capital investment (an environmental retrofit project) with a capital cost of more than \$230 million was placed into service at Boswell Energy Center Unit 4 (BEC 4) at the end of 2015. The environmental retrofit is the type of project that usually merits a life extension, and thus a remaining life longer than the proposed 20-year remaining life would also be justified.

As described in its Petition, MP chose not to propose changes to remaining lives for BEC 1, 2, and 4 for 2016 because it planned to propose in an upcoming rate case to consolidate all four of the Boswell units and the common facilities into a single depreciable asset, and to extend the life of that asset out to 2050. MP has since filed its rate case, including that proposal.⁸ The Company stated, on page 3 of its Petition that it believes that this proposal is best addressed in its rate case.

While the Department generally prefers not to wait to update depreciation parameters to reflect known changes in circumstances, the Department agrees with MP that in this case it would be reasonable to delay a decision on the Boswell units' remaining lives until the rate case is decided. The Department agrees that MP's rate case will provide a better opportunity to fully review its proposal to consolidate all of Boswell's units into a single depreciable asset and determine an appropriate remaining life for that asset. Because MP's rate case has a test year of 2017 there will be a delay of only one year, and given the potential for large changes to Boswell's depreciation accounting in 2017, it would be

⁵ See Ordering Point 6 of the Commission's *Order Approving Resource Plan with Modifications*, Docket No. E015/RP-15-690 (July 18, 2016).

⁶ See Ordering Point 5 of the Commission's *Order Approving Resource Plan with Modifications*, Docket No. E015/RP-15-690 (July 18, 2016).

⁷ See Minnesota Power's October 19, 2016 news release "Decision to Retire Two Small Coal Units Consistent with Minnesota Power's EnergyForward Plan". (<http://investor.allete.com/releasedetail.cfm?ReleaseID=994422>)

⁸ See the Direct Testimony of Herbert G. Minke in Docket No. E015/GR-16-664.

appropriate to maintain the status quo for 2016. Additionally, the Department notes that the net effect of (a) shortening the remaining lives of BEC 1&2 from nine years to three years to reflect MP's proposed 2018 retirement date and (b) extending the life of BEC 4 from 20 years to 35 years to reflect the environmental retrofit project would be decrease in depreciation expense of \$2.4 million, which, while not insignificant, is not overly large.

Thus, the Department concludes that MP's proposed remaining lives for Boswell's four generating units and common facilities are reasonable.

2. *Salvage Rates*

On page 3 of its Petition, MP stated that it had a new decommissioning study produced in December 2015 and incorporated the results of that study into its Petition. In addition, the Company developed a separate, updated cost estimate for decommissioning the Laskin ash ponds, based on a decommissioning plan that was approved by the Minnesota Pollution Control Agency in June 2016.⁹ The Company's proposed salvage rate for Laskin reflects this updated cost estimate.

The Department reviewed MP's proposed salvage rates and concludes that they are reasonable. The Department notes that December 2015 decommissioning study includes relatively minor changes relative to MP's prior decommissioning study, and resulting salvage rates are not significantly different from the salvage rates approved in MP's 2015 Depreciation Docket. The decommissioning estimate for Boswell Energy Center was updated to reflect the environmental retrofit project, and the estimate for Taconite Harbor Energy Center was corrected to include a cost item that was inadvertently omitted from the previous decommissioning study.¹⁰

III. RECOMMENDATIONS

As described above, the Department recommends that the Commission:

1. approve MP's proposed depreciation parameters;
2. require MP to include in future depreciation filings a comparison of the remaining lives used in its depreciation filing to the Company's most recent integrated resource plan and explain any differences;
3. require MP to include in its next depreciation filing a schedule of its supplemental depreciation expense recorded in 2016;
4. require MP to make its next depreciation filing on or before September 1, 2017 to establish depreciation parameters and rates to be effective January 1, 2017.

⁹ See Department Attachment 2.

¹⁰ See the Department's October 30, 2015 Comments in MP's 2015 Depreciation Docket, page 6, and Department Attachment 3 to these Comments.

State of Minnesota

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DEPARTMENT OF COMMERCE DIVISION OF ENERGY RESOURCES

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Docket No. E015/D-16-797
PUBLIC

Utility Information Request

Department Attachment 1
Page 1 of 3

Docket Number: E015/D-16-797

Date of Request: 12/2/2016

Requested From: Debbra A. Davey
Minnesota Power

Response Due: 12/12/2016

Analyst Requesting Information: Craig Addonizio

Type of Inquiry: []..... Financial []..... Rate of Return []..... Rate Design
 []..... Engineering []..... Forecasting []..... Conservation
 []..... Cost of Service []..... CIP []..... Other:

If you feel your responses are trade secret or privileged, please indicate this on your response.

Request No.	
1	<p>Reference: Solar Garden Pilot Program generation system</p> <p>Please explain how Minnesota Power developed its proposed remaining life of 25 years for its solar production facility, described on page 8 of the Company's Petition, and provide any relevant documents (engineering reports, etc.) the Company relied on.</p> <p><u>Response:</u> Please see DOC IR 1.1 Attach which is a memo that supports the 25 year life for Minnesota Power's community solar garden. Also see DOC IR 1.2 Attach for a memo from Burns and McDonnell which also supports a 25 year life for Minnesota Power's community solar garden.</p>

Response by: Debbie Davey
Title: Supervisor, Accounting
Department: Accounting
Telephone: 218-355-3174

From: Kris Spenningsby, P.E. Supervisor Retail Accounts

RE: Community Solar 25 year life

The 25 year life for the Community Solar Program was based on both the expected maintenance strategy for the 40 kW portion and the contractual term of the 1 MW portion of the Community Solar Garden Program.

The main components in any solar system are Solar Modules, Balance of System and Inverters. The warranty of solar modules is typically 25 years; however the modules degrade over time resulting in a loss of performance throughout their lifespan. Despite the loss in performance, it is likely that the life of the modules exceeds the 25 years, but additional investment in inverters and balance of system will be required to continue operating the system as those components, especially inverters, are not designed for a life longer than 25 years.

In earlier years, the additional investment in inverter replacement is made worthwhile due to continuation of production. In later years, such as after year 25, the additional investment may or may not be wise. On a utility scale system, with centralized inverters and a higher estimated level of production, it is more likely that the investment in component replacement after 25 years is a good investment. On smaller scale systems, with a lower level of production, decentralized inverters and higher unit cost of component replacement, the investment in later years is less likely to be a good investment than on a utility scale system. For a smaller system, we are expecting a maintenance strategy of a 25 year life to be more likely, but it will depend on the economics determined at the time of maintenance.

For the Community Solar Garden, we choose a 25 year life to match the expected maintenance strategy for inverter/component replacement after 25 years. This also matches the term of the 1 MW community garden PPA that is complimentary to the 40 kW project. A 25 year PPA is quite standard among solar and wind power purchase agreements.

**PUBLIC DOCUMENT
TRADE SECRET DATA
EXCISED IN ITS ENTIRETY**

DOC IR 1.2 Attachment

State of Minnesota
DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES

Docket No. E015/D-16-797
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Department Attachment 2
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Utility Information Request

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Requested From: Debbra A. Davey
Minnesota Power

Response Due: 12/12/2016

Analyst Requesting Information: Craig Addonizio

Type of Inquiry: ☐ Financial ☐ Rate of Return ☐ Rate Design
 ☐ Engineering ☐ Forecasting ☐ Conservation
 ☐ Cost of Service ☐ CIP ☐ Other:

If you feel your responses are trade secret or privileged, please indicate this on your response.

Request No.	
2	<p>Reference: Laskin Ash Pond Closure Plan</p> <p>a. Please provide a copy of the July 20, 2016 letter from the MPCA referenced on page 6 of MP's Petition approving the Company's modified Laskin ash cell closure plan.</p> <p>b. It appears that after MP's Laskin ash pond closure plan was approved by the MPCA, MP requested that Barr Engineering produce a new estimate of the cost of the plan. Please explain why this new estimate was necessary, and what is different from the estimate dated 3/18/2015 provided in Docket No. E015/D-15-711 (See the Department's 10/29/2015 Comments, Attachment 7.</p>

Response:

- 2.a.** Please see DOC IR 2.1 Attach for the June 20, 2016 letter from the MPCA. I believe the July in 2.a. above is a typo as Page 6 of MP's Petition states June, not July.
- 2.b.** Minnesota Power requested this new estimate to reflect the impacts of a pending Environmental Protection Agency coal ash rule change. On the Barr Engineering estimate provided with Minnesota Power's initial filing, these impacts are reflected on page 1 as Task 16 CCR Compliance Costs with more details for these costs on page 2.

Response by: Debbie Davey
Title: Supervisor, Accounting
Department: Accounting
Telephone: 218-355-3714



Minnesota Pollution Control Agency

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PUBLIC

Department Attachment 2

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June 20, 2016

Mr. Brett Ballavance
Environmental Risk Manager
Minnesota Power - ALLETE
30 West Superior Street
Duluth, MN 55802-2093

Re: Approval of Supplemental Ash Pond Closure Plan
Minnesota Power – Laskin Energy Center
National Pollutant Discharge Elimination System/State Disposal System Permit MN0000990

Dear Mr. Ballavance:

The Minnesota Pollution Control Agency (MPCA) is pleased to inform you that we are hereby granting approval of the Supplemental Cell A, B and E Closure Plan (Closure Plan), dated May 2015, as amended through the additional correspondence noted in this letter.

As a condition of this approval, construction of new containment dikes for the consolidated ash material which will be left in-place within the footprint of the current Cell A, and the final closure covers for Cell A and E must be designed as detailed in the Pond Closure Concept Plan revised February 2016, and submitted to the MPCA via email on February 15, 2016. Final construction plans and specifications for the covers must be submitted for MPCA review and approval as detailed in the Closure Plan.

Prior to construction of the Cell A cover, a supplemental sampling plan must be submitted detailing how the Cell A Restored Area will be sampled to verify adequate removal of ash material. At a minimum, the sampling plan must propose soil analysis for the parameters included in the Cell B testing that was submitted to the MPCA on November 23, 2015 and December 16, 2015.

Authorization for construction associated with the Closure Plan, and post-closure monitoring requirements will be governed by the provisions of National Pollutant Discharge Elimination System/State Disposal System Permit Number MN0000990 (Permit).

The MPCA's officers, employees and agents review, comment upon, and approve plans for the limited administrative purpose of determining whether there is reasonable assurance that the disposal systems when constructed will comply with the regulations and criteria of the MPCA. This approval shall not in any way relieve the permittee of responsibility, nor shall it make the MPCA responsible for the technical adequacy of the approved plan. This approval shall not relieve the permittee from complying with all conditions and requirements of the Permit and shall be retained with the permit.

Mr. Brett Ballavance
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June 20, 2016

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Department Attachment 2
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Please direct any questions regarding this approval to me at 651-757-2740.

Sincerely,

Brandon E. Smith

This document has been electronically signed.

Brandon E. Smith, P.E.
Engineer Senior
Water Section
Industrial Division

BES:Img

cc: Nick Nelson, Barr Engineering
Scott Schwake, Minnesota Power
Beth Gawrys, MPCA
Julie Henderson, MPCA

State of Minnesota

DEPARTMENT OF COMMERCE
DIVISION OF ENERGY RESOURCES

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 []..... Cost of Service []..... CIP []..... Other:

If you feel your responses are trade secret or privileged, please indicate this on your response.

Request No.	
3	<p>Reference: Decommissioning Study, Revised 12/23/2015</p> <p>Comparing Table 1-1 of the Site Decommissioning Study dated 12/23/2015 to the Site Decommissioning Study dated 4/1/2015, it appears that only the cost estimates for Boswell Energy Center and Taconite Harbor Energy Center changed. The cost estimates for Hibbard Energy Center, Laskin Energy Center, and the Bison Wind Energy Center are the same in the two studies.</p> <p>a. Please explain whether the decommissioning estimate for Boswell Energy Center reflects costs associated with decommissioning plant additions associated with the environmental retrofit, as well as any other changes to the cost estimate from the prior study.</p> <p>b. Please explain the reason(s) for the change in Taconite Harbor Energy Center's decommissioning cost estimate.</p>

Response:

3a: Yes, the decommissioning estimate for Boswell Energy Center in the Site Decommissioning Study dated 12/23/2015 reflect costs and additional

Response by: Debbie Davey
Title: Supervisor, Accounting
Department: Accounting
Telephone: 218-355-3714

salvage value associated with decommissioning plant additions associated with the environmental retrofit. The only other change to Boswell Energy Center's decommissioning cost estimate in the Site Decommissioning Study dated 12/23/2015 is for the impacts of including an estimate for coal pile remediation costs which were inadvertently not included in the Site Decommissioning Study dated 4/1/2015.

- 3b:** The reason for the change in Taconite Harbor Energy Center's decommissioning cost estimate in the Site Decommissioning Study dated 12/23/2015 is for the impacts of including an estimate for coal pile remediation costs which were inadvertently not included in the Site Decommissioning Study dated 4/1/2015.