

September 17, 2025

VIA E-FILING

Sasha Bergman
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101-2147

**Re: In the Matter of Investigation into a Fuel Life-Cycle
Analysis Framework for Utility Compliance with
Minnesota's Carbon Free Standard**

Docket No. E999/CI-24-352

SUPPLEMENTAL COMMENTS

Dear Ms. Bergman:

Attached please find Minnesota Power's Supplemental Comments pertaining to the matter of the Commission's Fuel Life-Cycle Analysis investigation.

The Company appreciates the opportunity to further engage with stakeholders on this nuanced and multifaceted issue.

Please contact me at (218) 355 - 3178 or jmccullough@mnpower.com with any questions related to this matter.

Sincerely,



Jess McCullough
Public Policy Advisor II

**STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION**

In the Matter of Investigation into a
Fuel Life-Cycle Analysis Framework
For Utility Compliance with Minnesota's
Carbon Free Standard

Docket No. E999/CI-24-352
**SUPPLEMENTAL
COMMENTS**

I. INTRODUCTION

On November 7, 2024 the Minnesota Public Utilities Commission (or, "Commission") initiated an investigation into a Fuel Life-Cycle Analysis (or, "LCA") following Phase 2 of Docket No. E-999/CI-23-151 ("Docket No. 23-151"), an Investigation into Implementing Changes to the Renewable Energy Standard and the Newly Created Carbon-Free Standard under Minn. Stat. § 216B.1691. On June 5, 2025, Minnesota Power (or, "Company") filed its initial comments in this docket and, on August 20, 2025, submitted Reply Comments articulating portions of record that the Company understood to be areas of alignment and emphasizing the importance of biomass as renewable generation technology that serves Minnesota Power customers today. Upon reviewing the reply comments of other parties in this docket, the Company further elaborates on potential areas of alignment and disagreement based upon its understanding of these comments. The Company reiterates its comments submitted in Docket No. 23-151, which demonstrate that biomass is a reliable and dispatchable eligible energy technology defined in Minnesota statute that offers both community and environmental benefits and can be considered a carbon free resource over its life cycle.

II. COMMENTS

• Biomass

The Company agrees with the Department of Commerce's (or, "Department") recommendation B.7 that the biogenic emission carbon cycle be included for all relevant LCA studies. The Company has maintained since its initial comments in Phase 2 of

Docket No. E-999/CI-23-151 that CO2 emissions from sustainably sourced biomass exist within the vegetation-carbon cycle, do not contribute to the long-term presence of carbon dioxide in the atmosphere, and displace emissions from fossil fuels.¹ The Company considers the recognition of the biogenic emission cycle essential to any fuel life-cycle analysis for biomass.

The Company also agrees with the position shared by St. Paul Co-Generation and District Energy St. Paul that disallowing biomass to be statutorily considered carbon-free would undermine the Eligible Energy Technology Standard (or, “EETS”). As stated in Minnesota Power’s Initial Comments in Docket No. 23-151, Minn. Stat. § 216B.1691, subd.1(c)(5) defines biomass as an “eligible energy technology” that generates electricity from renewable energy sources. It is the Company’s interpretation that the qualifying biomass sources listed in subd.1(c)(5) are in addition to the sources listed in Section 41A.15. The Company recommends that the Commission specifically clarify that woody biomass is an eligible source under Section 216B.1691, subd.1(c)(5). The Minnesota legislature specifically included that biomass is an eligible energy technology that includes all types of biomass except for defined exclusions related to wastewater sludge (reference Minn. Stat. § 216B.1691, subds. 1(c)(5) and 1a). Since there is no limitation on the definition of biomass under this statute coupled with the definition of biomass under Minn. Stat. § 41A.15, the Commission should find that woody biomass is also allowed under the carbon free standards from a legislative intent standpoint in addition to the policy and scientific justifications set forth in the Company’s comments in Docket No. 23-151 that address biomass.

Furthermore, including woody biomass as a carbon free resource based on an approved LCA framework comports with the language in Minn. Stat. § 216B.1691, subd. 9 that the Commission “shall take all reasonable actions within the commission’s statutory authority to ensure this section is implemented in manner that maximizes net benefits to all Minnesota citizens.” As demonstrated in the record in Docket No. 23-151, Biomass’s benefits extend to communities and Just Transition considerations as well as serving as a reliable, dispatchable energy resource. For example, Boswell Energy Center (“Boswell”)

¹ Docket No. E999/M-23-151, “Initial Comments”, June 28, 2024.

in Cohasset, Minnesota, is currently scheduled to cease coal-based generation by 2030 and 2035 for Boswell Units 3 and 4, respectively. A potential biomass conversion at Boswell Energy Center would not only provide important reliability benefits for the electric system, but would provide an efficient use of existing electric infrastructure. A partial conversion of the facility to biomass would also provide significant opportunities for jobs, related industries like logging and sawmill operations for Tribal entities, community citizens and would maintain the significant tax revenue benefits to the Boswell host community of Cohasset.

Utilizing these biomass resources for electrical generation, or for the creation of carbon-negative products like biochar or biocarbon, is also a responsible and practical use of an abundant and renewable Minnesota resource. Additionally, finding outlets for unmerchantable wildfire fuels can provide important risk mitigation to help prevent catastrophic wildfires and the effects these can have on forest-adjacent communities, such as those impacted by the Northern Minnesota wildfires during the Spring of 2025. Because of the potential reliability, environmental, and community benefits associated with woody biomass generation, Minnesota Power has proposed conducting additional investigation into the economic prospects of co-firing biomass as part of the refuel plan for Boswell in its 2025 Integrated Resource Plan (“IRP”), based on the outcome of this proceeding.

The Company maintains its position that a sufficient definition of sustainable and waste biomass already exists in statute and need not be redefined. The Company is concerned that a workgroup on the topic as proposed by the Department could substantially delay the implementation of the LCA process for biomass at a time when the need for dispatchable renewable energy is rising and the 2030 CFS milestone is fast approaching. The Company is willing to participate in any such workgroup, however, should the Commission determine that it is necessary.

- **Reevaluation of LCA Studies**

Minnesota Power discussed with the Department their intent to use a 10 percent threshold for determining when an LCA needs to be updated to demonstrate eligibility with the CFS,

as recommended in B.5.B. Based on that discussion, the Company's understanding is the threshold would be met if there is a 10 percent or greater change in the annual fuel mix utilized at a facility. For example, if one of the components of the annual fuel mix from a generation facility changes from 60 percent to 70 percent, then a new LCA is required to demonstrate eligibility with the CFS. With that clarification from the Department, the Company finds Department Recommendation B.5.B. to be reasonable and sufficient to maintain the intent of an LCA.

- **LCA Methodologies**

In both its initial and reply comments in this docket, the Company recommended that the Commission consider the adoption of the International Organization for Standardization (or, "ISO")'s life-cycle analysis frameworks 14040 and 14044 as a starting point for design of life-cycle analyses in compliance with the Carbon Free Standard. The Department and other commenters have suggested Argonne GREET, EPA WARM & LandGEM, or another similar methodology as potential frameworks for building LCA methodologies within the ISO framework. The Company does not take a position on which, if any, of these recommendations is best suited to this task, but does recommend that the Commission consider the most effective and flexible application of LCAs in practice.

Regarding Department recommendation B.6 that "all greenhouse gasses (or, "GHG") be quantified in fuel LCA studies, the Company notes that §216b.1691 subd. 2g. sets the benchmarks for the percentage of electricity procured by a utility from *carbon-free* energy technologies. Incorporating all greenhouse gas emissions beyond CO₂ into an LCA to determine a resource's eligibility in the Carbon Free Standard would therefore be inconsistent with Minnesota statute and create inequalities between resources requiring an LCA and those that do not.

- **Hourly Matching**

The Department's recommendation B.1.A. states that carbon-free electricity used in a life-cycle analysis must include hourly matching for CFS-eligible generation sources. Similarly, Department Recommendation B.2.A. states that for all electricity generation processes subject to lifecycle analysis in which the primary electricity input is greater than

25 percent of output energy that the utility must also demonstrate hourly matching of carbon-free electricity generation. The Company's understanding of these recommendations is that electricity used in establishing a generation source's CFS eligibility or the operational subprocess of a CFS-eligible generation source require a demonstration of hourly matched carbon-free electricity.

The question of Hourly Matching was discussed during the hearing for Phase 3 of Docket No. E-999/CI-23-151 on July 17, 2025. The Company awaits the Commission's written order on this subject but maintains its position that any use of hourly matching for compliance with the CFS is inconsistent with statute, for which all reporting is calculated on an annual basis. Furthermore, requiring such matching for LCA purposes and not for CFS compliance would create inequalities between those resources requiring an LCA and those that do not in the form of an undue burden requiring inconsistent reporting requirements.

- **Credit Allocation**

In the Department's Reply Comments of August 20, 2025, an unnumbered recommendation between B.5 and B.6 reads as follows:

- A. EACs be issued equivalent to metered generation on a per MWh basis;
- B. A single REC be issued for all generation that may be retired to demonstrate both EETS and CFS compliance;
- C. A carbon-free allocator, which defines the percentage of CFS eligible generation, must be used for any generation facility that is partially CFS compliant; and
- D. For all generation made in a CFS partial compliant facility that is not eligible for the EETS, metered generation in A. shall be multiplied by C. to determine the whole number of AECs to issue that are only eligible for the CFS.

The Company proposes the addition of the language below because of the potential for situations, depending on the outcome of an LCA, in which a portion of the RECs generated from a facility qualify for the CFS. Part "E" is needed to ensure that all carbon-free energy that qualifies for the CFS can be used to meet the CFS.

E. For all generation made in a CFS partial compliant facility that is eligible for the EETS but not 100% eligible for the CFS, metered generation in B shall be multiplied by C. to determine the whole number of RECs that are only eligible for the CFS.

III. CONCLUSION

Minnesota Power appreciates the constructive discussion in this record and continues to see opportunities for consensus among stakeholders. The Company's recommendations in these supplemental comments continue to represent the Company's views as the most viable and efficient options available to reach carbon-free by 2040 in compliance with statute and state energy goals, while keeping rates reasonable for customers. Minnesota Power remains committed to providing safe, reliable, affordable, and increasingly clean electricity to its customers – a commitment in which biomass plays an important role as a renewable, dispatchable resource that serves Minnesota Power's customer electricity needs today and has the potential to serve electricity needs into the future. The Company thanks the Commission in advance for its timely decision in this matter.

If you have any questions regarding this filing, please contact me at 218.355.3178 or jmccullough@mnpower.com

Dated: September 17, 2025

Respectfully submitted,

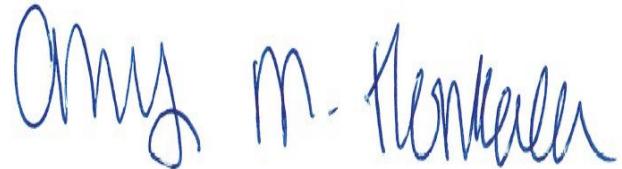


Jess McCullough
Public Policy Advisor II
218.428.9846
jmccullough@mnpower.com
Minnesota Power
30 W Superior St
Duluth, MN 55802

STATE OF MINNESOTA)
)ss
COUNTY OF ST. LOUIS)

AFFIDAVIT OF SERVICE VIA
ELECTRONIC FILING

I, Amy M. Honkala of the City of Duluth, County of St. Louis, State of Minnesota, hereby certify that on the 17th day of September, 2025, I electronically filed a true and correct copy of Minnesota Power's **Supplemental Comments in Docket No. E999/CI-24-352** on the Minnesota Public Utilities Commission and the Energy Resources Division of the Minnesota Department of Commerce via electronic filing. The persons on eDocket's Official Service List for this Docket were served as requested.



Amy M. Honkala