BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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

ISSUE DATE: May 14, 2026

DOCKET NO. E-999/CI-24-352

ORDER ADOPTING FUEL LIFE-CYCLE ANALYSIS FRAMEWORK FOR IDENTIFYING CARBON-FREE TECHNOLOGIES

PROCEDURAL HISTORY

Minnesota's Renewable Energy Objectives, Minn. Stat. § 216B.1691, generally directs the state's electric utilities to acquire their energy from sources that pollute less, and to demonstrate compliance by acquiring and retiring tradable credits.

In 2023, Minnesota modified this statute to add a Carbon-Free Standard at Minn. Stat. § 216B.1691, subd. 2g. The revised statute directs the Minnesota Public Utilities Commission (Commission) to establish criteria for measuring an electric utility's efforts to meet the statutory standards.

On November 7, 2024, the Commission initiated the current docket to explore the following topics, among others:

- Calculating partial compliance based on the net annual generation defined as "carbon-free."

- Calculating partial compliance for fossil fuel generation with carbon capture & storage by estimating the total direct carbon dioxide emissions per megawatt-hour (MWh) reduced by the amount captured and stored, and applying that percentage to the output of the generation resource employing carbon capture & storage to determine its carbon-free generation.

- Calculating partial compliance for hydrogen co-firing generation by estimating the direct and indirect emissions of the generation resource per MWh with hydrogen co-firing,

compared to the carbon dioxide per MWh that would be emitted if the generator burned only natural gas.

- Whether 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.

- Calculating partial compliance by generators burning waste materials based on a Fuel Life-Cycle Analysis considering greenhouse gas benefits relative to alternative waste management methods.[1]

From June 4, 2025, to January 13, 2026, the Commission received filings from the following:

- American Forest & Paper Association
- American Petroleum Institute
- Carbon Solutions Group
- Central Municipal Power Agency
- City of Red Wing
- Clean Energy Economy Minnesota
- Clean Energy Organizations
- Climate Generation
- Coalition for Plastic Reduction
- Connexus Energy
- CURE
- DFL Environmental Caucus
- District Energy St. Paul
- Eureka Recycling
- Great River Energy
- Health Professionals for a Healthy Climate
- Institute for Agriculture and Trade Policy
- Institute for Local Self-Reliance
- Legislative Members[2]
- LIUNA Minnesota and North Dakota

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[1] *In the Matter of an Investigation into Implementing Changes to the Renewable Energy Standard and the Newly Created Carbon-Free Standard under Minn. Stat. § 216B.1691*, Docket No. E-999/CI-23-151, Order Initiating New Docket and Clarifying "Environmental Justice Area" (November 7, 2024) at 6–7.

[2] Comments filed jointly by Senators Bobby Joe Champion, Doron Clark, D. Scott Dibble, Omar Fateh, Mary Kunesh, John Marty, Jen McEwen, Zaynab Mohamed, Susan Pha, Erin Maye Quade, and Lindsey Port; Representatives Patty Acomb, Esther Agbaje, Ned Carroll, Mary Clardy, Nathan Coulter, Brion Curran, Alex Falconer, Sandra Feist, Mike Freiberg, Aisha Gomez, David Gottfried, Julie Greene, Amanda Hemmingsen-Jaeger, Rick Hansen, Kaohly Her, Athena Hollins, Mike Howard, Katie Jones, Sydney Jordan, Liish Kozlowski, Fue Lee, Kelly Moller, Huldah Momanyi-Hiltsley, Mohamud Noor, Kristi Pursell, Lucy Rehm, Kari Rehrauer, Liz Reyer, Samantha Sencer-Mura, Andy Smith, and Jay Xiong; and former Representative Frank Hornstein.

- Minnesota Center for Environmental Advocacy
- Minnesota Department of Commerce—Division of Energy Resources (Department)
- Minnesota Environmental Justice Table
- Minnesota Environmental Partnership
- Minnesota Forest Industries
- Minnesota Forest Resources Council
- Minnesota Interfaith Power & Light
- Minnesota Municipal Power Agency
- Minnesota Pollution Control Agency
- Minnesota Power
- Minnesota Resource Recovery Association
- Minnkota Power Cooperative
- Northeast Metro Climate Action
- Northern States Power Company d/b/a Xcel Energy
- Olmsted County
- Otter Tail Power Company
- Partnership for Policy Integrity
- Partnership on Waste and Energy
- Ramsey/Washington Recycling & Energy Board
- Senator Nick Frentz
- Sierra Club
- St. Paul Co-Generation
- Vote Solar
- Zero Burn Coalition

On January 15, 2026, this matter came before the Commission.

FINDINGS AND CONCLUSIONS

I. Summary

In this order the Commission establishes how utilities subject to the Carbon-Free Standard may identify carbon-free technologies, and technologies that would permit partial compliance with the standard. The Commission also establishes procedures for conducting a Fuel Life-Cycle Analysis for identifying carbon-free energy, and authorizes its Executive Secretary to initiate a new proceeding addressing how energy storage facilities should be analyzed for purposes of a Fuel Life-Cycle Analysis.

II. Legal Background

The State of Minnesota seeks to reduce the emission of greenhouse gases across all sectors of the economy emitting these gases.[3] In support of this goal, the Minnesota legislature adopted and revised its Renewable Energy Objectives, Minn. Stat. § 216B.1691, to direct Minnesota's electric utilities to procure specified amounts of electricity from specified types of generation, and established deadlines for meeting these objectives. In general, the statute establishes the following standards:

- The Eligible Energy Technologies Standard, adopted in 2007 as the "Renewable Energy Standard," directs each electric utility by 2035 to acquire sufficient electric energy from generators employing certain "eligible energy technologies" to serve 55 percent of the energy demanded by the utility's retail customers in Minnesota.[4]

- The Solar Energy Standard, adopted in 2013, directs each public utility by 2020 to acquire sufficient solar energy to meet the needs of 1.5 percent of the energy demanded by the utility's retail customers in Minnesota.[5]

- The Distributed Solar Energy Standard, adopted in 2023, directs each public utility to serve up to 3 percent of its electric loads with energy from small distributed solar energy systems.[6]

- Finally, the Carbon-Free Standard, adopted in 2023, directs a utility to acquire sufficient energy from "carbon-free" technologies to meet all of the needs of its Minnesota retail customers (or sometimes the utility's wholesale customers) according to the following schedule:

2030	80 percent for public utilities; 60 percent for other electric utilities
2035	90 percent for all electric utilities
2040	100 percent for all electric utilities.[7]

New subdivision 1(b) defines "carbon-free" as "a technology that generates electricity without emitting carbon dioxide." New subdivision 2d(a) directs the Commission to issue orders to facilitate implementation of the new Carbon-Free Standard:

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[3] Minn. Stat. § 216H.02, subd. 1(a).

[4] Minn. Stat. § 216B.1691, subd. 2a.

[5] *Id.,* subd. 2f.

[6] *Id.,* subd. 2h.

[7] *Id.,* subd. 2g.

> (a) The commission shall issue necessary orders detailing the criteria and standards used to: (1) measure an electric utility's efforts to meet the standards under [the statute]; and (2) determine whether the utility is achieving the standards.

Subdivision 2d(b) directs the Commission to recognize sources of electricity that comply only partially with the Carbon-Free Standard:

> (b) In the order under paragraph (a), the commission shall include criteria and standards that (1) protect against undesirable impacts on the reliability of the utility's system and economic impacts on the utility's ratepayers and that consider technical feasibility; and (2) require the commission to allow for partial compliance with [the Carbon-Free Standard] from:
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> (i) electricity generated from facilities that utilize carbon-free technologies for electricity generation, but only for the percentage that is carbon-free; and
>
> (ii) an electric utility's annual purchases from a regional transmission organization net of the electric utility's sales to the regional transmission organization, but only for the percentage of annual net purchases that is carbon-free, which percentage the commission must calculate based on the regional transmission organization's systemwide annual fuel mix or an applicable subregional fuel mix.

Subdivision 4 provides for the Commission to establish a program a) authorizing the owner of a generator powered by any of the Eligible Energy Technologies to earn a trackable and tradeable "credit" for each kilowatt-hour (kWh) produced, and b) providing for utilities subject to the statute to demonstrate compliance by acquiring and retiring these credits. This system of tradeable credits increases the incentive for developers to build efficient carbon-free generators, while also providing utilities with the flexibility to pursue the most competitive method of fulfilling their statutory obligations. The Commission has issued various orders implementing this statutory provision.[8] To facilitate the trading and tracking of credits, the Commission has ordered utilities to demonstrate compliance by using credits registered with the Midwest Renewable Energy Tracking System (M-RETS), operated by CleanCounts. In the M-RETS/CleanCounts registry, a generator receives one credit for each eligible megawatt-hour (MWh) of electricity.

Finally, Minn. Stat. § 216B.1691, subdivisions 2d(b)1 and 9(b), direct the Commission to weigh a variety of other considerations while implementing this statute—considerations such as

[8] *See e.g.*, *In the Matter of Commission Consideration and Determination on Compliance with Renewable Energy Obligations and Renewable Energy Standards*, Docket No. E-999/CI-03-869, Third Order Detailing Criteria and Standards for Determining Compliance Under Minn. Stat. § 216B.1691 and Setting Procedures for Retiring Renewable Energy Credits (December 4, 2008), ordering paragraphs 1 and 3.

maintaining the reliability of the electric system, managing cost to ratepayers, and promoting economic development within the state.

III. Generation Technologies, Energy Storage, Emissions Storage

Throughout the discussion about implementing the Carbon-Free Standard, commentors distinguished between various types of generating technologies/fuels, including fossil fuels, biomass, municipal solid waste, geothermal energy, hydrogen, Eligible Energy Technologies, and uranium. Some technologies that emit greenhouse gases may also be paired with methods to capture and store some or all of the emissions so that they do not enter the atmosphere—at least, not immediately. Finally, some commenters discussed the use of energy storage technologies.

A. Fossil fuel

Fossil fuel refers to coal, natural gas, and petroleum. Burning these fuels releases greenhouse gases.

B. Biomass

"Biomass" generally refers to an organic fuel source that is available on a recurring basis.[9] The Renewable Energy Objectives statute provides the following examples:

> landfill gas; an anaerobic digester system; the predominantly organic components of wastewater effluent, sludge, or related by-products from publicly owned treatment works, but not including incineration of wastewater sludge to produce electricity; and … an energy recovery facility used to capture the heat value of mixed municipal solid waste or refuse-derived fuel from mixed municipal solid waste as a primary fuel.[10]

"Municipal solid waste" generally refers to garbage and refuse from residential, commercial, industrial, and community activities that the generator of the waste aggregates for collection.[11]

Using biomass as a fuel emits greenhouse gases. Commentors ask the Commission to subdivide the concept of biomass further, as discussed below.

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[9] *See, for example,* Minn. Stat. § 41A.15, subd. 2e (defining biomass for the purposes of Minn. Stat. §§ 41A.15 to 41A.18).

[10] Minn. Stat. § 216B.1691, subd. 1(c)(5). Note, however, that the statute excludes the Hennepin Energy Recovery Center from the list of Eligible Energy Technologies. *Id.*, subd. 1a.

[11] *See* Minn. Stat. § 115A.03, subd. 21.

C. Hydrogen

Hydrogen is an element that can be burned in place of (or as a supplement to) natural gas, or can power a fuel cell. Neither use emits greenhouse gases—but some methods of obtaining hydrogen can emit greenhouse gases.

D. Geothermal energy

By circulating fluids through pipes in the ground, heat from the earth can be extracted to generate electricity. The use of some of these fluids can releases *de minimis* amounts of greenhouse gases.

E. Eligible Energy Technologies

The Renewable Energy Objectives statute defines an Eligible Energy Technology as one that generates electricity from sunlight, wind, biomass, most hydroelectric facilities (dams), and from hydrogen obtained using energy from another Eligible Energy Technology.[12] These technologies vary in their emissions.

F. Uranium

As radioactive uranium atoms decay into smaller elements, they release energy which can be harnessed to generate electricity (nuclear energy). The process of mining, milling, refining, and enriching uranium may result in *de minimis* emissions of greenhouse gases.

G. Energy storage

Energy storage facilities such as batteries play an increasing role in managing the electrical grid. Generators relying on fossil fuels are *dispatchable*—that is, operators exercise control over when they operate and the amount of output they produce, permitting utilities to adjust the total generation output to match the needs of customers as they change from moment to moment. In contrast, operators cannot control when the sun shines or the wind blows, and this complicates a utility's efforts to manage systems with sun- and wind-powered generators. To the extent that energy can be stored to be used later, these storage facilities can take on the qualities of dispatchable sources of generation. While many generating technologies emit greenhouse gases, typically storage technologies do not.

H. Carbon capture & storage

While burning most fuels typically generates some greenhouse gases, arguably the resulting harm may be offset if the gases can be captured and retained. Commentors disagree about whether a generator that emits greenhouse gases which are then captured using carbon capture & storage may qualify as carbon-free.

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[12] Minn. Stat. § 216B.1691, subd. 1(c). The statute excludes hydroelectric facilities with a capacity of 100 megawatts (MW) or more that began operating after February 8, 2023; *see* subd. 1(c)(3).

IV. Comments on Frameworks for Evaluating "Carbon-Free" Technologies

When interpreting the Carbon-Free Standard, commentors disagree about how to apply the definition of "carbon-free," and the conceptual frameworks implied thereby. Commentors proposed a Point-of-Generation framework, an Eligible Energy Technologies framework, and a Fuel Life-Cycle Analysis framework.

A. Point-of-Generation framework

Reading the definition of "carbon-free" narrowly, advocates of the Point-of-Generation framework argue that any technology that emits carbon dioxide at the moment that an energy source is converted to electricity cannot qualify as carbon-free.

Advocates emphasize that this definition would not require non-qualifying generators to close. For example, the statute would not preclude these generators from selling electricity to out-of-state parties. They could sell to Minnesota utilities that serve wholesale loads in addition to their retail loads. They might be able to sell to utilities that need additional generating capacity to meet reliability requirements imposed by regional transmission authorities (such as the Midcontinent Independent System Operator, Inc., or the Southwest Power Pool), or to replace line losses—that is, energy that is dissipated in the process of transmission. And utilities could rely on these generators to serve their retail customers provided the utilities acquire enough credits recognized by M-RETS/CleanCounts.

Opponents of this view raise various objections.

First, the Point-of-Generation framework appears to lead to absurd results. A developer might use carbon-emitting generators' electricity to extract hydrogen from methane or water, and subsequently use the hydrogen to generate electricity. Because no greenhouse gas would be emitted at the moment of electricity generation, this electricity would qualify as carbon-free—even if the aggregate effect would release more carbon dioxide than if the developer had simply distributed the electricity from the carbon-emitting generators. Or a developer might use carbon-emitting technologies to generate electricity, but capture and store the carbon dioxide—only to release that gas later (for example, as part of a petroleum extraction process). Because at least some of the greenhouse gases would be captured at the moment of electric generation, part of this electricity would qualify as carbon-free—even if the ultimate amount of carbon dioxide released would be the same either way. Rather than encouraging a reduction in emissions, the Point-of-Generation framework appears to reward policy *leakage*—that is, shifting emissions outside of an arbitrarily narrow frame of reference solely to comply with the letter of the law, while ignoring the law's purpose.

Second, the Point-of-Generation framework would preclude any electricity generated from biomass and municipal solid waste from qualifying as carbon-free, even though the Renewable Energy Objectives statute contemplates the use of these fuels as Eligible Energy Technologies. Cannons of statutory construction argue against interpreting legal language in a manner that would render some or all of a statute meaningless.

Third, adopting the Point-of-Generation framework would preclude the Commission from considering countervailing factors set forth in the Renewable Energy Objectives statute and other statutes. If adopting the Point-of-Generation framework caused the premature closure of existing dispatchable generators, this might impair system reliability, increase ratepayer costs, trigger the loss of local business investment and employment—and even conflict with the state's Waste Management Act, which favors using waste as fuel rather than sending it to a landfill.[13] And while proponents of the Point-of-Generation framework argue that generators of non-compliant electricity could conceptually continue operations in Minnesota even beyond the 2040 deadline set forth in the Carbon-Free Standard, opponents of this framework doubt whether this option would be practical economically.

B. Eligible Energy Technologies framework

Some commentors recommend that the Commission read the definition of carbon-free to match the statutory definition of Eligible Energy Technologies—that is, to encompass generators powered by sunlight, wind, biomass, most hydroelectric facilities, and from hydrogen obtained using energy from another Eligible Energy Technology. In effect, this framework differs from the Point-of-Generation Framework by recognizing generators that burn biomass may qualify as carbon-free, excluding nuclear generators, and excluding some newer, larger hydroelectric facilities.

While the Carbon-Free Standard directs applicable utilities to acquire specified amounts of electricity from carbon-free sources, it also specifies that utilities should demonstrate compliance by acquiring and retiring tradable credits, such as Renewable Energy Credits. And the Renewable Energy Objectives statute states that utilities may earn these credits by acquiring electricity through the use of Eligible Energy Technologies. According to some commentors, by using tradeable credits as the method for demonstrating compliance, the statute effectively makes any Eligible Energy Technology a mechanism for complying with the Carbon-Free Standard. In particular, the chief author of the legislation in the Minnesota Senate stated that he intended generators burning waste biomass to qualify as carbon-free.[14]

Opponents of this framework dispute this legal interpretation, arguing that the Renewable Energy Objectives statute distinguishes between credits earned for acquiring renewable energy and credits earned for acquiring carbon-free energy.

Other opponents object that generators burning biomass emit carbon dioxide at the point of generation, which conflicts with the narrow definition of "carbon-free." Still other opponents grant that using biomass to generate electricity may sometimes result in lower greenhouse gas emissions than simply letting those materials decompose in a landfill, but sometimes the opposite will be true; there is no way to know without studying the matter for each individual case.

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[13] Minn. Stat. § 115A.02(b).

[14] Senator Frentz comments, at 1.

C. Fuel Life-Cycle Analysis framework

The statutory definition of carbon-free specifies that a qualifying generator would not emit greenhouse gases. Proponents of a Fuel Life-Cycle Analysis framework argue for reading this definition to exclude generating technologies that result in additional *net* emissions of greenhouse gases. That is, if using a proposed technology to generate electricity would result in lower emissions than the most likely alternative scenario (for example, using the fuel with a different technology to generate electricity, or just letting the fuel stock decompose in a landfill while generating the substitute electricity using natural gas), then the generating technology would qualify as carbon-free; otherwise, it would not. To make such a judgment would require analyzing the competing scenarios—a developer's proposal and a "counterfactual scenario"—not merely at the moment of electricity generation, but across a broader time horizon so as to include all of the causally related emissions.

The analysis would identify the scenario that results in the best result, including the result that reduces the amount of greenhouse gas emissions per unit of energy generated. Different greenhouse gases have differing capacities for trapping heat in the atmosphere. By convention, a life-cycle analysis measures the emissions of varying gases based on their heat-trapping equivalence to carbon dioxide (CO_2e), with a primary goal being to minimize this carbon dioxide equivalence per megawatt-hour generated (CO_2e/MWh).

Conceptually this analysis might also encompass emissions released during the creation of capital assets used in generating electricity. But for ease of administration, the proponents of this framework recommend focusing the analysis on comparing emissions resulting from the different potential uses of fuel stocks. For example, a Fuel Life-Cycle Analysis might encompass the emissions from a truck used to haul woody biomass to a generation facility, but it would not include the emissions associated with making the truck.

Different advocates offer variations on this framework. Many argue that certain generation technologies that emit little or no greenhouse gases should be exempt from a Fuel Life-Cycle Analysis entirely. Some advocates, including the Department and the Pollution Control Agency, argue that certain generators fueled by waste wood should be exempt from a Fuel Life-Cycle Analysis—in effect, making this framework more similar to the Eligible Energy Technologies framework. And others argue that the Commission should use the Fuel Life-Cycle Analysis to identify generation that would qualify as partially carbon-free under the statute's "partial compliance" provision.[15]

Opponents of the Fuel Life-Cycle Analysis framework argue that the statutory language focuses exclusively on the emissions of carbon dioxide, and does not expressly authorize a life-cycle analysis or consideration of greenhouse gas emissions occurring outside the context of electricity generation. Some opponents argue that this framework might undermine Minnesota's waste management goals which encourage reuse, recycling, and composting.

[15] Minn. Stat. § 216B.1691, subd. 2d(b)(2)(i).

Opponents also argue that conducting a Fuel Life-Cycle Analysis could prove to be impractical and burdensome, resulting in regulatory uncertainty. The analysis may require facility-specific data that may not be available at the point that the Commission must approve or reject a developer's application for approval. The analysis would rest on speculative assumptions about how a potential fuel source might be used if it were not used for generating electricity. Changes in the state of the law, science, or technology may cause the conclusions of the life-cycle analysis to change over time—potentially causing the Commission to approve of a generating technology at one time and disapprove of it later. Regulators may need to constantly monitor each generator's fuel stock to ensure that the generator did not substitute a new fuel with higher emissions, or ensure that the ongoing supply of woody biomass really comes from waste wood rather than wood harvested to serve as fuel.

Finally, even if a fuel life-cycle analysis would result in lower emissions of greenhouse gases, it may also result in increased burning of organic material—resulting in the emission of other pollutants that may harm human health, especially in areas with high concentrations of historically marginalized populations (environmental justice areas).[16]

V. Commission Action

Having considered the statutory language and the arguments of the commentors, the Commission decides as follows:

A. Carbon as greenhouse gas

While the Carbon-Free Standard is a new statute, it does not stand alone; it is part of a larger set of policies designed to track and reduce greenhouse gas emissions. For example, Minn. Stat. § 216H.02 establishes the state's goals for reducing the emission of greenhouse gas throughout the state. Likewise, Minn. Stat. § 216B.2422, subd. 3, directs the Commission to consider the cost of greenhouse gas emissions when evaluating an electric utility's resource plans or application for authorization to build certain types of physical plant (Certification of Need applications[17]).

The Commission reads the Carbon-Free Standard as another statute in this scheme, seeking to reduce greenhouse gas emissions resulting from electric generation by the percentages and on the timeline specified.[18] But the purpose of this proceeding is not to determine how someone might interpret the statute in the abstract or in isolation; it is to determine how the Commission should integrate the standard into the larger context of state law and Commission responsibilities.

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[16] Minn. Stat. § 216B.1691, subd. 1(e).

[17] See Minn. Stat. § 216B.243.

[18] *See* Minn. Stat. § 216B.1691, subd. 2g.

B. Nexus between generation and emissions, and framework selection

While the statutory definition of "carbon-free" focuses on the relationship between electricity generation and emissions, the definition does not specify how to determine when emissions are sufficiently proximate to generation as to be considered in the analysis. Commentors disagree on this matter. To summarize, some commentors urge the Commission to consider only emissions released at the moment of generation. Others urge the Commission to consider emissions released at any point in the production and use of a fuel used to generate electricity. Still others urge the Commission to replace this definition with the definition of Eligible Energy Technologies.

The Commission finds that the definition of "carbon-free" does not mandate any of these approaches, and even legislators who voted for the law have reached different conclusions on this question.

To read the definition to focus solely on emissions emitted at the moment of electricity generation would lead to absurd results. It might lead utilities subject to the Carbon-Free Standard to invest in a mix of electric generation resources that result in increased greenhouse gas emissions throughout our economy. And given that the statute directs the Commission to maintain system reliability and manage costs to ratepayers,[19] the Commission will decline to construe the definition in a manner that would compel the premature retirement of sources of electricity that are currently operating, dispatchable, and potentially carbon-free.

While the language is ambiguous, it is clear that it should be read in a manner consistent with the overarching goals of the Carbon-Free Standard. Whether a generation resource qualifies as carbon-free should be determined by whether the net emissions resulting from a technology or fuel used to produce electricity, evaluated over the fuel's production and combustion cycle, is lower than the emissions that would result from the process most likely to occur in the absence of its use for electricity generation. This is the Fuel Life-Cycle Analysis.

Moreover, the Commission finds that if the analysis demonstrates that the resource in question will produce the best results in terms of greenhouse gases and all other factors under the Commission's consideration, then any question about partial compliance becomes moot; all of the resulting generation will qualify as carbon-free.

Beyond statutory objections, opponents of the Fuel Life-Cycle Analysis framework raise environmental concerns. Opponents argue that adopting a Fuel Life-Cycle Analysis framework could result in utilities relying more heavily on generators that burn biomass. Even if this process would result in less greenhouse gases emitted, opponents argue that a Fuel Life-Cycle Analysis may not give sufficient weight to other types of pollution that may result. The Commission again notes that it faces legal obligations—arising from the Renewable Energy Objectives and elsewhere—to weigh a variety of factors when evaluating a utility's resource plan or Certificate of Need application. In particular, the Commission has directed utilities to evaluate their preferred resource plans and alternative scenarios while giving specific financial weight to a

[19] Minn. Stat. § 216B.1691, subd. 2d(b)1.

variety of environmental and regulatory costs.[20] In short, a utility's need to consider environmental costs long pre-dated the Carbon-Free Standard.

Finally, opponents argue that its finding would be subject to constant revision, impeding a developer's and utility's ability to plan. Recognizing these challenges, the Commission will adopt procedures below to lend stability to the process.

C. Distinctions among technologies—biomass

The primary practical effect of rejecting the Point-of-Generation framework is to recognize that biomass technologies, including biomass technologies recognized as Eligible Energy Technologies, may qualify as carbon-free. But not all biomass technologies will qualify.

1. Limitations on primary biomass technology qualifying as carbon-free

First, the Commission finds that technologies fueled by "primary biomass" cannot qualify as carbon-free for purposes of demonstrating compliance with the Carbon-Free Standard.

Commentors widely recognized a distinction between using biomass grown as a crop to serve as a fuel source (primary biomass) and using waste biomass as a fuel source (waste biomass). Specifically, the energy and other resources that go into raising primary biomass, and the emissions that result, are incremental and avoidable—in the sense that a choice not to raise the primary biomass would result in avoiding the expenditure of those resources and emitting those gases. In contrast, waste biomass comes into existence regardless of whether anyone would use it as a fuel. Only the incremental resources and incremental emissions used in preparing secondary biomass as a fuel—the energy used to move a fallen tree to a generator for incineration, for example—would be avoidable, and thus would count as part of the Fuel Life-Cycle Analysis. No commentor recommended treating generators using primary biomass as carbon-free. The Commission reaches the same conclusion, and will preclude that option.

To clarify this distinction, the Commission will adopt the Department's definition of primary biomass: Biomass that is intentionally cultivated, harvested, and prepared for use, in whole or in part, as a fuel for the generation of electricity, such as farm-grown closed-loop biomass as defined in Minn. Stat. § 216B.2424, subd. 1(a)(1).[21]

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[20] Minn. Stat. § 216B.2422, subd. 3, directs the Commission to quantify and establish a range of environmental costs associated with each method of generating electricity. And Minn. Stat. § 216H.06 directs the Commission to establish estimates of the regulatory cost for emitting carbon dioxide. In Docket No. E-999/CI-14-643, *In the Matter of the Further Investigation into Environmental and Socioeconomic Costs Under Minnesota Statutes Section 216B.2422, Subdivision 3*, the Commission has established—and occasionally revises—a range of costs for a variety of emissions, including carbon dioxide.

[21] *See* Department reply comments (August 20, 2025) at Appendix A, page 1.

2. Limitations waste biomass technology qualifying as carbon-free

In contrast, generators burning waste biomass may potentially qualify as carbon-free. Rather than being deliberately generated or created for use as a fuel feedstock, waste biomass may derive from secondary activity as the by-product of the functions of society. For example, it may accrue due to people clearing brush, or as wood scraps resulting from manufacturing with forest products. Or waste biomass may result from natural forces such as pests, disease, and storm damage. Or it may result as a biproduct of agricultural activities, including activities producing manure. Or it may result from food waste and other organic waste. Waste biomass must accumulate due to some disposal process that would occur regardless of the potential to use the biomass as a fuel.[22]

But even a generator using waste biomass technology will not qualify as carbon-free if it cannot pass the Fuel Life-Cycle Analysis. The Commission will recognize Eligible Energy Technologies powered by waste-derived fuels[23] as carbon-free only after an analysis shows that approving the facility would result in equal or lower emissions than would have occurred under the counterfactual scenario. If the counterfactual scenario is to use the waste biomass for some different generating technology, the analysis must incorporate all reasonable, commercially available practices for mitigating waste and emissions for the technology in question.

Even after approving a technology as carbon-free, the Commission will retain the discretion to establish limits on significant additional use of fuels emitting greenhouse gases. For example, the Commission may establish such limits when evaluating a utility's or technology's compliance or partial compliance with the Carbon-Free Standard, or when evaluating a utility's resource plan.

D. Distinctions among technologies—"clean" technologies

In contrast, the Commission concurs in the argument that certain "clean" technologies emit such small amounts of greenhouse gases as to obviate the need for a Fuel Life-Cycle Analysis. For example, no commentor argued for analyzing the emissions resulting from generators powered by geothermal energy, hydroelectric energy, nuclear energy, solar energy, or wind energy. In addition, no commentor argued for the need to analyze emissions resulting from generating electricity using hydrogen—provided that the hydrogen itself was acquired by using one of these clean technologies. The Commission finds that these technologies should be exempt from a Fuel Life-Cycle Analysis.

E. Distinctions among technologies—dual-fuel power plants

The Renewable Energy Objectives direct the Commission to issue orders implementing the statute and providing for a utility to achieve partial compliance with the Carbon-Free Standard

[22] *See* Partnership on Energy & Waste comments (June 5, 2025) at 3.

[23] Minn. Stat. § 216B.1691, subd. 1(c)(5).

with "electricity generated from facilities that utilize carbon-free technologies for electricity generation, but only for the percentage that is carbon-free…."[24]

Based on the recommendations of the Department and the Pollution Control Agency, the Commission concludes that facilities producing electricity through the use of a combination of a carbon-free fuel and carbon-emitting fuel (dual-fuel power plants) may be able to achieve partial compliance under the statute.

F. Distinctions among technologies—carbon capture & storage

Based on the recommendations of the Department, the Pollution Control Agency, and others, the Commission likewise finds that a utility may achieve partial compliance with the Carbon-Free Standard by capturing a portion of greenhouse gases emitted by a specific generating technology. A utility may calculate the share of energy that qualifies for partial compliance with the Carbon-Free Standard based on the generation technology's net emission with carbon capture & storage as compared to the net emission without carbon capture & storage, measured on the basis of the kilograms of greenhouse gases emitted equivalent to carbon-dioxide per megawatt-hour generated (kg CO_2e / MWh).

However, under no circumstances may a utility claim partial compliance for using a generation technology with carbon capture & storage if the gas will be subsequently used for enhanced oil recovery. Commentors generally agree that the subsequent release of the carbon dioxide, combined with its use in procuring additional fossil fuels, render this usage antithetical to the purposes of the Carbon-Free Standard.

G. Distinctions among technologies—energy storage

Storage assets pose conceptual challenges for electricity modeling and analysis. Like a customer, they consume energy. But unlike customers, storage facilities can release energy into the grid upon command. Commentors did not agree about how best to treat storage assets, and many argued that the record is not yet adequately developed to address the matter.

The Commission concurs, and therefore will decline to adopt a specific framework to account for storage assets. Instead, the Commission will delegate to its Executive Secretary authority to begin proceedings to establish a process to develop an accounting methodology for energy storage to comply with the Carbon-Free Standard, including but not limited to large-scale energy storage resources that connect directly to the transmission grid.

VI. Procedure

Opponents of the Fuel Life-Cycle Analysis raise concerns that this framework will prove impractical, unstable, and conflict with other goals such as promoting recycling. To address these and other concerns, the Commission will set forth the following procedures.

[24] Minn. Stat. § 216B.1691, subd. 2d(b)(2)(i).

A. Selection of docket to address compliance with Carbon-Free Standard

While utilities may file their Fuel Life-Cycle Analyses in a variety of dockets, the Commission will encourage them to file these analyses in a resource plan proceeding or resource acquisition proceeding (Certificate of Need). In a resource plan proceeding, a large electric utility proposes plans for meeting the forecasted needs of its customers for electricity, and analyzes those plans under a variety of circumstances to find the optimal mix of benefits and costs.[25] In a Certificate of Need proceeding, people seeking to build large energy facilities must demonstrate that they have considered alternative ways to meet their objectives, including ways that reduce environmental costs.[26] A resource planning proceeding will arguably provide the best forum for selecting electric generating resources while weighing considerations of reliability, resource adequacy, greenhouse gas emissions and associated externalities—including pollutants and other environmental consequences.

B. Filing Content

1. Goal

A utility implementing a Fuel Life-Cycle Analysis to demonstrate compliance with the Carbon-Free Standard must file a detailed and transparent description of the inputs, assumptions, and results contained in the analysis. In particular, the utility must do the following:

- Thoroughly explain how it selected the counterfactual scenario it used as a basis for comparison to the technology the utility proposes to use.

- Document and verify that the source of the feedstock to be used is eligible for consideration as carbon free, based on Minn. Stat. § 216B.1691, subd. 1(c)(5), and other considerations.

2. Pre-filing consultation

Before filing its Fuel Life-Cycle Analysis, the utility must work with the Department and the Pollution Control Agency to develop the assumptions and inputs appropriate for the proposed project. These parties must identify the following:

- The appropriate counterfactual scenario, including reasonable, commercially available practices for reducing the amount of waste feedstock used, and/or for mitigating associated emissions.

- System boundary and feedstock assumptions, including assumptions related to leakage where applicable.

[25] Minn. Stat. § 216B.2422.

[26] Minn. Stat. § 216B.243.

- The study period.
- Relevant offsets, including but not limited to landfill methane collection practices and recycling or alternative beneficial uses of the waste feedstocks.

3. Filing before the Commission

A utility seeking to demonstrate compliance with the Carbon-Free Standard based on energy from a technology that was not exempt from a Fuel Life-Cycle Analysis must then file its analysis for Commission review.

The Department, in consultation with the Pollution Control Agency, will review and make a recommendation to the Commission on whether to approve, modify, or deny the assumptions, inputs, and/or results of the Fuel Life-Cycle Analysis.

Whichever docket the utility chooses for filing its Fuel Life-Cycle Analysis, members of the public will then have the opportunity to file comments. They may comment on the analysis's methodology, outcome, inputs, and assumptions, including the appropriateness of the counterfactual scenario. And no utility may rely on the energy from the technology in question for purposes of complying with the Carbon-Free Standard until after interested parties have received notice and opportunity to comment, and after the Commission has approved of the need for the facility.

4. Post-approval review

The Commission finds that annual reporting will facilitate oversight of this matter.[27] Specifically, once the Commission finds, based on a Fuel Life-Cycle Analysis, that a generator provides carbon-free energy, any utility relying on this energy to comply with the Carbon-Free Standard must report —

- the fuel mix used in that generator compared to the mix used during the generator's Fuel Life-Cycle Analysis,
- any electricity used to process the fuel, and
- any energy attribute credits (EAC) that the utility retired to match this energy use.

This requirement will apply for annul reports filed in 2027 and later.

5. Biomass requiring processing before combustion

Where a utility seeks to demonstrate compliance with the Carbon-Free Standard by relying on electricity from a combustion technology, and the fuel must be processed using electricity before it is combusted, then a Fuel Life-Cycle Analysis will require the utility to provide a

[27] Utilities subject to the Commission's jurisdiction must disclose this information as part of their reports filed annually in Docket No. E-999/PR-YR-12 (where "YR" is the final two digits of the year in which the report is filed).

comprehensive analysis of the emissions associated with this processing electricity. If the utility knows the emissions associated with the processing electricity, it may say so. Otherwise, the utility may use as a proxy the average emissions associated with the generation available in the regional wholesale energy market managed by the Midcontinent Independent System Operation, Inc. (MISO), or the part of MISO's service area that encompasses most of Minnesota.[28]

6. Dual-fuel power plant

Utilities seeking to achieve partial compliance with the Carbon-Free Standard through the use of a dual-fuel power plant must file the following:

- A detailed, facility-specific analysis describing the proposed fuels to be used at the dual-fuel power plant.
- The estimated amount of each fuel to be used annually.
- the estimated amount of electricity to be produced by each fuel annually, measured in terms of megawatts (MW) and MWh.
- The resulting percentage of the total output that should qualify as carbon free.

This filing will be subject to a public notice and comment process and reviewed by the Department and the Pollution Control Agency. These agencies will then recommend to the Commission whether to accept, modify, or reject the utility's proposed partial credit methodology and results.

In addition, the utility must file in its annual compliance report in Docket No. E-999/PR-YR-12 the following:

- The actual fuels used at the dual-fuel power plant.
- The actual amount of each fuel used in that year.
- The actual amount of electricity produced by each fuel in that year (MWh and MW).
- The resulting percentage of the total output that should qualify as carbon-free for that year.

7. Carbon capture & storage

A utility proposing to use carbon capture & storage to achieve partial compliance with the Carbon-Free Standard must file the following information:

- A detailed analysis of the project facilitating carbon capture & storage, including a detailed explanation of how emissions will be sequestered and over what period.

[28] MISO manages the wholesale electricity market in a region extending from the Gulf of Mexico to the Canadian province of Manitoba. MISO subdivides its service area into local resource zones (LRZ); most of Minnesota falls within LRZ 1. MISO calculates the amount of carbon-free energy in its wholesale markets as a function of the types of generators contributing energy into its market, and performs a similar calculation to determine the amount of carbon-free energy in LRZ 1.

- The regulatory and contractual obligations that will ensure that the carbon tied to carbon credits or accounting used to meet Minnesota standards will in fact be sequestered and not repurposed for activities that would release carbon, such as advanced oil recovery.
- The annual estimated amount of greenhouse gas emissions captured and sequestered, measured on the basis of CO_2e.
- The annual estimated amount of remaining greenhouse gases emitted by the carbon capture & storage facility, measured on the basis of CO_2e.
- The annual estimated indirect greenhouse gas emissions associated with the facility, measured in CO_2e.
- The annual estimated amount of MWh and MW provided by the capture & storage facility.
- The estimated emissions of the power plant without carbon capture & storage.
- The resulting share of the total output that should qualify as carbon-free.

A utility may calculate the share of energy that qualifies for partial compliance with the Carbon-Free Standard based on the generation technology's net emissions of electricity generation with carbon capture & storage as compared to the net emissions of electricity generation without carbon capture & storage, measured on the basis of kg CO_2e / MWh generated. This filing will be subject to a public notice and comment process and reviewed by the Department and the Minnesota Pollution Control Agency. These agencies should then recommend to the Commission whether to accept, modify, or reject the utility's proposed partial credit methodology and results.

A utility using carbon capture & storage to achieve partial compliance with the Carbon-Free Standard must file, in its annual compliance report in Docket No. E-999/PR-YR-12, the actual greenhouse gas emissions captured and stored at its carbon capture & storage facility (measured in CO_2e), the actual amount of remaining greenhouse gas emissions emitted by the facility, actual indirect greenhouse gas emissions associated with the facility, the actual amount of MWh and MW provided by the carbon capture & storage facility, and the resulting percentage of the total output that should qualify as carbon-free for each year.

C. Frequency of analysis

Critics of the Fuel Life-Cycle Analysis note that this framework creates a tension between the goal of constantly scrutinizing resource choices to ensure that they remain an optimal choice, and the goal of providing a stable regulatory environment for developers to invest in new sources of generation and recover their investments. Balancing these concerns, the Commission will declare as follows.

For new capital projects subject to a Fuel Life-Cycle Analysis, once the Commission finds that the project provides carbon-free energy, the Commission will not reevaluate this finding for the projected service life of the project at the time of the analysis or until the project is fully depreciated, whichever occurs first. This should provide investors with reasonable assurance of having an opportunity to recover their investments in projects that pass an initial Fuel Life-Cycle Analysis.

Fully depreciated projects subject to a Fuel Life-Cycle Analysis will be re-evaluated no more often than every five years.

However, substantial changes to a generator's fuel mix could substantially alter the generator's emissions. Therefore, regardless of a generator's depreciation, if a generator subject to a Fuel Life-Cycle Analysis alters its fuel mix by more than ten percent, the utility receiving the energy must file a new or revised life-cycle analysis, and be subject to Commission acceptance or rejection.

D. Demonstrating compliance with the 2030 Carbon-Free Standard goal

As previously noted, the Carbon-Free Standard directs utilities to acquire specified percentages of their electricity from carbon-free sources, with the percentages increasing over time. By 2030, public utilities must acquire 80 percent of this electricity from carbon-free sources; other electric utilities must acquire 60 percent.[29]

The Commission anticipates that some utilities will seek to demonstrate compliance with the 2030 goal by relying on energy from generating technologies that will require a Fuel Life-Cycle Analysis. To monitor progress towards meeting the 2030 goal, the Commission will direct these utilities to notify the Commission and provide basic information about the relevant resources, their fuel types, and sourcing. That filing will be due within 60 days of this order.

The Commission will so order.

ORDER

Fuel Life-Cycle Analysis in general

1. A utility need not conduct a Fuel Life-Cycle Analysis in order to demonstrate compliance with the Carbon-Free Standard to the extent that the utility relies on electricity derived from the following generating technologies: solar, wind, hydropower, nuclear, geothermal, and hydrogen produced with solar, wind, hydropower, nuclear, or geothermal.

2. Otherwise, a Fuel Life-Cycle Analysis must be conducted to determine whether the net emissions resulting from a technology or fuel used to produce electricity, throughout the fuel's production and combustion cycle, is lower than the emissions that would result from the process most likely to occur in the absence of its use for electricity generation (the counterfactual scenario).

3. Fuel Life-Cycle Analysis review will use the following procedures:

[29] Minn. Stat. § 216B.1691, subd. 2g.

A. The resource planning process will continue to be the Commission's primary tool and process for selecting electric generating resources with consideration of reliability, resource adequacy, greenhouse gas emissions and associated externalities, and pollutants and other environmental impacts. Utilities are encouraged to file proposed Fuel Life-Cycle Analyses during a resource plan or resource acquisition proceeding, but may file at any time.

B. The utility proposing to demonstrate compliance with the Carbon-Free Standard through the use of a Fuel Life-Cycle Analysis is responsible for conducting the analysis and providing to the Commission —

    1) documentation verifying that the source of the feedstock is eligible for consideration as carbon-free, based on the order points herein and Minn. Stat. § 216B.1691, subd. 1(c)(5), and

    2) a detailed and transparent description of the inputs, assumptions, and results of the analysis, including a comprehensive explanation and justification for the counterfactual scenario selected.

C. The utility must work with the Minnesota Department of Commerce and the Minnesota Pollution Control Agency to develop the appropriate assumptions and inputs for the project-specific analysis, including the following:

    1) The appropriate counterfactual, including reasonable, commercially available practices to reduce the amount of waste feedstock and/or mitigate associated emissions.

    2) System boundary and feedstock assumptions, including assumptions related to leakage where applicable.

    3) The study period.

    4) Relevant offsets, including but not limited to landfill methane collection practices and recycling or alternative beneficial use of waste feedstocks.

D. The utility must then file its Fuel Life-Cycle Analysis. The Department, in consultation with the Pollution Control Agency, will review and make a recommendation to the Commission on whether to approve, modify, or deny the assumptions, inputs, and/or results of an analysis conducted by a utility.

E. When the utility files its Fuel Life-Cycle Analysis for Commission review, the matter will be assigned a docket number and subject to public comment. Interested parties may comment on the methodology, outcome, inputs, and assumptions of the Fuel Life-Cycle Analysis, including the appropriateness of the counterfactual and associated assumptions.

4. Fuel Life-Cycle Analyses must quantify all greenhouse gases considered in Minn. Stat. § 216B.2422, subd. 3, and the environmental costs the Commission must apply when evaluating and selecting resource options in all proceedings before the Commission, measured in CO_2e.

5. In its proposed Fuel Life-Cycle Analysis filing, the utility must provide a comprehensive analysis of the emissions resulting from the electricity used for processing. For all claims of carbon-free electricity used in a Fuel Life-Cycle Analysis where the fuel requires processing using electricity before the fuel is combusted, the utility must specify the source of processing electricity. If that source is not carbon-free, the utility may use as a proxy the average carbon content of the whole MISO territory or Local Resource Zone 1 annual grid emissions.

6. In evaluating compliance or partial compliance with the Carbon-Free Standard, and in evaluating resource plans, the Commission may establish limits on significant additional use of emitting fuels that have been determined to be carbon-free based on a Fuel Life-Cycle Analysis.

Frequency of re-assessment, and changes in fuel mix

7. For fully depreciated assets, lifecycle emissions will be evaluated no more often than every five years.

8. For new capital projects, lifecycle emissions will be reevaluated no sooner than after the capital project is either fully depreciated or was expected to be paid off as determined at the time of Carbon-Free Standard eligibility, whichever is earlier, unless the facility was subject to a Fuel Life-Cycle Analysis and the fuel mix deviates by more than ten percent.

9. For any fuel determined to be carbon-free from a Fuel Life-Cycle Analysis, if that fuel source deviates by more than ten percent, the utility must file a new or revised lifecycle analysis.

10. Beginning in 2027, when a utility relies on a generator to demonstrate compliance with the Carbon-Free Standard and the Commission agrees that the Fuel Life-Cycle Analysis shows that a generator provides carbon-free energy, the utility must include in its annual compliance report in Docket No. E-999/PR-YR-12 —

    A. the fuel mix used in that generator compared to the mix used during the generator's Fuel Life-Cycle Analysis,

    B. any electricity used to process the fuel, and

    C. any energy attribute credits (EAC) that the utility retired to match this energy use.

Biomass

11. Utilities may not use energy from technologies using primary biomass to demonstrate compliance with the Carbon-Free Standard. Primary biomass is defined as follows:

    A. Biomass that is intentionally cultivated, harvested, and prepared for use, in whole or in part, as a fuel for the generation of electricity.

    B. Farm-grown closed-loop biomass as defined in Minn. Stat. § 216B.2424, subd. 1(a)(1).

12. Utilities may use energy from technologies using waste biomass to demonstrate compliance with the Carbon-Free Standard. Waste biomass is defined as follows:

    A. Biomass derived from secondary activities including but not limited to —
        1) Wood waste from storm damage, disease or infestation, utility line maintenance, waste from forest-products manufacturing;
        2) Agricultural activities, including activities producing manure; and
        3) Food waste and other organic waste.

    B. Biomass that results in lower emissions of greenhouse gases than the alternative disposal method.

    C. Biomass that is not deliberately generated or created for use as a fuel feedstock, but is a by-product of the functions of society, or the result of natural forces such as pests, disease and storm damage, and requires some type of management or disposal on an ongoing basis, irrespective of the opportunities for or need for energy production.

13. Energy from waste-derived Eligible Energy Technologies included in Minn. Stat. § 216B.1691, subd. 1(c)(5) will qualify as carbon-free only if a facility-specific Fuel Life-Cycle Analysis shows that the technologies release emissions that are less than or equal to the emissions that would result from the relevant counterfactual scenario. The counterfactual must incorporate all reasonable, commercially available waste and emissions mitigation practices associated with the Eligible Energy Technology.

Carbon capture & storage

14. A utility may qualify for partial compliance with the Carbon-Free Standard by relying on generating technologies that use carbon capture & storage. Partial credit will be based on the net emissions of electricity generation with carbon capture & storage as compared to the net emissions of electricity generation without carbon capture & storage, on a kg CO_2e / MWh basis.

15. A utility proposing to use carbon capture & storage for partial compliance with the Carbon-Free Standard must file a detailed analysis of the carbon capture & storage project, including —

A. a detailed explanation of how emissions will be sequestered and over what period,

B. the regulatory and contractual obligations that will ensure that the carbon tied to carbon credits or accounting used to meet Minnesota standards will in fact be sequestered and not repurposed for activities that would release carbon, such as advanced oil recovery,

C. the annual estimated amount of greenhouse gas emissions captured and sequestered, measured in CO_2e,

D. the annual estimated amount of remaining greenhouse gases emitted by the carbon capture & storage facility, measured in CO_2e,

E. annual estimated indirect greenhouse gas emissions associated with the carbon capture & storage facility, measured in CO_2e,

F. the annual estimated amount of MWh and MW provided by the carbon capture & storage facility,

G. the estimated emissions of the power plant without carbon capture & storage, and

H. the resulting percentage of the total output that should qualify as carbon free.

16. A utility's proposal to use carbon capture & storage to achieve partial compliance with the Carbon-Free Standard will be subject to a public notice and comment process and reviewed by the Department and the Pollution Control Agency. The agencies must recommend to the Commission whether to accept, modify, or reject the utility's proposed partial credit methodology and results.

17. A utility using carbon capture & storage to achieve partial compliance with the Carbon-Free Standard must include in its annual compliance report in Docket No. E-999/PR-YR-12 —

A. the actual greenhouse gas emissions captured and sequestered at the carbon capture & storage facility, measured in CO_2e,

B. the actual amount of greenhouse gases emitted by the carbon capture & storage facility, measured in CO_2e,

C. the actual indirect greenhouse gas emissions associated with the carbon capture & storage facility, measured in CO_2e,

D. the actual amount of MWh and MW provided by the carbon capture & storage facility, and

E. the resulting percentage of the total output that should qualify as carbon-free for each year.

Dual-fuel technologies

18. A utility may qualify for partial compliance with the Carbon-Free Standard by relying on generating technologies that produce electricity using a combination of a carbon-free fuel with a carbon-emitting fuel. A utility seeking to demonstrate partial compliance must file —

    A. a detailed, facility-specific analysis describing the proposed fuels to be used at the dual fuel power plant,

    B. the estimated amount of each fuel to be used annually,

    C. the estimated amount of electricity to be produced by each fuel annually (MWh and MW), and

    D. the resulting percentage of the total output that should qualify as carbon-free.

19. A utility's proposal to use dual-fuel technologies to achieve partial compliance with the Carbon-Free Standard will be subject to a public notice and comment process and reviewed by the Department and the Pollution Control Agency. The agencies must recommend to the Commission whether to accept, modify, or reject the utility's proposed partial credit methodology and results.

20. A utility using dual-fuel technology to achieve partial compliance with the Carbon-Free Standard must file in its annual compliance report in Docket No. E-999/PR-YR-12 —

    A. the actual fuels used at the dual-fuel power plant,

    B. the actual amount of each fuel used in that year,

    C. the actual amount of electricity produced by each fuel in that year (MWh and MW), and

    D. the resulting percentage of the total output that should qualify as carbon-free for that year.

Energy storage

21. The Commission delegates to its Executive Secretary to begin proceedings to establish a process to develop an accounting methodology for energy storage to comply with the Carbon-Free Standard, including but not limited to large-scale energy storage resources interconnected to the transmission grid.

Demonstrating compliance with the 2030 Carbon-Free Standard goal

22. Within 60 days, any utility subject to the Carbon-Free Standard and intending to use a resource that requires a Fuel Life-Cycle Analysis for compliance with the 2030 requirements of the Carbon-Free Standard must notify the Commission and offer basic information about the relevant resources and fuel types and sourcing.

23. This order takes effect immediately.

BY ORDER OF THE COMMISSION

Sasha Bergman
Executive Secretary

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CERTIFICATE OF SERVICE

I, Anne Redmond, hereby certify that I have this day, served a true and correct copy of the following document to all persons at the addresses indicated below or on the attached list by electronic filing, electronic mail, courier, interoffice mail or by depositing the same enveloped with postage paid in the United States mail at St. Paul, Minnesota.

Minnesota Public Utilities Commission
ORDER ADOPTING FUEL LIFE-CYCLE ANALYSIS FRAMEWORK FOR IDENTIFYING CARBON-FREE TECHNOLOGIES

Docket Number **E-999/CI-24-352**

Dated this 14th day of May, 2026

/s/ Anne Redmond

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48	Cathy	Chavers	cchavers@boisforte-nsn.gov	Bois Forte Band of Chippewa		Bois Forte Tribal Government 5344 Lakeshore Drive Nett Lake MN, 55772 United States	Electronic Service		No	24-352Official
49	Marc	Child	mchild@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	24-352Official
50	Ray	Choquette	rchoquette@agp.com	Ag Processing Inc.		12700 West Dodge Road PO Box 2047 Omaha NE, 68103-2047 United States	Electronic Service		No	24-352Official
51	Steve W.	Chriss	stephen.chriss@walmart.com	Wal-Mart		2001 SE 10th St. Bentonville AR, 72716-5530 United States	Electronic Service		No	24-352Official
52	John	Coffman	john@johncoffman.net	AARP		871 Tuxedo Blvd. St, Louis MO,	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						63119-2044 United States				
53	Kenneth A.	Colburn	kcolburn@symbioticstrategies.com	Symbiotic Strategies, LLC		26 Winton Road Meredith NH, 32535413 United States	Electronic Service		No	24-352Official
54	Generic	Commerce Attorneys	commerce.attorneys@ag.state.mn.us		Office of the Attorney General - Department of Commerce	445 Minnesota Street Suite 1400 St. Paul MN, 55101 United States	Electronic Service		Yes	24-352Official
55	Jean	Comstock	jean.comstock.dbcc@gmail.com	St. Paul 350		729 6th St E St. Paul MN, 55106 United States	Electronic Service		No	24-352Official
56	Hillary	Creurer	hcreurer@allete.com	Minnesota Power		30 W Superior St Duluth MN, 55802 United States	Electronic Service		No	24-352Official
57	George	Crocker	gwillc@nawo.org	North American Water Office		5093 Keats Avenue Lake Elmo MN, 55042 United States	Electronic Service		No	24-352Official
58	Rebecca	Crooks Stratton	rebecca.crooks-stratton@shakopeedakota.org	Shakopee Mdewakanton Sioux Community		Shakopee Mdewakanton Sioux Community 2330 Sioux Trail NW Prior Lake MN, 55372 United States	Electronic Service		No	24-352Official
59	Brooke	Cunningham	health.review@state.mn.us	Minnesota Department of Health		PO Box 64975 St. Paul MN, 55164-0975 United States	Electronic Service		No	24-352Official
60	Stacy	Dahl	sdahl@minnkota.com	Minnkota Power Cooperative, Inc.		5301 32nd Ave S Grand Forks ND, 58201 United States	Electronic Service		No	24-352Official
61	Michael	Daley	mdaley@carbonsolutionsgroup.com	Carbon Solutions Group LLC		2045 W Grand Ave. Ste B PMB #58751 Chicago IL, 60612 United States	Electronic Service		No	24-352Official
62	George	Damian	gdamian@cleanenergyeconomymn.org	Clean Energy Economy MN		13713 Washburn Ave S Burnsville MN, 55337 United States	Electronic Service		No	24-352Official
63	Lorene	Damsits	lorened@cmpasgroup.org	Central MN MPA		459 S Grove St Blue Earth MN, 56013 United States	Electronic Service		No	24-352Official
64	Lisa	Daniels	lisadaniels@windustry.org	Windustry		201 Ridgewood Ave Minneapolis MN, 55403 United States	Electronic Service		No	24-352Official
65	Miyah	Danielson	miyahdanielson@fdlrez.com	Fond du Lac Band of Lake Superior Chippewa		1720 Big Lake Road Cloquet MN, 55720 United States	Electronic Service		No	24-352Official
66	Chris	Davis	christopher.davis@state.mn.us		Department of Commerce	Suite 280 85 Seventh	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						Place East St. Paul MN, 55101-2198 United States				
67	Jason	Decker	jason.decker@llojibwe.net	Leech Lake Band of Ojibwe		190 Sailstar Drive NW Cass Lake MN, 56633 United States	Electronic Service		No	24-352Official
68	James	Denniston	james.r.denniston@xcelenergy.com	Xcel Energy Services, Inc.		414 Nicollet Mall, 401-8 Minneapolis MN, 55401 United States	Electronic Service		No	24-352Official
69	Bobby	Deschampe	robertdeschampe@grandportage.com	Grand Portage Band of Lake Superior Chippewa		PO Box 428 Grand Portage MN, 55605 United States	Electronic Service		No	24-352Official
70	Curt	Dieren	curt.dieren@dgr.com	L&O Power Cooperative		1302 S Union St Rock Rapids IA, 51246 United States	Electronic Service		No	24-352Official
71	Kami	Diver	kamidiver@fdlrez.com	Fond du Lac Band of Lake Superior Chippewa		1720 Big Lake Road Cloquet MN, 55720 United States	Electronic Service		No	24-352Official
72	Becky	Dobbs	bdobbs@grenergy.com			null null, null United States	Electronic Service		No	24-352Official
73	J.	Drake Hamilton	hamilton@fresh-energy.org	Fresh Energy		408 St Peter St Ste 350 Saint Paul MN, 55101 United States	Electronic Service		No	24-352Official
74	Shane	Drift	sdrift@boisforte-nsn.gov	Bois Forte Band of Chippewa		Bois Forte Tribal Government 5344 Lakeshore Drive Nett Lake MN, 55772 United States	Electronic Service		No	24-352Official
75	Adam	Duininck	aduininck@ncsrcc.org	North Central States Regional Council of Carpenters		700 Olive Street St. Paul MN, 55130 United States	Electronic Service		No	24-352Official
76	Kristin W	Duncanson	kw.duncanson@gmail.com			57746 Highway 30 Mapleton MN, 56065 United States	Electronic Service		No	24-352Official
77	Wally	Dupuis	wallydupuis@fdlband.org	Fond du Lac Band of Lake Superior Chippewa		1720 Big Lake Road Cloquet MN, 55720 United States	Electronic Service		No	24-352Official
78	Kevin	Dupuis, Sr.	kevindupuis@fdlrez.com			Reservation Business Committee 1720 Big Lake Rd Cloquet MN, 55720 United States	Electronic Service		No	24-352Official
79	Brian	Edstrom	briane@cubminnesota.org	Citizens Utility Board of Minnesota		332 Minnesota St Ste W1360 Saint Paul MN, 55101 United States	Electronic Service		No	24-352Official
80	Jamie	Edwards	jamie.edwards@millelacsband.com	Mille Lacs Band of Ojibwe		43408 Oodena Drive Onamia MN,	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						56358 United States				
81	Kristen	Eide Tollefson	healingsystems69@gmail.com	R-CURE		28477 N Lake Ave Frontenac MN, 55026-1044 United States	Electronic Service		No	24-352Official
82	Michael	Fairbanks	michael.fairbanks@whiteearth-nsn.gov	White Earth Reservation Business Committee		PO Box 418 White Earth MN, 56591 United States	Electronic Service		No	24-352Official
83	John	Farrell	jfarrell@ilsr.org	Institute for Local Self-Reliance		2720 E. 22nd St Institute for Local Self-Reliance Minneapolis MN, 55406 United States	Electronic Service		No	24-352Official
84	Sharon	Ferguson	sharon.ferguson@state.mn.us		Department of Commerce	85 7th Place E Ste 280 Saint Paul MN, 55101-2198 United States	Electronic Service		No	24-352Official
85	Terri	Finn	terri.goggleye@llojibwe.net			null null, null United States	Electronic Service		No	24-352Official
86	Mike	Fiterman	mikefiterman@libertydiversified.com	Liberty Diversified International		5600 N Highway 169 Minneapolis MN, 55428-3096 United States	Electronic Service		No	24-352Official
87	Jonathan	Fortner		Lignite Energy Council		PO Box 2277 Bismarck ND, 58502 United States	Paper Service		No	24-352Official
88	Christine	Fox	cfox@itasca-mantrap.com	Itasca-Mantrap Coop. Electric Assn.		PO Box 192 Park Rapids MN, 56470 United States	Electronic Service		No	24-352Official
89	Lucas	Franco	lfranco@liunagroc.com	LIUNA		81 Little Canada Rd E Little Canada MN, 55117 United States	Electronic Service		No	24-352Official
90	Ronald J.	Franz	ronald.franz@dairylandpower.com	Dairyland Power Cooperative		3200 East Ave S PO Box 817 La Crosse WI, 54602-0817 United States	Electronic Service		No	24-352Official
91	Nathan	Franzen	nathan@nationalgridrenewables.com	Geronimo Energy, LLC		8400 Normandale Lake Blvd Ste 1200 Bloomington MN, 55437 United States	Electronic Service		No	24-352Official
92	Gary	Frazer	gfrazer@mnchippewatribe.org	Minnesota Chippewa Tribe		PO Box 217 Cass Lake MN, 56633 United States	Electronic Service		No	24-352Official
93	Barb	Freese	bfreese@mncenter.org	Minnesota Center for Environmental Advocacy		1919 University Ave W Ste 515 Saint Paul MN, 55104-3435 United States	Electronic Service		No	24-352Official
94	Christopher	Friez	christopher.friez@nacco.com	NACCO Natural Resources/North American Coal		918 E. Divide Ave., Suite 200 Bismarck ND, 58501 United States	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
95	Stacey	Fujii	sfujii@grenergy.com	Great River Energy		12300 Elm Creek Boulevard Maple Grove MN, 55369-4718 United States	Electronic Service		No	24-352Official
96	Jessica	Fyhrie	jfyhrie@otpco.com	Otter Tail Power Company		PO Box 496 Fergus Falls MN, 56538-0496 United States	Electronic Service		No	24-352Official
97	Edward	Garvey	garveyed@aol.com	Residence		32 Lawton St Saint Paul MN, 55102 United States	Electronic Service		No	24-352Official
98	Benjamin	Gerber	ben@mrets.org	Midwest Renewable Energy Tracking System		60 South Sixth Street Suite 2800 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official
99	David P.	Geschwind	dp.geschwind@smmpa.org	Southern Minnesota Municipal Power Agency		500 First Avenue SW Rochester MN, 55902 United States	Electronic Service		No	24-352Official
100	Shannon	Geshick	shannon.geshick@state.mn.us	Minnesota Indian Affairs Council (MIAC)		null null, null United States	Electronic Service		No	24-352Official
101	Jenny	Glumack	jenny@mrea.org	Minnesota Rural Electric Association		11640 73rd Ave N Maple Grove MN, 55369 United States	Electronic Service		No	24-352Official
102	Julie	Goehring	julie@redriverbasincommission.org			708 70 Ave NW Moorhead MN, 56560 United States	Electronic Service		No	24-352Official
103	Todd J.	Guerrero	todd.guerrero@kutakrock.com	Kutak Rock LLP		Suite 1750 220 South Sixth Street Minneapolis MN, 55402-1425 United States	Electronic Service		No	24-352Official
104	Tessa	Haagenson	tessa.haagenson@connexusenergy.com	Connexus Energy		14601 Ramsey Blvd NW Ramsey MN, 55303 United States	Electronic Service		No	24-352Official
105	Jeffrey	Haase	jhaase@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	24-352Official
106	Laura	Haight	lhaight@pfpi.net	Partnership for Policy Integrity		POB 2513 Amherst MA, 01004 United States	Electronic Service		No	24-352Official
107	Hal	Halpern	halhalpern@clpower.com	Cooperative Light & Power		1554 Hwy 2 P0 Box 69 Two Harbors MN, 55616 United States	Electronic Service		No	24-352Official
108	Jeremy	Hamilton	jhamilton@uppersiouxcommunity-nsn.gov	Upper Sioux Community		Upper Sioux Community PO Box 147 Granite Falls MN, 56241 United States	Electronic Service		No	24-352Official
109	David A.	Hansen	hansen@federatedrea.coop	Federated Rural Electric Association		77100 U.S. Highway 71 PO Box 69 Jackson MN,	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						56143 United States				
110	James	Hartson				59931 300th Street Waltham MN, 55982 United States	Paper Service		No	24-352Official
111	Amy	Hastings	amyh@uppersiouxcommunity-nsn.gov	Upper Sioux Community		5722 Travers Lane PO Box 147 Granite Falls MN, 56241 United States	Electronic Service		No	24-352Official
112	Erik	Hatlestad	erik@cureriver.org			117 1st St Montevideo MN, 56265 United States	Electronic Service		No	24-352Official
113	Kim	Havey	kim.havey@minneapolismn.gov	City of Minneapolis		350 South 5th Street, Suite 315M Minneapolis MN, 55415 United States	Electronic Service		No	24-352Official
114	Philip	Hayet	phayet@jkenn.com	J. Kennedy and Associates, Inc.		570 Colonial Park Drive Suite 305 Roswell GA, 30075-3770 United States	Electronic Service		No	24-352Official
115	Adam	Heinen	aheinen@dakotaelectric.com	Dakota Electric Association		4300 220th St W Farmington MN, 55024 United States	Electronic Service		No	24-352Official
116	Annete	Henkel	mui@mnutilityinvestors.org	Minnesota Utility Investors		413 Wacouta Street #230 St.Paul MN, 55101 United States	Electronic Service		No	24-352Official
117	Jessy	Hennesy	jessy.hennesy@avantenergy.com	Avant Energy		220 S. Sixth St. Ste 1300 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official
118	Kristin	Henry	kristin.henry@sierraclub.org	Sierra Club		2101 Webster St Ste 1300 Oakland CA, 94612 United States	Electronic Service		No	24-352Official
119	Benjamin	Hertz	bhertz@bepc.com	Basin Electric Power Cooperative		1717 E Interstate Ave Bismarck ND, 58503 United States	Electronic Service		No	24-352Official
120	Holly	Hinman	holly.r.hinman@xcelenergy.com	Xcel Energy		414 Nicollet Mall, 7th Floor Minneapolis MN, 55401 United States	Electronic Service		No	24-352Official
121	Joe	Hoffman	ja.hoffman@smmpa.org	SMMPA		500 First Ave SW Rochester MN, 55902-3303 United States	Electronic Service		No	24-352Official
122	Michael	Hoppe	lu23@ibew23.org	Local Union 23, I.B.E.W.		445 Etna Street Ste. 61 St. Paul MN, 55106 United States	Electronic Service		No	24-352Official
123	Ronald	Horman	rhorman@redwoodelectric.com	Redwood Electric Cooperative		60 Pine Street Clements MN, 56224 United States	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
124	Frank	Hornstein	frank.hornstein@minneapolismn.gov	City of Minneapolis		350 South 5th Street Minneapolis MN, 55415 United States	Electronic Service		No	24-352Official
125	Rick	Horton	rhorton@minnesotaforests.com	Minnesota Forest Industries		324 West Superior Street 903 Medical Arts Building Duluth MN, 55802 United States	Electronic Service		No	24-352Official
126	Robbie	Howe	robbie.howe@llojibwe.net	Leech Lake Band of Ojibwe		190 Sailstar Drive NW Cass Lake MN, 56633 United States	Electronic Service		No	24-352Official
127	John	Ihle	ljihle@rrt.net	PlainStates Energy LLC		27451 S Hwy 34 Barnesville MN, 56514 United States	Electronic Service		No	24-352Official
128	Annie	Jackson	cheryl.jackson@whiteearth-nsn.gov	White Earth Nation		White Earth Tribal Headquarters 35500 Eagle View Road Ogemo MN, 56569 United States	Electronic Service		No	24-352Official
129	Faron	Jackson, Sr.	faron.jackson@llojibwe.net			190 Sailstar Drive NW Cass Lake MN, 56633 United States	Electronic Service		No	24-352Official
130	Casey	Jacobson	cjacobson@bepc.com	Basin Electric Power Cooperative		1717 East Interstate Avenue Bismarck ND, 58501 United States	Electronic Service		No	24-352Official
131	Justin	Jahnz	justin.jahnz@ecemn.com	East Central Energy		412 Main Ave N Braham MN, 55006 United States	Electronic Service		No	24-352Official
132	Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law		2950 Yellowtail Ave. Marathon FL, 33050 United States	Electronic Service		No	24-352Official
133	Nathan	Jensen	njensen@otpco.com	Otter Tail Power Company		215 S. Cascade St. Fergus Falls MN, 56537 United States	Electronic Service		No	24-352Official
134	Kevin	Jensvold	kevinj@uppersiouxcommunity-nsn.gov	Upper Sioux Community		PO Box 147 Granite Falls MN, 56241-0147 United States	Electronic Service		No	24-352Official
135	Annette	Johnson	annette.johnson@redlakenation.org	Red Lake Nation		15484 Migizi Drive Red Lake MN, 56671 United States	Electronic Service		No	24-352Official
136	Richard	Johnson	rickjohnson@cozen.com	Cozen O'Connor		150 S. 5th Street Suite 1200 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
137	Sarah	Johnson Phillips	sjphillips@stoel.com	Stoel Rives LLP		33 South Sixth Street Suite 4200 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official
138	Nate	Jones	njones@hcpd.com	Heartland Consumers Power		PO Box 248 Madison SD, 57042 United States	Electronic Service		No	24-352Official
139	Nick	Kaneski	nick.kaneski@enbridge.com	Enbridge Energy Company, Inc.		11 East Superior St Ste 125 Duluth MN, 55802 United States	Electronic Service		No	24-352Official
140	Veda	Kanitz	vmkanitz@gmail.com			null null, null United States	Electronic Service		No	24-352Official
141	Jenny	Kartes	jkartes@arrowhead.coop	Arrowhead Electric Cooperative, Inc.(P)		PO Box 39 5401 W Hwy 61 Lutsen MN, 55612 United States	Electronic Service		No	24-352Official
142	David	Kempf	dkempf@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	24-352Official
143	William	Kenworthy	will@votesolar.org			1 South Dearborn St Ste 2000 Chicago IL, 60603 United States	Electronic Service		No	24-352Official
144	Becky	Kern	bkern@bepc.com	Basin Electric Power Cooperative		1717 E Interstate Ave Bismarck ND, 58501 United States	Electronic Service		No	24-352Official
145	Samuel B.	Ketchum	sketchum@kennedy-graven.com	Kennedy & Graven, Chartered		150 S 5th St Ste 700 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official
146	Nazir	Khan	nazir@mnejtable.org	Minnesota Environmental Justice Table		2720 E 22nd St Minneapolis MN, 55406 United States	Electronic Service		No	24-352Official
147	Hudson	Kingston	hudson@curemn.org			PO Box 712 Ely MN, 55731 United States	Electronic Service		No	24-352Official
148	Kate	Knuth	kate.knuth@gmail.com			2347 14th Terrace NW New Brighton MN, 55112 United States	Electronic Service		No	24-352Official
149	Frank	Kohlasch	frank.kohlasch@state.mn.us		Minnesota Pollution Control Agency	520 Lafayette Rd N. St. Paul MN, 55155 United States	Electronic Service		No	24-352Official
150	Brian	Kolbinger	brian@beckertownship.org	Becker Township Board		PO Box 248 12165 Hancock St Becker MN, 55308 United States	Electronic Service		No	24-352Official
151	Seth	Koneczny	st.koneczny@smmpa.org	SMMPA		500 First Avenue, SW Rochester MN, 55902-3303 United States	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
152	Brian	Krambeer	bkrambeer@mienergy.coop	MiEnergy Cooperative		PO Box 626 31110 Cooperative Way Rushford MN, 55971 United States	Electronic Service		No	24-352Official
153	Randy	Kramer	rlkramer89@gmail.com	Water and Soil Resources Board		42808 Co. Rd. 11 Bird Island MN, 55310 United States	Electronic Service		No	24-352Official
154	Allen	Krug	allen.krug@xcelenergy.com	Xcel Energy		414 Nicollet Mall-7th fl Minneapolis MN, 55401 United States	Electronic Service		No	24-352Official
155	Kay	Kuhlmann	teri.swanson@ci.red-wing.mn.us	City Of Red Wing		315 West Fourth Street Red Wing MN, 55066 United States	Electronic Service		No	24-352Official
156	Brenda	Kyle	bkyle@stpaulchamber.com	St. Paul Area Chamber of Commerce		401 N Robert Street Suite 150 St Paul MN, 55101 United States	Electronic Service		No	24-352Official
157	Therese	LaCanne	tlacanne@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	24-352Official
158	Matthew	Lacey	mlacey@grenergy.com	Great River Energy		12300 Elm Creek Boulevard Maple Grove MN, 55369-4718 United States	Electronic Service		No	24-352Official
159	Becky	Lammi	cityclerk@ci.aurora.mn.us	City of Aurora		16 W 2nd Ave N PO Box 160 Aurura MN, 55705 United States	Electronic Service		No	24-352Official
160	Carmel	Laney	carmel.laney@stoel.com	Stoel Rives LLP		33 South Sixth Street Suite 4200 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official
161	Arthur	LaRose	arthur.larose@llojibwe.net	Leech Lake Band of Ojibwe		190 Sailstar Drive NW Cass Lake MN, 56633 United States	Electronic Service		No	24-352Official
162	Robert L	Larsen	robert.larsen@lowersioux.com	Lower Sioux Indian Community		PO Box 308 39527 Reservation Highway 1 Morton MN, 56270 United States	Electronic Service		No	24-352Official
163	Emily	Larson	elarson@duluthmn.gov	City of Duluth		411 W 1st St Rm 403 Duluth MN, 55802 United States	Electronic Service		No	24-352Official
164	James D.	Larson	james.larson@avantenergy.com	Avant Energy Services		220 S 6th St Ste 1300 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
165	Mark	Larson	mlarson@meeker.coop	Meeker Coop Light & Power Assn		1725 Highway 12 E Ste 100 Litchfield MN, 55355 United States	Electronic Service		No	24-352Official
166	Rachel	Leonard	rachel.leonard@ci.monticello.mn.us	City of Monticello		505 Walnut St Ste 1 Monticello MN, 55362 United States	Electronic Service		No	24-352Official
167	Dan	Lesher	dlesher@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	24-352Official
168	Annie	Levenson Falk	annielf@cubminnesota.org	Citizens Utility Board of Minnesota		332 Minnesota Street, Suite W1360 St. Paul MN, 55101 United States	Electronic Service		No	24-352Official
169	Jesse	Levine	jesse_levine@afandpa.org			1101 K St NW Suite 700 Washington DC, 20005 United States	Electronic Service		No	24-352Official
170	Amy	Liberkowski	amy.a.liberkowski@xcelenergy.com	Xcel Energy		414 Nicollet Mall 7th Floor Minneapolis MN, 55401-1993 United States	Electronic Service		No	24-352Official
171	Eric	Lindberg	elindberg@mncenter.org	Minnesota Center for Environmental Advocacy		1919 University Avenue West Suite 515 Saint Paul MN, 55104-3435 United States	Electronic Service		No	24-352Official
172	Eric	Lipman	eric.lipman@state.mn.us		Office of Administrative Hearings	PO Box 64620 St. Paul MN, 55164-0620 United States	Electronic Service		Yes	24-352Official
173	Michelle	Lommel	mlommel@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	24-352Official
174	Bob	Long	rlong@larkinhoffman.com	Larkin Hoffman (Silicon Energy)		1500 Wells Fargo Plaza 7900 Xerxes Ave S Bloomington MN, 55431 United States	Electronic Service		No	24-352Official
175	Nicole	Luckey	nluckey@invenergyllc.com	Invenergy LLC		1 S. Wacker Suite 1800 Chicago IL, 60606 United States	Electronic Service		No	24-352Official
176	Susan	Ludwig	sludwig@mnpower.com	Minnesota Power		30 West Superior Street Duluth MN, 55802 United States	Electronic Service		No	24-352Official
177	Robert	Lunder	robert.lunder@mdu.com	Montana-Dakota Utilities (ET)		400 N 4th St Bismark ND, 58501 United States	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
178	Alice	Madden	alice@communitypowermn.org	Community Power		2720 E 22nd St Minneapolis MN, 55406 United States	Electronic Service		No	24-352Official
179	Scott	Magnuson	smagnuson@bpu.org	Brainerd Public Utilities		8027 Highland Scenic Rd Baxter MN, 56425 United States	Electronic Service		No	24-352Official
180	Kavita	Maini	kmaini@wi.rr.com	KM Energy Consulting, LLC		961 N Lost Woods Rd Oconomowoc WI, 53066 United States	Electronic Service		No	24-352Official
181	Christine	Marquis	regulatory.records@xcelenergy.com	Xcel Energy		414 Nicollet Mall MN1180-07-MCA Minneapolis MN, 55401 United States	Electronic Service		No	24-352Official
182	Emily	Marshall	emarshall@lourismarshall.com	Miller O'Brien Jensen, PA		120 S. 6th Street Suite 2400 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official
183	Mary	Martinka	mary.a.martinka@xcelenergy.com	Xcel Energy Inc		414 Nicollet Mall 7th Floor Minneapolis MN, 55401 United States	Electronic Service		No	24-352Official
184	Trista	Martinson	tmartinson@recyclingandenergy.org	Ramsey/Washington Recycling & Energy Board		100 Red Rock Rd Newport MN, 55055 United States	Electronic Service		No	24-352Official
185	Gregg	Mast	gmast@cleanenergyeconomymn.org	Clean Energy Economy Minnesota		4808 10th Avenue S Minneapolis MN, 55417 United States	Electronic Service		No	24-352Official
186	Shena	Matrious	shena.matrious@millelacsband.com	Mille Lacs Band of Ojibwe		43408 Oodena Drive Onamia MN, 56349 United States	Electronic Service		No	24-352Official
187	Daryl	Maxwell	dmaxwell@hydro.mb.ca	Manitoba Hydro		360 Portage Ave FL 16 PO Box 815, Station Main Winnipeg MB, R3C 2P4 Canada	Electronic Service		No	24-352Official
188	Tim	McCarthy	tim.mccarthy@siouxvalleyenergy.com	Sioux Valley Southwestern Electric Cooperative, Inc. d/b/a Sioux Valley Energy		null null, null United States	Electronic Service		No	24-352Official
189	Scot	McClure	scotmcclure@alliantenergy.com	Interstate Power And Light Company		4902 N Biltmore Ln PO Box 77007 Madison WI, 53707-1007 United States	Electronic Service		No	24-352Official
190	April	McCormick	aprilm@grandportage.com	Grand Portage Band of Lake Superior Chippewa		PO Box 428 Grand Portage MN, 55605 United States	Electronic Service		No	24-352Official
191	Jess	McCullough	jmccullough@mnpower.com	Minnesota Power		30 W Superior St Duluth MN,	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						55802 United States				
192	Sara G	McGrane	smcgrane@felhaber.com	Felhaber Larson		220 S 6th St Ste 2200 Minneapolis MN, 55420 United States	Electronic Service		No	24-352Official
193	Natalie	McIntire	natalie.mcintire@gmail.com	Wind on the Wires		570 Asbury St Ste 201 Saint Paul MN, 55104-1850 United States	Electronic Service		No	24-352Official
194	Harvey	McMahon	hmcmahon@otpco.com	Otter Tail Power Company		215 South Cascade Street Fergus Falls MN, 56537 United States	Electronic Service		No	24-352Official
195	Taylor	McNair	taylor@gridlab.org			668 Capp Street San Francisco CA, 94110 United States	Electronic Service		No	24-352Official
196	Ronald	Meier	rmeier@mcleodcoop.com	Mcleod Cooperative Power		3515 11th St East Glencoe MN, 55336 United States	Electronic Service		No	24-352Official
197	Melanie	Mesko Lee	melanie.lee@burnsvillemn.gov	City of Burnsville		100 Civic Center Parkway Burnsville MN, 55337-3867 United States	Electronic Service		No	24-352Official
198	Peder	Mewis	pmewis@cleangridalliance.org	Clean Grid Alliance		570 Asbury St. St. Paul MN, 55104 United States	Electronic Service		No	24-352Official
199	Joseph	Meyer	joseph.meyer@ag.state.mn.us		Office of the Attorney General - Residential Utilities Division	Bremer Tower, Suite 1400 445 Minnesota Street St Paul MN, 55101-2131 United States	Electronic Service		No	24-352Official
200	Valentina	Mgeni	valentina.mgeni@piic.org	Prairie Island Indian Community		Prairie Island Indian Community 5636 Sturgeon Lake Road Welch MN, 55089 United States	Electronic Service		No	24-352Official
201	Cole W.	Miller	cole.miller@shakopeedakota.org	Shakopee Mdewakanton Sioux Community		Shakopee Mdewakanton Sioux Community 2330 Sioux Trail NW Prior Lake MN, 55372 United States	Electronic Service		No	24-352Official
202	Dalene	Monsebroten	dalene.monsebroten@nmpagency.com	Northern Municipal Power Agency		123 2nd St W Thief River Falls MN, 56701 United States	Electronic Service		No	24-352Official
203	Sarah	Mooradian	sarah@curemn.org	CURE		117 South 1st Street Montevideo MN, 56265 United States	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
204	Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP		33 South Sixth St Ste 4200 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official
205	Travis	Morrision	travis.morrison@boisforte-nsn.gov	Bois Forte Band of Chippewa		Bois Forte Tribal Government 5344 Lakeshore Drive Nett Lake MN, 55772 United States	Electronic Service		No	24-352Official
206	David	Morrison, Sr.	david.morrison@boisforte-nsn.gov	Bois Forte Band of Chippewa		Bois Forte Tribal Government 5344 Lakeshore Drive Nett Lake MN, 55772 United States	Electronic Service		No	24-352Official
207	Evan	Mulholland	emulholland@mncenter.org	Minnesota Center for Environmental Advocacy		1919 University Ave W Ste 515 Saint Paul MN, 55101 United States	Electronic Service		No	24-352Official
208	Alan	Muller	alan@greendel.org	Energy & Environmental Consulting		1110 West Avenue Red Wing MN, 55066 United States	Electronic Service		No	24-352Official
209	Sonny	Myers	smyers@1854treatyauthority.org	1854 Treaty Authority		4428 Haines Rd Duluth MN, 55811-1524 United States	Electronic Service		No	24-352Official
210	Ben	Nelson	benn@cmpasgroup.org	CMMPA		459 South Grove Street Blue Earth MN, 56013 United States	Electronic Service		No	24-352Official
211	Carl	Nelson	cnelson@mncee.org	Center for Energy and Environment		212 3rd Ave N Ste 560 Minneapolis MN, 55401 United States	Electronic Service		No	24-352Official
212	Deb	Nelson	dnelson@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	24-352Official
213	David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency		220 South Sixth Street Suite 1300 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official
214	Duane	Ninneman	duane@cureriver.org	Clean Up the River Environment		117 South 1st St Montevideo MN, 56265 United States	Electronic Service		No	24-352Official
215	Michael	Noble	noble@fresh-energy.org	Fresh Energy		408 Saint Peter St Ste 350 Saint Paul MN, 55102 United States	Electronic Service		No	24-352Official
216	Rolf	Nordstrom	rnordstrom@gpisd.net	Great Plains Institute		2801 21ST AVE S STE 220 Minneapolis MN, 55407-1229 United States	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
217	Samantha	Norris	samanthanorris@alliantenergy.com	Interstate Power and Light Company		200 1st Street SE PO Box 351 Cedar Rapids IA, 52406-0351 United States	Electronic Service		No	24-352Official
218	M. William	O'Brien	bobrien@mojlaw.com	Miller O'Brien Jensen, P.A.		120 S 6th St Ste 2400 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official
219	Ric	O'Connell	ric@gridlab.org	GridLab		2120 University Ave Berkeley CA, 94704 United States	Electronic Service		No	24-352Official
220	Joseph	OBrien	joey.obrien@lowersioux.com			39527 Highway 1 Morton MN, 56270 United States	Electronic Service		No	24-352Official
221	Lori	Olinger	olingers25@msn.com	Coalition for Plastic Reduction		25 Deer Hills DR North Oaks MN, 55127 United States	Electronic Service		No	24-352Official
222	Matthew	Olsen	molsen@otpco.com	Otter Tail Power Company		215 South Cascade Street Fergus Falls MN, 56537 United States	Electronic Service		No	24-352Official
223	Russell	Olson	rolson@hcpd.com	Heartland Consumers Power District		PO Box 248 Madison SD, 57042-0248 United States	Electronic Service		No	24-352Official
224	Debra	Opatz	dopatz@otpco.com	Otter Tail Power Company		215 South Cascade Street Fergus Falls MN, 56537 United States	Electronic Service		No	24-352Official
225	Mikayla	Osterman	mosterman@otpco.com	Otter Tail Power Company		215 S Cascade St PO Box 496 Fergus Falls MN, 56537 United States	Electronic Service		No	24-352Official
226	Jamie	Overgaard	jovergaard@minnkota.com	Minnkota Power Cooperative, Inc.		5301 32nd Ave S Grand Forks ND, 58201 United States	Electronic Service		No	24-352Official
227	Carol A.	Overland	overland@legalectric.org	Legalectric - Overland Law Office		1110 West Avenue Red Wing MN, 55066 United States	Electronic Service		No	24-352Official
228	Gregory	Padden	gpadden@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	24-352Official
229	Jessica	Palmer Denig	jessica.palmer-denig@state.mn.us		Office of Administrative Hearings	600 Robert St N PO Box 64620 St. Paul MN, 55164 United States	Electronic Service		No	24-352Official
230	Marsha	Parlow	mparlow@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
231	Priti	Patel	ppatel@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369-4718 United States	Electronic Service		No	24-352Official
232	Gerad	Paul	gpaul@minnkota.com	Minnkota Power Cooperative		5301 32nd Ave S Grand Forks ND, 58201 United States	Electronic Service		No	24-352Official
233	Earl	Pendleton	earl.pendleton@lowersioux.com	Lower Sioux Indian Community		39527 Highway 1 Morton MN, 56270 United States	Electronic Service		No	24-352Official
234	Mary Beth	Peranteau	mperanteau@fredlaw.com	Fredrikson & Byron, P.A.		44 East Mifflin Street Suite 1000 Madison WI, 53703 United States	Electronic Service		No	24-352Official
235	Thom	Petersen	thom.petersen@state.mn.us		Minnesota Department of Agriculture	625 North Robert St Saint Paul MN, 55155 United States	Electronic Service		No	24-352Official
236	Luke	Peterson	luke.peterson@hpuc.com	Hibbing Public Utilities Commission		1902 Sixth Ave E Hibbing MN, 55746 United States	Electronic Service		No	24-352Official
237	Neil	Peterson	info@nclucb.org	Northern Counties Land Use Coordinating Board		null null, null United States	Electronic Service		No	24-352Official
238	Gordon	Pietsch	gpietsch@grenergy.com	Great River Energy		12300 Elm Creek Blvd. Maple Grove MN, 55369-4718 United States	Electronic Service		No	24-352Official
239	Joe	Plumer	joe.plumer@redlakenation.org	Red Lake Nation		15484 Migizi Drive Red Lake MN, 56671 United States	Electronic Service		No	24-352Official
240	Kaci	Poor	kwp@floomenergylaw.com	Floom Energy Law PLLC		3100 Clarendon Blvd. Suite 920 Arlington VA, 22201 United States	Electronic Service		No	24-352Official
241	J.	Porter	greg.porter@nngco.com	Northern Natural Gas Company		1111 South 103rd St Omaha NE, 68124 United States	Electronic Service		No	24-352Official
242	Kevin	Pranis	kpranis@liunagroc.com	Laborers' District Council of MN and ND		81 E Little Canada Road St. Paul MN, 55117 United States	Electronic Service		No	24-352Official
243	Robert	Prescott	bob.prescott@lowersioux.com	Lower Sioux Indian Community		39527 Highway 1 Morton MN, 56270 United States	Electronic Service		No	24-352Official
244	Jody	Puddu	jody.puddu@piic.org	Prairie Island Indian Community		5636 Sturgeon Lake Rd Welch MN, 55089 United States	Electronic Service		No	24-352Official
245	David	Raatz	draatz@bepc.com	Basin Electric Power Cooperative		1717 East Interstate Avenue Bismarck ND,	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						58501 United States				
246	John C.	Reinhardt		Laura A. Reinhardt		3552 26th Ave S Minneapolis MN, 55406 United States	Paper Service		No	24-352Official
247	Victoria	Reinhardt	victoria.reinhardt@co.ramsey.mn.us	Partnership on Waste and Energy		Ramsey County Board Office 15 W. Kellogg Blvd., Ste. 220 St. Paul MN, 55102 United States	Electronic Service		No	24-352Official
248	Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us		Office of the Attorney General - Residential Utilities Division	1400 BRM Tower 445 Minnesota St St. Paul MN, 55101-2131 United States	Electronic Service		Yes	24-352Official
249	Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy		26 E Exchange St, Ste 206 St. Paul MN, 55101-1667 United States	Electronic Service		No	24-352Official
250	Micah	Revell	micah.revell@stinson.com	Stinson LLP		50 South Sixth St Ste 2600 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official
251	John	Richards	johnrichards@nweco.com	Northwestern Wisconsin Electric Company		104 S. Pine St. Grantsburg WI, 54840 United States	Electronic Service		No	24-352Official
252	Susan	Romans	sromans@allete.com	Minnesota Power		30 West Superior Street Legal Dept Duulth MN, 55802 United States	Electronic Service		No	24-352Official
253	Stephan	Roos	stephan.roos@state.mn.us		Minnesota Department of Agriculture	625 Robert St N Saint Paul MN, 55155-2538 United States	Electronic Service		No	24-352Official
254	B.	Rosas	b.rosas@climategen.org			1427 Monroe Street NE #2 Minneapolis MN, 55413 United States	Electronic Service		No	24-352Official
255	Alan	Roy	alan.roy@whiteearth-nsn.gov	White Earth Nation		White Earth Tribal Headquarters 35500 Eagle View Road Ogema MN, 56569 United States	Electronic Service		No	24-352Official
256	Bill	Rudnicki	bill.rudnicki@shakopeedakota.org	Shakopee Mdewakanton Sioux Community		Shakopee Mdewakanton Sioux Community 2330 Sioux Trail NW Prior Lake MN, 55372 United States	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
257	Nathaniel	Runke	nrunke@local49.org			611 28th St. NW Rochester MN, 55901 United States	Electronic Service		No	24-352Official
258	Zachary	Ruzycki	zruzycki@grenergy.com	Great River Energy		12300 Elm Creek Boulevard Maple Grove MN, 55369 United States	Electronic Service		No	24-352Official
259	Robert K.	Sahr	bsahr@eastriver.coop	East River Electric Power Cooperative		P.O. Box 227 Madison SD, 57042 United States	Electronic Service		No	24-352Official
260	Todd	Sailer		Minnetonka Power Cooperative		5301 32nd Ave. S Grand Forks ND, 58201 United States	Paper Service		No	24-352Official
261	Miranda	Sam	miranda.sam@lowersioux.com	Lower Sioux Indian Community		39527 Reservation Highway 1 PO Box 308 Morton MN, 56270 United States	Electronic Service		No	24-352Official
262	Joseph L	Sathe	jsathe@kennedy-graven.com	Kennedy & Graven, Chartered		150 S 5th St Ste 700 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official
263	Adam	Savariego	adams@uppersiouxcommunity-nsn.gov	Upper Sioux Community		5722 Travers Lane PO Box 147 Granite Falls MN, 56241 United States	Electronic Service		No	24-352Official
264	John	Saxhaug	john_saxhaug@yahoo.com			3940 Harriet Ave Minneapolis MN, 55409 United States	Electronic Service		No	24-352Official
265	Jean	Schafer	jeans@bepc.com	Basin Electric Power Cooperative		1717 E Interstate Ave Bismarck ND, 58501 United States	Electronic Service		No	24-352Official
266	Eric	Schenck	eric.schenck@state.mn.us	EWS		1530 Cleveland Ave. N St. Paul MN, 55108 United States	Electronic Service		No	24-352Official
267	Jeff	Schneider	jeff.schneider@ci.red-wing.mn.us	City of Red Wing		315 West 4th Street Red Wing MN, 55066 United States	Electronic Service		No	24-352Official
268	Kay	Schraeder	kschraeder@minnkota.com	Minnkota Power		5301 32nd Ave S Grand Forks ND, 58201 United States	Electronic Service		No	24-352Official
269	Kathleen	Schuler	keschuler47@gmail.com			1520 10th Ave S #2 Minneapolis MN, 55404 United States	Electronic Service		No	24-352Official
270	Robert H.	Schulte	rhs@schulteassociates.com	Schulte Associates LLC		1742 Patriot Rd Northfield MN, 55057 United States	Electronic Service		No	24-352Official
271	J.P.	Schumacher	jps@mrenergy.com	Missouri River Energy Services		null null, null United States	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
272	Kevin	Schumacher	kevin@mrets.org	Midwest Renewable Energy Tracking System		null null, null United States	Electronic Service		No	24-352Official
273	Ronald J.	Schwartau	rschwartau@noblesce.com	Nobles Electric Cooperative		22636 U.S. Hwy. 59 Worthington MN, 56187 United States	Electronic Service		No	24-352Official
274	Douglas	Seaton	doug.seaton@umwlc.org	Upper Midwest Law Center		8421 Wayzata Blvd Ste 300 Golden Valley MN, 55426 United States	Electronic Service		No	24-352Official
275	Dean	Sedgwick	sedgwick@itascapower.com	Itasca Power Company		PO Box 455 Spring Lake MN, 56680 United States	Electronic Service		No	24-352Official
276	Jessie	Seim	jessie.seim@piic.org	Prairie Island Indian Community		5636 Sturgeon Lake Rd Welch MN, 55089 United States	Electronic Service		No	24-352Official
277	Darrell	Seki, Sr.	dseki@redlakenation.org			15484 Migizi Drive Red Lake MN, 56671 United States	Electronic Service		No	24-352Official
278	Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates		7400 Lyndale Ave S Ste 190 Richfield MN, 55423 United States	Electronic Service		No	24-352Official
279	Bria	Shea	bria.e.shea@xcelenergy.com	Xcel Energy		414 Nicollet Mall Minneapolis MN, 55401 United States	Electronic Service		No	24-352Official
280	Andrew R.	Shedlock	andrew.shedlock@kutakrock.com	Kutak Rock LLP		60 South Sixth St Ste 3400 Minneapolis MN, 55402-4018 United States	Electronic Service		No	24-352Official
281	Doug	Shoemaker	dougs@charter.net	Minnesota Renewable Energy		2928 5th Ave S Minneapolis MN, 55408 United States	Electronic Service		No	24-352Official
282	Beth	Smith	bsmith@greatermankato.com	Greater Mankato Growth		1961 Premier Dr Ste 100 Mankato MN, 56001 United States	Electronic Service		No	24-352Official
283	Joel	Smith	jsmith@mnchippewatribe.org	Minnesota Chippewa Tribe		PO Box 217 Cass Lake MN, 56633 United States	Electronic Service		No	24-352Official
284	Joshua	Smith	joshua.smith@sierraclub.org			85 Second St FL 2 San Francisco CA, 94105 United States	Electronic Service		No	24-352Official
285	Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.		76 W Kellogg Blvd St. Paul MN, 55102 United States	Electronic Service		No	24-352Official
286	Nizhoni	Smith	nizhoni.smith@lowersioux.com	Lower Sioux Indian Community		PO Box 308 39527 Reservation Highway 1 Morton MN, 56270 United States	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
287	Trevor	Smith	trevor.smith@avantenergy.com	Avant Energy, Inc.		220 South Sixth Street Suite 1300 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official
288	Roger	Smith, Sr.	rogermsmithsr@fdlrez.com			1720 Big Lake Road Cloquet MN, 55720 United States	Electronic Service		No	24-352Official
289	Beth	Soholt	bsoholt@cleangridalliance.org	Clean Grid Alliance		570 Asbury Street Suite 201 St. Paul MN, 55104 United States	Electronic Service		No	24-352Official
290	Anna	Sommer	asommer@energyfuturesgroup.com	Energy Futures Group		PO Box 692 Canton NY, 13617 United States	Electronic Service		No	24-352Official
291	Marie	Spry	mariespry@grandportage.com			PO Box 428 Grand Portage MN, 55605 United States	Electronic Service		No	24-352Official
292	Mark	Spurr	mspurr@fvbenergy.com	International District Energy Association		222 South Ninth St., Suite 825 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official
293	LeRoy	Staples Fairbanks III	leroy.fairbanks@llojibwe.net	Leech Lake Band of Ojibwe		190 Sailstar Drive NW Cass Lake MN, 56633 United States	Electronic Service		No	24-352Official
294	Russ	Stark	russ.stark@ci.stpaul.mn.us	City of St. Paul		Mayor's Office 15 W. Kellogg Blvd., Suite 390 Saint Paul MN, 55102 United States	Electronic Service		No	24-352Official
295	Byron E.	Starns	byron.starns@stinson.com	STINSON LLP		50 S 6th St Ste 2600 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official
296	Cary	Stephenson	cstephenson@otpco.com	Otter Tail Power Company		215 South Cascade Street Fergus Falls MN, 56537 United States	Electronic Service		No	24-352Official
297	Mark	Strohfus	mstrohfus@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	24-352Official
298	Samuel	Strong	sam.strong@redlakenation.org	Red Lake Nation		15484 Migizi Drive Red Lake MN, 56671 United States	Electronic Service		No	24-352Official
299	Kent	Sulem	ksulem@mmua.org			3131 Fernbrook Ln N Ste 200 Plymouth MN, 55447-5337 United States	Electronic Service		No	24-352Official
300	Timothy	Sullivan	tsullivan@whe.org	Wright Hennepin Coop. Electric Assn.		6800 Electric Drive PO Box 330 Rockford MN, 55373 United States	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
301	David	Sunderman	daves@benco.org	BENCO (DUPLICATE)		PO Box 8 Mankato MN, 56002-0008 United States	Electronic Service		No	24-352Official
302	Randy	Synstelien	rsynstelien@otpco.com	Otter Tail Power Company		215 S Cascade St Fergus Falls MN, 56537 United States	Electronic Service		No	24-352Official
303	Camille	Tanhoff	kamip@uppersiouxcommunity-nsn.gov	Upper Sioux Community		5722 Travers Lane PO BOX 147 Granite Falls MN, 56241 United States	Electronic Service		No	24-352Official
304	Mikayala	Thompson	mmthompson@otpco.com	Otter Tail Power Company		null null, null United States	Electronic Service		No	24-352Official
305	Tim	Thompson	tthompson@lrec.coop	Lake Region Electric Cooperative		PO Box 643 1401 South Broadway Pelican Rapids MN, 56572 United States	Electronic Service		No	24-352Official
306	Joshua	Toor	joshuat@eurekarecycling.org	Eureka Recycling			Electronic Service		No	24-352Official
307	Pat	Treseler	pat.jcplaw@comcast.net	Paulson Law Office LTD		4445 W 77th Street Suite 224 Edina MN, 55435 United States	Electronic Service		No	24-352Official
308	Lise	Trudeau	lise.trudeau@state.mn.us		Department of Commerce	85 7th Place East Suite 500 Saint Paul MN, 55101 United States	Electronic Service		No	24-352Official
309	Caralyn	Trutna	carrie@uppersiouxcommunity-nsn.gov	Upper Sioux Community		Upper Sioux Community P.O. Box 147 Granite Falls MN, 55372 United States	Electronic Service		No	24-352Official
310	Jackie	Van Norman	jvannorman@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	24-352Official
311	Analeisha	Vang	avang@mnpower.com			30 W Superior St Duluth MN, 55802-2093 United States	Electronic Service		No	24-352Official
312	Adrian	Varga	avarga@actcommodities.com	ACT Commodities		437 Madison Ave New York City NY, 10022 United States	Electronic Service		No	24-352Official
313	Sam	Villella	sdvillella@gmail.com			10534 Alamo Street NE Blaine MN, 55449 United States	Electronic Service		No	24-352Official
314	Julie	Voeck	julie.voeck@nee.com	NextEra Energy Resources, LLC		700 Universe Blvd Juno Beach FL, 33408 United States	Electronic Service		No	24-352Official
315	Amelia	Vohs	avohs@mncenter.org	Minnesota Center for Environmental Advocacy		1919 University Avenue West Suite 515 St. Paul MN, 55104 United States	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
316	Michael	Volker	mvolker@eastriver.coop	East River Electric Power Coop		211 S. Harth Ave Madison SD, 57042 United States	Electronic Service		No	24-352Official
317	Toni	Volkmeier	toni.volkmeier@state.mn.us	MPCA		520 Lafayette Rd. N. St. Paul MN, 55155 United States	Electronic Service		No	24-352Official
318	Trent	Waite	twaite@grenergy.com			null null, null United States	Electronic Service		No	24-352Official
319	Laurance R	Waldoch	larrywaldoch@gmail.com	Attorney		2597 Parkview Dr Saint Paul MN, 55110 United States	Electronic Service		No	24-352Official
320	Greg	Wannier	greg.wannier@sierraclub.org	Sierra Club		2101 Webster St Ste 1300 Oakland CA, 94612 United States	Electronic Service		No	24-352Official
321	Roger	Warehime	roger.warehime@owatonnautilities.com	Owatonna Municipal Public Utilities - Gas		208 S Walnut Ave PO BOX 800 Owatonna MN, 55060 United States	Electronic Service		No	24-352Official
322	Cynthia	Warzecha	cynthia.warzecha@state.mn.us	Minnesota Department of Natural Resources		500 Lafayette Road Box 25 St. Paul MN, 55155-4040 United States	Electronic Service		No	24-352Official
323	Heather	Westra	heather.westra@piic.org	Prairie Island Indian Community		5636 Sturgeon Lake Rd Welch MN, 55089 United States	Electronic Service		No	24-352Official
324	Paul	White	paul.white@prcwind.com	Project Resources Corp./Tamarac Line LLC/Ridgewind		618 2nd Ave SE Minneapolis MN, 55414 United States	Electronic Service		No	24-352Official
325	Steve	White	steve.white@llojibwe.net	Leech Lake Band of Ojibwe		190 Sailstar Drive NW Cass Lake MN, 56633 United States	Electronic Service		No	24-352Official
326	Cody	Whitebear	cody.whitebear@piic.org	Prairie Island Indian Community		5636 Sturgeon Lake Road Welch MN, 55089 United States	Electronic Service		No	24-352Official
327	John	Williams	jwilliams@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	24-352Official
328	Laurie	Williams	laurie.williams@sierraclub.org	Sierra Club		Environmental Law Program 1536 Wynkoop St Ste 200 Denver CO, 80202 United States	Electronic Service		No	24-352Official
329	Virgil	Wind	virgil.wind@millelacsband.com	Mille Lacs Band of Ojibwe		43408 Oodena Drive Onamia MN, 56359 United States	Electronic Service		No	24-352Official
330	Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine		225 South Sixth Street, Suite 3500	Electronic Service		No	24-352Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						Minneapolis MN, 55402 United States				
331	Robyn	Woeste	robynwoeste@alliantenergy.com	Interstate Power and Light Company		200 First St SE Cedar Rapids IA, 52401 United States	Electronic Service		No	24-352Official
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337	Patrick	Zomer	pzomer@cozen.com	Cozen O'Connor		150 S. 5th Street, #1200 Minneapolis MN, 55402 United States	Electronic Service		No	24-352Official