

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

Katie Sieben	Chair
Hwikwon Ham	Commissioner
Audrey Partridge	Commissioner
Joseph Sullivan	Commissioner
John Tuma	Commissioner

*In the Matter of a Commission
Investigation into A Fuel Life-Cycle
Analysis Framework for Utility Compliance
Carbon-Free Standard*

Docket No. E-999/CI-24-352

Reply Comments

Reply Comments of St. Paul Co-Generation and District Energy St. Paul

St. Paul Co-Generation (“SPC”) and District Energy St. Paul (“District Energy”) respectfully submit these Reply Comments pursuant to the Minnesota Public Utilities Commission’s (“Commission”) January 22, 2025 Notice of Comment Period, and subsequent extensions,¹ in the above-referenced docket.

As more fully explained below, SPC and District Energy strongly support the position articulated by the Minnesota Department of Commerce (“Department”), Northern States Power d/b/a Xcel (“Xcel”), the Partnership on Waste and Energy, and others that the Commission has authority to employ a life-cycle analysis in determining whether an energy technology is carbon free. Additionally, these Reply Comments address the existential consequences that SPC and other biomass facilities face in the absence of a carbon-free energy technology designation. Lastly, these Reply Comments detail the statewide benefits associated with SPC’s productive use of waste wood and the critical importance of sustainable, firm energy generation amidst a rapidly evolving energy market.

I. The Commission has authority under Minn. Stat. § 216B.1691 to adopt a life-cycle analysis for purposes of demonstrating that an energy technology is carbon free.

As highlighted by comments in the above-referenced docket and in Docket 23-151, the Commission has authority to adopt a life-cycle analysis in determining what constitutes a “carbon-free energy technology.” Indeed, based on the record in this docket and Docket 23-151, the Commission may have already concluded that a life-cycle analysis is permissible under the statute

¹ The comment period was extended in the Commission’s Notice of Extended Reply and Supplemental Comment Period, June 30, 2025, eDockets ID No. [20256-220467-01](#) and the Second Notice of Extended Reply and Supplemental Comment Period, July 30, 2025, eDockets ID No. [20257-221571-01](#).

and that biomass would be eligible for the Carbon-Free Standard (“CFS”) under such an analysis.² To the extent the Commission has not already done so explicitly, SPC and District Energy respectfully urge the Commission to make such a determination.

The statute defines “carbon-free” as “a technology that generates electricity without emitting carbon dioxide,” but contains no reference to a timeframe for determining emissions.³ As a result, rather than being limited to the emissions at the point of generation, the Commission can and should determine whether an energy technology does not emit carbon dioxide based on emissions over its life cycle.⁴ Indeed, with respect to waste wood in particular, a life-cycle analysis is necessary to determine whether use as a generation fuel results in differing emissions compared to alternative dispositions, including open burning, landfill decomposition, etc.

Utilizing a life-cycle analysis approach is also consistent with the flexibility and Commission discretion built into the statute. The statute creates flexibility through the partial compliance provision and the requirement that the Commission develop standards that “protect against undesirable impacts on the reliability of the utility’s system and economic impacts on the utility’s ratepayers and [] technical feasibility.”⁵ The statute also grants the Commission broad authority to adopt standards based on a variety of factors. The Commission can issue orders defining compliance with the CFS⁶ as well as guide the implementation of the CFS based on factors such as the potential benefits to Minnesota, ratepayer costs, reliability, and technical considerations.⁷ These statutory provisions indicate the Commission should interpret “carbon-free” in a flexible manner that is cognizant of the realities of Minnesota’s current energy resources rather than a brightline rule of what constitutes “carbon-free.”

In addition to being permissible under the statute, interpreting the definition of “carbon-free” in a manner that excludes biomass would effectively render the eligible energy technology standard (“EETS”) meaningless. Under Minnesota law, “[e]very law shall be construed, if possible, to give effect to all its provisions.”⁸ Currently, Minnesota law has two distinct requirements for how electric utilities generate or procure energy for retail customers. First, by 2035, the EETS requires that each “electric utility” generate or procure at least 55 percent of the

² Briefing papers filed prior to the July 17 hearing in Docket 23-151 noted: “the Commission has determined that biomass may be partially compliant with the CFS on a life-cycle basis.” Staff’s Briefing Papers at p. 21 n.97, July 7, 2025, eDockets ID No. [20257-220685-01](#) (Docket 23-151). *See also* Petition for Clarification and Rehearing by Clean Energy Organizations, Nov. 27, 2024, eDocket ID No. [202411-212510-02](#) (Docket 23-151). Additionally, the topics for this docket include “[w]hether biomass, renewable natural gas, and solid waste should be eligible as fully or partially carbon-free generation resources based on a fuel life-cycle analysis.” Order by the Commission at p. 6, Nov. 7, 2024, eDockets ID No. [202411-211701-01](#) (Docket 23-151).

³ Minn. Stat. § 216B.1691, subd. 1(b).

⁴ Cf. Public Comments by the Partnership on Waste & Energy, June 28, 2024, eDockets ID No. [20247-208893-01](#) (Docket 23-151); Public Comments by the Department of Commerce, Division of Energy Resources, June 28, 2024, [20246-208098-01](#) (“DOC 2024 Initial Comments”) (Docket 23-151).

⁵ Minn. Stat. § 216B.1691, subd. 2d. Cf. Public Comments by Otter Tail Power Company, July 24, 2024, eDockets ID No. [20247-208916-01](#) (Docket 23-151).

⁶ Minn. Stat. § 216B.1691, subd. 2d.

⁷ *Id.* § 216B.1691, subd. 2b & subd. 9.

⁸ Minn. Stat. § 645.16; *Shefa v. Ellison*, 968 N.W.2d 818, 825 (Minn. 2022) (“[T]he canon against surplusage dictates that we ‘avoid interpretations that would render a word or phrase superfluous, void, or insignificant.’”); *State v. Thonesavanh*, 904 N.W.2d 432, 437 (Minn. 2017).

energy for its retail customers from “an eligible energy technology.”⁹ Eligible energy technologies include solar, wind, certain hydroelectric facilities, certain hydrogen, and biomass.¹⁰ Second, by the same year, the CFS requires that each “electric utility” generate or procure at least 90 percent of the energy for its retail customers from a “carbon-free energy technology.”¹¹

Because electric utilities are required to provide significantly more energy that complies with the CFS than the EETS, and given the overlap in qualifying technologies for each standard, there is already a risk that utilities will focus their compliance efforts on the CFS at the expense of the EETS. If the Commission interprets “carbon-free” to exclude certain EETS-eligible sources such as biomass, there would be no practical reason for electric utilities to generate or purchase energy compliant with the EETS, thus rendering the EETS superfluous.¹² In addition, reading the EETS out of the statute is also inconsistent with the goals of the CFS. As aptly noted by Xcel and the Department, the CFS was intended to build upon the EETS, not erase it.¹³ Practically, having overlap between CFS- and EETS-eligible sources also provides stability and continuity for electric utilities as the CFS is implemented¹⁴ and is consistent with how other states have implemented their renewable and carbon-free energy requirements.¹⁵

Finally, SPC and District Energy agree with the Department, the Minnesota Pollution Control Agency (“MPCA”), and other commenters that a single life-cycle analysis model cannot be implemented effectively for all energy technologies.¹⁶ Instead, each project or energy technology should use a life-cycle analysis model that reflects the specific considerations of that energy technology. SPC and District Energy agree with the Partnership on Waste and Energy that the California Biomass Residue Emissions Characterization (“C-BREC”) model is the model best suited for biomass.¹⁷

II. Designating biomass as carbon-free energy technology will have a direct and determinative effect on whether individual biomass facilities can continue to operate.

If the Commission does not designate biomass as a carbon-free energy technology, there will be direct economic consequences for biomass facilities and practical consequences for

⁹ Minn. Stat. § 216B.1691, subd. 2a.

¹⁰ *Id.* § 216B.1691, subd. 1(c).

¹¹ *Id.* § 216B.1691, subd. 2a.

¹² As Xcel notes, designating biomass as a carbon-free energy technology would still maintain a meaningful difference between EETS and CFS sources because carbon-free energy includes other resource types that are not EETS eligible, such as nuclear energy. Public Comments by Xcel Energy, June 28, 2024, eDockets ID No. [20246-208107-01](#) (“Xcel 2024 Initial Comments”) (Docket 23-151).

¹³ Xcel 2024 Initial Comments; DOC 2024 Initial Comments; Public Comments by Great River Energy, June 28, 2024, eDockets ID No. [20246-208125-01](#) (Docket 23-151).

¹⁴ See Xcel 2024 Initial Comments.

¹⁵ See, e.g., Colo. Rev. Stat. § 40-2-125.5(2)(b) (defining “clean energy resource” to include both sources that do not emit carbon dioxide and renewable energy resources).

¹⁶ See, e.g., Comments by Department of Commerce and Pollution Control Agency, June 5, 2025, eDocket ID No. [20256-219638-01](#); Initial Comments by Xcel Energy, June 5, 2025, eDockets ID No. [20256-219624-01](#).

¹⁷ Comments by Partnership on Waste and Energy, June 5, 2025, eDockets ID No. [20256-219609-01](#). C-BREC is specifically designed to evaluate the emissions of productively used waste biomass compared to biomass disposed of through open burning, wildfire, or decay. See, e.g., *Climate and air quality impacts of utilizing forest management residues in California*, Schatz Energy Research Center and California State Polytechnic University, Humboldt, available at <https://schatzcenter.org/docs/2024-CBREC-Research-Brief.pdf> (last visited July 21, 2025).

Minnesotans. Comments filed by the Clean Energy Organizations¹⁸ suggest that biomass facilities can continue operating regardless of whether they qualify as carbon-free technology, but that position ignores the economic realities of the energy market. Under energy portfolio laws, such as the CFS, regulated electric utilities are purchasing both electricity and compliance with the relevant standard. The demand for and economic value of compliant sources will increase because, in addition to providing electricity, they also allow the electric utility to comply with the CFS. In contrast, the demand for and value of non-compliant energy will decrease as it provides only electricity.¹⁹

Such a devaluation will have direct adverse effects on specific facilities and likely result in more emissions, not fewer. For SPC, the devaluation of biomass energy will ultimately lead to the biomass facility being shuttered. Under the current power purchase agreement between Xcel and SPC (“PPA”), the value of SPC’s biomass energy is not limited to the energy itself, as the agreement also assigns all renewable energy credits created by the biomass energy to Xcel.²⁰ The PPA is the product of significant efforts from not only the parties but also the state legislature, and even with the PPA in place, a one-time grant from the legislature was also vital to support SPC’s continued operations.²¹ If biomass is not carbon-free energy technology under the CFS, once the existing PPA has ended, the value of the biomass energy will decline without the added value of the renewable energy credits. Without the added value, District Energy will need to replace the energy generated by SPC’s biomass facility by burning natural gas, an inexpensive, firm energy source, for generating heat and thermal energy for downtown St. Paul. Based on calculations from Docket 21-590, replacing SPC’s biomass energy entirely by burning natural gas would lead to a significant increase in greenhouse gases emitted, as well as an increase in criteria pollutants emitted from uncontrolled disposal of the waste wood biomass SPC currently uses.²²

In contrast, designating biomass as a carbon-free energy technology would support a more sustainable economic market for biomass and consequently lower overall emissions. For instance, doing so would create a meaningful incentive for extension of SPC’s PPA with Xcel. More generally, designating biomass as carbon-free energy technology would place SPC and other biomass facilities on more equal footing with other renewable energy sources and allow them to compete in the energy market. This approach would also be consistent with Minnesota’s history of providing economic support to socially beneficial energy technologies that may not be as competitive in the broader energy market.

Specific to SPC, prolonging its ability to utilize biomass would also provide the stability and economic resources needed to further reduce its current greenhouse gas emissions. As discussed in Docket 21-590, District Energy, SPC, and Xcel have been collaborating on an

¹⁸ Public Comments by Clean Energy Organizations at 21, June 5, 2025, eDockets ID No. [20256-219637-01](#) (Docket 24-352).

¹⁹ As noted in Section I, since the CFS requirements are more stringent and, to a certain extent, overlap with the EETS, electric utilities are more likely to purchase CFS-compliant energy since most CFS-compliant energy can be used to satisfy both the CFS and the EETS requirements.

²⁰ Revised Petition for Approval of a Power Purchase Agreement by Xcel at p. 13, Oct. 1, 2021, eDockets ID. No [202110-178483-02](#) (Docket 21-590).

²¹ See Laws of Minn. 2023, ch. 60, art. 1, sec. 2, subd. 7(q).

²² Cf. Reply Public Comments of Xcel Energy at 11-12, Aug. 13, 2024, eDocket ID No. [20248-209457-01](#) (Docket 21-590); Compliance Filing by Xcel Energy at 6-8, Mar. 29, 2024, eDocket ID No. [20243-204801-01](#) (“Compliance Filing”) (Docket 21-590).

electrification project that would allow District Energy to displace the natural gas and fuel oil it currently uses to generate a portion of the heat and thermal energy for downtown St. Paul.²³ District Energy and SPC are evaluating an electric boiler project as well as several alternative electrification options, including capturing waste heat from waste water treatment facilities.²⁴ At this stage, the electrification project cannot displace SPC's utilization of biomass, which provides reliable, firm energy especially during the winter, but the electrification project will still reduce emissions. These projects take time and economic resources to develop and without the carbon-free energy technology designation for biomass, these efforts will be significantly hampered.

On balance, the lack of a carbon-free energy technology designation for biomass will result in more emissions—greenhouse gases, criteria pollutants, and particulates—while implementing the CFS in a manner that allows biomass to be eligible under the CFS will reduce the emissions of greenhouse gases and other criteria pollutants. Such a reduction is consistent with the intention of the CFS and the statutory instruction for the Commission to ensure that the energy portfolio requirements are “implemented in a manner that maximizes net benefits to all Minnesota citizens,” including by “ensuring that statewide air emissions are reduced.”²⁵

III. Defining biomass as a carbon-free energy technology will ensure SPC's biomass facility continues its critical provision of both waste wood disposal services and renewable firm generation.

As discussed by commenters in this docket and others, SPC's biomass facility provides significant benefits to Minnesota by providing a safe disposal mechanism for waste wood—a benefit consistently recognized by stakeholders—and a reliable source of renewable energy in the midst of changes and uncertainty in the energy market.

First, SPC's beneficial and controlled use of biomass addresses a tangible and increasing need—waste wood disposal, especially from trees infected with emerald ash borer (“EAB”). Based on research from the Partnership on Waste and Energy, an organization representing Hennepin, Ramsey, and Washington counties, the EAB infestation is not expected to peak until 2028, meaning that Minnesota will continue to have high volumes of EAB waste wood for many more years.²⁶ While there are a handful of facilities that can properly dispose of EAB waste wood, a study by the Partnership on Waste and Energy concluded that of the 400,000 tons of waste wood processed in the Twin Cities, SPC is responsible for managing approximately two-thirds of that volume.²⁷ SPC's controlled disposal of more than 250,000 tons of waste wood provides a significant societal benefit (about \$850 million dollars net present value) from avoided criteria pollutant emissions compared to open burning, the likely disposal method in the absence of SPC's operations.²⁸

²³ Compliance Filing at 2; Public Comments by the Minnesota Pollution Control Agency, July 16, 2024, eDocket ID No. [20247-208682-01](#) (“MPCA 2024 Comments”) (Docket 21-590) (discussing the offset greenhouse gas emissions from the electrification project).

²⁴ First Electrification Project Progress Report from SPC, May 2, 2025, eDocket ID No. [20255-218561-01](#) (Docket 21-590).

²⁵ Minn. Stat. § 216B.1691, subd. 9(a)(5).

²⁶ Letter in Support of Progress Report by SPC, Dec. 16, 2022, eDockets ID No. [202212-191426-01](#) (“SPC 2022 Letter”) (Docket 21-590).

²⁷*Id.*; See also MPCA 2024 Comments.

²⁸ Compliance Filing at 8.

Second, recent legislative action and state and local stakeholder support illustrates the essential nature of SPC's beneficial and controlled use of waste wood. Legislation enacted in 2023 provided the framework for SPC's negotiations with Xcel for a PPA and a one-time grant to support SPC's current beneficial use in the face of rising operating costs (due to inflation) and the need for capital investments.²⁹ At the state level, in 2022–2023, the Department and MPCA collaborated with Xcel and SPC to develop a cost-benefit analysis of SPC's continued beneficial use of biomass, which, as outlined above, concluded that there were significant benefits to SPC's operations. At the local level, the Partnership on Waste and Energy published the report, referenced above, which concluded that support for existing biomass facilities is "imperative."³⁰

Lastly, SPC and other biomass facilities provide a predictable energy source in the midst of an uncertain energy landscape. Many recently constructed Minnesota generation projects have been wind and solar energy facilities, which provide energy on an intermittent basis. Biomass, in contrast, is a firm energy resource that can be predictably deployed, including during periods of high demand. For SPC, biomass is a necessary resource to supply sufficient heat and thermal energy during the winter when intermittent sources may not be sufficient. Having predictable sources of energy generation is also vital as the national energy trends shift. Since the CFS was enacted, the federal government's stance towards wind and solar energy has created uncertainty about the continued growth of such resources. Supporting existing, sustainable biomass facilities can provide reliable energy, especially in light of such uncertainty.

Conclusion

SPC and District Energy appreciate the opportunity to participate in this docket and believe that the Commission has authority to and should approve the use of a life-cycle analysis to determine if an energy source "carbon-free energy technology" as required by the CFS. Without the ability to qualify biomass as a carbon-free energy technology, SPC, and other biomass facilities are likely to switch to natural gas or other fuel sources, resulting in more emissions and the loss of the beneficial use of waste wood. Thank you for your attention to this filing and thoughtful consideration of these important issues. Please contact Michael Auger at michael.auger@evergreenenergy.com or (651) 925-8119 with any questions or concerns.

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Respectfully Submitted,

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²⁹ Laws of Minn. 2023, ch. 60, art. 1, sec. 2, subd. 7(q).

³⁰ SPC 2022 Letter at p. 2.