COMMERCE DEPARTMENT

May 23, 2025

Will Seuffert
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: Response to Xcel EnCompass Modeling & Correction of Final Recommendation List
Docket No. E-999/CI-23-151

Dear Mr. Seuffert:

The Department submits this letter in primarily in response to a significant claim made by Northern States Power Company, dba Xcel Energy (Xcel) in its Round 3 reply comments. In its comments, Xcel attempts to refute the Department's recommendation for hourly matching. On March 19, 2025, Xcel stated:

> In order to meet the 2040 goal, our analysis shows that we would need to add an incremental 17,700 MWs of battery storage and over 4,000 MW of incremental solar resources, both which would require significant acreage, above the amount included in our recently approved IRP. As a result, in 2040 the revenue requirement associated with this overbuild of resources would be over 60 percent higher than the costs included in our IRP without providing additional energy or capacity benefits for our customers. These resources would go beyond our actual system needs and transmission and infrastructure costs would be in addition to this. Such a requirement would have significant impacts on customer rates. More analysis of the potential rate impacts of an hourly requirement should be undertaken to fully understand the impact to customers before implementation of an hourly matching compliance methodology.[1]

Xcel submitted this modeling to the docket with a sparse narrative explaining the modeling framework and assumptions, and also did not submit the necessary modeling files for the Department or other stakeholders to analyze the modeling results. The Department had to request the information necessary to perform the analysis through a formal information request. On April 1, 2025, the Department received Xcel's response to the Department's information request for all of the

[1] Northern States Power Company, dba Xcel Energy, Reply Comments, March 19, 2025, (eDockets) 20253-216596-01, at 11.

EnCompass modeling files used to generate the above-referenced analysis.[2] In its Supplemental Comments, the Department stated, "[t]he Department may provide a detailed discussion of Xcel's modeling results in a late filed supplemental filing, or discuss its response at the forthcoming Agenda

Meeting."[3] The Department was unable to analyze Xcel's modeling files until after it filed its Supplemental Comments in the current proceeding.

The Department attempted to submit a quick response to show how capacity buildout decreases with a declining Carbon-free Standard (CFS) hourly matching requirement; however, this attempt was stymied by a number of factors. The Department was unable to replicate Xcel's results due to a difference in EnCompass model behavior between different versions of EnCompass. Once this discrepancy was resolved, the Department was able to replicate Xcel's results. A subsequent reduction of Xcel's CFS compliance requirement resulted in identical capacity buildout, which is unexpected. Because of these issues, the Department required additional time to understand and test Xcel's model to produce the intended result of declining capacity buildout with a declining CFS requirement.

The Department apologizes for the delay, and requests that the Commission add the Department's analysis to the record, particularly because the conclusions of the Department are of significant importance to the current understanding of concepts discussed in the record.

The Department's analysis questions the value of Xcel's modeling choices, which unreasonably bias the results towards the highest-cost outcome possible under a 24/7 CFS matching scenario and muddle the record with misleading conclusions. The Department will discuss multiple areas in which Xcel's analysis of hourly matching can be modeled differently, including participation in the Midcontinent Independent System Operator, Inc. (MISO) market, the implementation of compliance cost caps, and briefly discusses other options such as utilization of lower-cost technology options and energy attribute certificate (EAC) purchases.

Attached is Appendix C (Reply to Xcel EnCompass Modeling) to the Department's Supplemental Comments.

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[2] See Appendix A of the Department's Supplemental Comments. Minnesota Department of Commerce, April 16, 2025, (eDockets) 20254-217739-01, (hereinafter "Department Supplemental Comments").
[3] *Id.*, at 32.

Additionally, the Department issues two corrections to its final recommendations in its Supplemental Comments. First, the hourly matching requirement, listed as B.1.2.1.1 was erroneously included in the Department's recommendations, and should have been removed. Second, the Department erroneously omitted its recommendation on pages 43-44 of its Supplemental Comments that pertains to a geographic preference, which shall be listed as B.8. The revised list of Department recommendations is attached to this letter as Attachment A.

Sincerely,

/s/ Sydnie Lieb, Ph.D.
Assistant Commissioner, Office of Regulatory Analysis

SL/AZ/ad
Attachment

COMMERCE DEPARTMENT

Before the Minnesota Public Utilities Commission

Supplemental Comments of the Minnesota Department of Commerce

I. INTRODUCTION

On March 19, 2025, the Northern States Power Company, dba Xcel Energy (Xcel) stated:

> In order to meet the 2040 goal, our analysis shows that we would need to add an incremental 17,700 MWs of battery storage and over 4,000 MW of incremental solar resources, both which would require significant acreage, above the amount included in our recently approved IRP. As a result, in 2040 the revenue requirement associated with this overbuild of resources would be over 60 percent higher than the costs included in our IRP without providing additional energy or capacity benefits for our customers. These resources would go beyond our actual system needs and transmission and infrastructure costs would be in addition to this. Such a requirement would have significant impacts on customer rates. More analysis of the potential rate impacts of an hourly requirement should be undertaken to fully understand the impact to customers before implementation of an hourly matching compliance methodology.[4]

The purpose of this appendix is to explore the cost drivers of Xcel's analysis of hourly matching to meet the Carbon-free Standard (CFS). The analysis presented in this appendix focuses only on capacity buildout and does not present results for revenue requirements or for social costs. The focus on capacity allows for an abbreviated discussion with less model behavior to explain, as well as less data to present. The Department's analysis shows a significant correlation between added capacity and total system costs, particularly as these costs pertain to renewables and storage.

The Department's analysis demonstrates that significantly reduced capacity buildout can result from the allowance of market exports in capacity expansion plans, as well as from changes to the penalty for non-compliance to alleviate the need for capacity that serves very little compliance benefit.

II. REVIEW OF KEY ASSUMPTIONS

In this section, the Department provides a brief discussion of the assumptions used by Xcel. These assumptions shape model behavior by applying constraints to capacity buildout. This section only states the key assumptions. The Department's analysis of Xcel's assumptions is covered in the next section.

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[4] Northern States Power Company, dba Xcel Energy, Reply Comments, March 19, 2025, (eDockets) 20253-216596-01, at 11, (hereinafter "Xcel Reply Comments").

A. ENVIRONMENTAL COMPLIANCE PROGRAM

Xcel employs the environmental compliance program function in EnCompass to model hourly matching. The environmental compliance program requires that the model A) build resources to comply with the CFS requirement, or B) pay a penalty of $1,000,000 for each MWh of energy that is not met for the CFS compliance requirement. Compliance with the program is measured on an annual basis.

B. ENVIRONMENTAL COMPLIANCE DATES

Xcel models the CFS according to the CFS requirements of 80 percent carbon-free by 2030, 90 percent carbon-free by 2035, and 100 percent carbon-free by 2040.

C. COMPLIANCE ALLOCATION

Xcel models 74 percent of its total system load to meet a 100 percent CFS. This load requirement corresponds to the Minnesota share of Xcel's multi-state service area.

In addition, Xcel applies its 74 percent jurisdictional allocation to all new expansion units, known as capital projects in EnCompass.

D. ELIGIBLE RESOURCES

Xcel allows a large number of resources to meet its CFS compliance goal. A number of existing and planned resources are allowed for CFS compliance, as well as future generic wind and solar projects. In addition, battery storage is also available, but can only be used to meet the CFS to the extent that storage avoids curtailment of CFS-eligible generation.

E. CAPITAL PROJECT AVAILABILITY

Table 1 shows the main resources available for capital projects:

Table 1: Xcel CFS-Eligible Resources and Storage Available for Capacity Expansion

Resource	2030	2035	2040	2045
Wind (MW)	2,800	5,600	66,400	166,400
Solar (MW)	0	1,200	31,200	81,200
Battery 4 Hr (MW)	720	1,500	19,800	49,800
Battery 10 Hr (MW)	Unconstrained	Unconstrained	Unconstrained	Unconstrained

F. MISO MARKET ACCESS IN CAPACITY EXPANSION

Xcel allows no access to the Midcontinent Independent System Operator, Inc. (MISO) market in its capacity expansion model, which means that no energy generated by Xcel can be exported to MISO and no energy from MISO can be imported by Xcel.

G. MODEL TIMEFRAME

Xcel's capacity expansion model runs from 2024 to 2045 with an optimization period of 4 years. In this scenario the model automatically optimizes the system in four-year increments rather than once for the entire 2024 to 2045 timeframe, Xcel used this timeframe for its EnCompass models in its recent integrated resource plan (IRP) in Docket No. E002/RP-24-67.

III. XCEL'S MODELING RESULTS

Xcel's modeling scenarios compare generic CFS-eligible new resource additions with and without the CFS requirement during the 2024-2045 timeframe. Table 2 presents the results for the No CFS Base and for the Xcel CFS Base. These two base scenarios will be used to compare Department modeling results to Xcel's modeling results. The marginal capacity is derived from the subtraction of the No CFS Base capacity from the Xcel CFS Base. Xcel's CFS Base Scenario only deviates from the No CFS Base in 2040 and 2045. Note that the model never selects 10-hour storage, so these results are omitted from future discussion. It is worth noting that there is a large increase in capacity needs in the last year of the run (2045). The Department does not investigate why this large increase occurs. However, the fact that increase is entirely solar and battery units indicates the model is dealing with capacity issues rather than energy issues.

Table 2: Comparison of Xcel No CFS Baseline Capacity to Xcel CFS Baseline Capacity

No CFS Base	2030	2035	2040	2045
Generic Wind Capacity (MW)	2,800	5,600	8,400	14,400
Generic Solar Capacity (MW)	0	1,200	1,200	1,200
Generic 4 Hour Battery Capacity (MW)	720	1,500	2,100	3,527
Total	3,520	8,300	11,700	19,127
Xcel CFS Base	2030	2035	2040	2045
Generic Wind Capacity (MW)	2,800	5,600	8,400	14,400
Generic Solar Capacity (MW)	0	1,200	5,292	25,292
Generic 4 Hour Battery Capacity (MW)	720	1,500	19,800	49,800
Total	3,520	8,300	33,492	89,492
Xcel CFS Base Marginal Capacity	2030	2035	2040	2045
Generic Wind Capacity (MW)	0	0	0	0
Generic Solar Capacity (MW)	0	0	4,092	24,092
Generic 4 Hour Battery Capacity (MW)	0	0	17,700	46,273
Total	0	0	21,792	70,365

Table 2 shows that in the early years (2030 and 2035) there is no marginal capacity impact. However, in 2040 an additional 4,092 MW of solar, and 17,700 MW of storage, are needed, which totals 21,792 MW of marginal capacity. In 2045, an additional 24,092 MW of solar, 46,273 MW of storage is needed, which totals 70,365 MW of marginal capacity.

IV. DEPARTMENT ANALYSIS

The focus of the Department's analysis is A) to explain the behavior of Xcel's model, and B) to explore different model assumptions that could lower capacity buildout.

A. HOURLY MATCHING IMPLEMENTATION TIMELINE

As a preliminary matter, the Department made the following recommendation for hourly matching in its Initial Comments:

> The Department recommends that the Commission order the following total retail electric sales matching requirements for electric utilities by the end of the year indicated:
>
> 1) 2030: Annual matching of 80 percent for public utilities; 60 percent for other electric utilities
>
> 2) 2035: Hourly matching of 80 percent for public utilities; 60 percent for other electric utilities
>
> 3) 2040: Hourly matching of 90 percent for all electric utilities
>
> 4) 2045: Hourly matching of 100 percent for all electric utilities.[5]

As discussed in Section II.B, Xcel models hourly matching according to the statutory requirements for CFS compliance,[6] and does not model the Department's recommendation to implement hourly matching on a five-year delay compared to the statutory requirement. The results discussed therefore represent a more aggressive implementation of hourly matching than the Department recommended in initial comments.

B. ENVIRONMENTAL PROGRAM ASSUMPTION

Xcel's model assumes 100 percent annual CFS matching for 74 percent of its load, which corresponds to the Minnesota-share of its total-system load. Additionally, Xcel allocates 74 percent of eligible renewable and nuclear generation for CFS compliance. These assumptions amount to hourly matching for all of Xcel's territory. To illustrate, take a simple system that requires 100 MWh. A 74 percent CFS load requirement amounts to 74 MWh that must be CFS-eligible, which leaves 26 MWh that does not need to be CFS-eligible. However, if EnCompass builds 74 MWh of CFS-eligible generation, it will apply 74 percent of total generation to the CFS requirement, which is 55 MWh. To reach the 74 MWh requirement, the EnCompass must build 100 MWh of CFS-eligible generation, which effectively makes the CFS requirement a 100 percent CFS for Xcel's entire multi-state system. If EnCompass achieves full compliance with the 100 percent CFS requirement, then no fossil fuel generation in the capacity

[5] Minnesota Department of Commerce, Initial Comments, January 29, 2025, (eDockets) 20251-214567-01 at 11.
[6] Minn. Stat. § 216B.1691 subd. 2g.

expansion plan is possible, because every MWh of load will be served by CFS-eligible generation that is directly supplied or stored and discharged to meet the CFS.

Xcel's model incorrectly applies the CFS to its entire system rather than limiting the model and the CFS to only Minnesota. Twenty six percent of Xcel's total system load is not statutorily required to meet the CFS. In effect, Xcel requires an additional 35.1 percent of generation and capacity to meet the CFS requirement compared to a Minnesota-only CFS. To accurately model the CFS for Minnesota only, Xcel would need to model a Minnesota Load Area with a 100 percent CFS and appropriate program import/export limits for CFS compliance. Because the assumptions in the model incorrectly define the service territory the CFS is applied to, Xcel's results are inherently biased toward an overstatement of the cost of Minnesota's 2040 goal. Therefore, Xcel's statement that, "[i]n order to meet the 2040 goal, our analysis shows that we would need to add an incremental 17,700 MWs of battery storage and over 4,000 MW of incremental solar resources"[7] is not correct; the goal is a 100 percent Minnesota CFS, not a 100 percent CFS goal for all of Xcel's service territory. However, the Department notes that the percentage of cost increase for Minnesota ratepayers under a properly modeled scenario should be approximately the same.

Despite this assumption, the modeling submitted by Xcel is 100 percent hourly matching. Therefore, a discussion of Xcel's model is informative for hourly matching.

C. GENERAL DESCRIPTION OF XCEL'S MODEL BEHAVIOR

The model behavior described in Section III is highly unusual. For example, Xcel's coincident peak load in 2040 is 13,202 MW, while the model builds 25,628 MW of new firm capacity,[8] in addition to the existing 6,992 MW of firm capacity, which totals 32,620 MW of firm capacity. This capacity addition is nearly 2.5 times more capacity than the coincident peak. While a 4-hour battery can only provide capacity for 4 hours at a time, or a maximum of 12 hours per day,[9] the capacity need is still significantly higher than the coincident peak. New capacity in 2045 is 59,591 MW, while the coincident peak in 2045 is only 13,594 MW. In comparison, the No CFS Base model builds 7,322 MW of new firm capacity in 2040 and 9,007 MW of new firm capacity in 2045.[10]

While the model builds additional capacity to meet the CFS, the added capacity is not proportional to the expected need. As discussed in Section II.F, the model is not allowed to export power to MISO, or allowed to import power from MISO during a capacity expansion plan run. The model is only allowed to select between wind, solar, and storage to meet the CFS. The generic wind and solar generation profiles are identical, which means that once energy generation exceeds load, the marginal generation must be either curtailed or stored. EnCompass will build energy storage if it is more economical to store the energy than to curtail it. If the costs to generate or store marginal energy exceed $1,000,000 per MWh, EnCompass will incur the penalty instead of building additional generation or storage.

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[7] Xcel Reply Comments at 11.

[8] While storage receives a similar capacity accreditation compared to nameplate capacity, solar and wind receive significantly lower firm capacity ratings.

[9] Assuming the battery is constantly charging or discharging.

[10] Note that the baseline model runs until 2055, which likely produces different edge behavior than the CFS model that ends in 2045.

While it may be economical to build some amount of storage to avoid curtailment, EnCompass will reach a point at which daily generation and storage is no longer sufficient to meet total system energy needs. Eventually, storage needs will shift to a seasonal pattern, where EnCompass will either need to pay the penalty or build generation and storage to meet a need that may exist for only a few months, weeks, days, and then hours. As the need becomes increasingly smaller, the marginal benefit of meeting the next MWh of compliance becomes increasingly more expensive. Because generation profiles are identical, there is little opportunity for EnCompass to generate electricity at different times to avoid this issue. Therefore, EnCompass must evaluate building potentially gigawatts of generation and storage to meet a need that may be in the megawatt scale, but because no energy can leave the system, the capacity buildout quickly becomes unrealistic. The expected result is large capacity buildout with low utilization and very high levels of renewable curtailment.

D. MODEL DOES NOT RESPOND TO A LOWER CFS REQUIREMENT

The Department initially sought to simply plot out the capacity buildout curve that results from a relaxation of the CFS requirement between 90 – 100 percent in 2040 to display how capital buildout could increase quickly without a 100 percent CFS. However, when the Department tests scenarios between 90 – 100 percent, the model provides identical capacity expansion results. This result leads the Department to conclude that the model is severely constrained, and therefore some constraints need to be relaxed to observe the expected behavior.

The constraint is more obvious when the CFS compliance requirement is compared to actual renewable energy certificate (REC) credit generation, which is shown in Table 3.

Table 3: Xcel CFS Compliance Output

Year	Credits Generated	Required Credits	Difference
2024	22,798,368	32,885,242	-10,086,874
2025	22,772,575	33,639,740	-10,867,165
2026	24,308,339	35,696,472	-11,388,133
2027	24,614,861	37,173,480	-12,558,619
2028	27,748,428	37,718,420	-9,969,992
2029	28,442,916	38,229,200	-9,786,284
2030	29,148,625	31,156,786	-2,008,161
2031	29,989,672	31,765,882	-1,776,210
2032	31,537,038	32,544,706	-1,007,668
2033	31,952,530	33,367,184	-1,414,654
2034	33,000,126	34,366,004	-1,365,878
2035	33,276,099	39,736,568	-6,460,469
2036	34,591,819	40,661,540	-6,069,721
2037	34,709,399	41,504,428	-6,795,029
2038	40,310,767	42,279,224	-1,968,457
2039	42,669,648	43,003,108	-333,460
2040	48,512,801	48,389,000	123,801

The model does not fully meet the CFS requirements until 2040. This result occurs because the available capacity is severely constrained until 2038, at which time the model can select much higher amounts of renewables and 4-hour battery storage. The results before 2038 are partially explained by the new generic capacity limits set by Xcel, which are shown in Table 4:

Table 4: Comparison of Xcel Base Case Capacity Built to EnCompass Capacity Limits

Xcel CFS Base	2030	2035	2040	2045
Generic Wind Capacity (MW)	2,800	5,600	8,400	14,400
Generic Solar Capacity (MW)	0	1,200	5,292	25,292
Generic 4 Hour Battery Capacity (MW)	720	1,500	19,800	49,800
Total	3,520	8,300	33,492	89,492
Capacity Limit	2030	2035	2040	2045
Generic Wind (MW)	2,800	5,600	66,400	166,400
Generic Solar (MW)	0	1,200	31,200	81,200
Generic Battery 4 Hr (MW)	720	1,500	19,800	49,800
Remaining Capacity	2030	2035	2040	2045
Generic Wind (MW)	0	0	58,000	152,000
Generic Solar (MW)	0	0	25,908	55,908
Generic Battery 4 Hr (MW)	0	0	0	0

While these results explain CFS non-compliance before 2040, they do not explain why the model does not respond to a lower CFS requirement, even though the model meets the CFS requirement in 2040.

E. CFS ENFORCEMENT CORRECTION

The Department discovered an error in Xcel's analysis that affects the model results, which is apparent in the CFS compliance results shown in Table 4. For example, Table 4 shows that the CFS requirement in 2029 is 38,229,200 credits, while the requirement drops to 31,156,786 credits in 2030. This error results from a mistake in the CFS enforcement timeseries, which set a default 100 percent CFS requirement before 2030. This error results in immediate CFS non-compliance when the model loads, and materially affects the subsequent capacity expansion results.[11]

In all of the subsequent results presented, the Department corrects the CFS enforcement timeseries.

[11] The most notable difference is the 2044 and 2045 results in the 90% CFS scenarios. The uncorrected model builds 51,888 and 59,590 MW of new firm capacity in 2045 and 2045, respectively, while the corrected model builds 44,535 and 44,744 MW, respectively. This modification was the first scenario tested by the Department to demonstrate a lower capacity buildout with a lower CFS requirement.

F. REC BANKING REMOVAL

The Department additionally modifies Xcel's model by the removal of REC banking, which allows EnCompass to generate RECs before they are needed for compliance, and then retire them at a later date. The default setting used in the Xcel CFS Base Scenario to enforce the CFS has no time limit for REC banking. While Xcel's model is constrained such that REC banking is not feasible, the Department's subsequent analyses remove REC banking when the model becomes unconstrained for CFS compliance. This modeling choice ensures that the model meets the CFS in the year required, instead of building new generation earlier to accumulate credits. This assumption allows the Department to observe model behavior in the year expected and is better for diagnosing problems.

The Department refers to the corrected model with the accurate CFS enforcement timeseries and the REC banking removed as the "DOC Base." The results of the corrected model are shown in Table 5. These two modifications result in an 886 MW decrease in 2040 total capacity, and a 27,258 – 32,345 MW decrease in 2045 total capacity.[12]

Table 5: Comparison of DOC Base to Xcel CFS Base Marginal Capacity Additions Above No CFS Base

No Banking + Corrected (DOC Base)	2030	2035	2040	2045
100% CFS (All New Generic Marginal CFS Cap. MW)	0	0	20,907	43,107
95% CFS (All New Generic Marginal CFS Cap. MW)	0	0	20,907	38,020
90% CFS (All New Generic Marginal CFS Cap. MW)	0	0	20,907	38,020
Δ 100% - Xcel CFS Base Marginal Capacity (MW)[13]	0	0	-886	-27,258
Δ 95% - Xcel CFS Base Marginal Capacity (MW)	0	0	-885	-32,345
Δ 90% - Xcel CFS Base Marginal Capacity (MW)	0	0	-885	-32,345

The Department notes that the corrections result in different model behavior based on the CFS percentage, but only in 2045, and the effect does not continue to decrease between the 90 percent and 95 percent scenarios.

G. RELAXATION OF CAPACITY CONSTRAINTS

While the Department acknowledges that the capacity constraints set by Xcel should correspond to some real-world constraints that limit available capacity additions, the relaxation of capacity constraints allows the Department to observe how the model would like to behave if these capacity constraints are not active. The much looser capacity limits set in 2038 likely correspond to a sufficient planning horizon, such that transmission or other constraints can be built to meet a need 14 years in the future.

The results are shown in Table 6. Total capacity is higher, which demonstrates that the Base CFS model is significantly constrained. Most notably, the model builds capacity much quicker to meet the 2030 80

[12] For the marginal capacity of the Xcel CFS Base, see Table 2.
[13] All Δ values reference the change in capacity compared to the Xcel CFS Base Scenario, as presented in Table 2. Positive values indicate more capacity than the Xcel CFS Base Scenario, and negative values indicate less capacity.

percent CFS requirement, the majority of which is storage. The 2040 scenario behaves similarly to the DOC Base, where the 90 percent and 95 percent scenarios have the same 2040 capacity. However, the model displays decreasing capacity with the decreasing CFS requirement in 2045 for each scenario, which is closer to the expected result.

Table 6: Comparison of No Capacity Limit + DOC Base Marginal Capacity to Xcel CFS Base Marginal Capacity

No Capacity Limit + DOC Base	2030	2035	2040	2045
100% CFS (All New Generic Marginal CFS Cap. MW)	16,860	24,360	27,601	63,617
95% CFS (All New Generic Marginal CFS Cap. MW)	16,860	24,360	24,956	54,946
90% CFS (All New Generic Marginal CFS Cap. MW)	16,860	24,360	24,956	46,644
Δ 100% - Xcel CFS Base Marginal Capacity (MW)[14]	16,860	24,360	5,809	-6,748
Δ 95% - Xcel CFS Base Marginal Capacity (MW)	16,860	24,360	3,164	-15,419
Δ 90% - Xcel CFS Base Marginal Capacity (MW)	16,860	24,360	3,164	-23,721

H. ALLOWANCE OF MARKET EXPORTS

As discussed in Section IV.C, the disallowance of market exports in capacity expansion is expected to lead to high amounts of generation and storage capacity buildout to meet a small compliance requirement. Market access allows EnCompass to export energy, which can both avoid curtailment and new storage additions and should lower capacity requirements. Generation assets with less curtailment are also more economical to build. Additionally, the risks regarding spot markets in EnCompass are not symmetrical. The primary risk of market exposure in capacity expansion modeling is overreliance on the market for capacity, which could result in unserved energy and reliability issues in the real world. The risks associated with market exports is that allowing exports for economic profit potentially exposes ratepayers to speculation on future market prices. While the allowance of market exports could lead EnCompass to build generation to sell into the market, in the present context, the data presented above demonstrate that overbuilding capacity to meet the CFS is a greater risk.

Xcel's CFS Base allows no market access in capacity expansion runs and a MISO market access of 2,300 MW for imports and exports in its production cost runs. The Department adds to its capacity expansion runs modified Xcel market access inputs from its production cost runs to only allow the 2,300 MW to be exported in a capacity expansion run. This scenario tests a hypothesis whereby it may not be cost effective to seasonally build generation and storage, but it could be much more cost effective to partially meet a CFS compliance need without curtailment, but instead an export of excess energy. To ensure that market exports do not lead to CFS compliance to serve load outside of Minnesota, market exports of CFS-eligible generation receive no CFS allocation in EnCompass.

The results of this modelling scenario are shown in Table 7. The results show the expected lower capacity buildout with a lower CFS requirement in 2040 and in 2045. The required capacity for the 100

[14] All Δ values reference the change in capacity compared to the Xcel CFS Base Scenario, as presented in Table 2. Positive values indicate more capacity than the Xcel CFS Base Scenario, and negative values indicate less capacity.

percent CFS in 2040 is 10,765 MW lower than in the Xcel CFS Base, and is 54,100 MW lower in 2045, which is a decrease of 49.4 and 76.9 percent, respectively. In the 90 percent CFS scenario, marginal capacity drops by 18,252 MW in 2040 and 64,557 MW in 2045, which is a decrease of 83.8 and 91.7 percent, respectively. The key point is that these results confirm that assumptions about exports are essential to keep costs contained, which avoids unnecessary buildout of generation and capacity. Furthermore, if additional export capacity is gained through ongoing transmission development, the capacity buildout could be even lower, as additional renewable capacity avoids curtailment via market exports.

Table 7: Comparison of 2300 Market Export + DOC Base Marginal Capacity to Xcel CFS Base Marginal Capacity

2300 Mkt Export + DOC Base	2030	2035	2040	2045
100% CFS (All New Generic Marginal CFS Cap. MW)	0	0	11,027	16,265
95% CFS (All New Generic Marginal CFS Cap. MW)	0	0	7,246	10,797
90% CFS (All New Generic Marginal CFS Cap. MW)	0	0	3,540	5,808
Δ 100% - Xcel CFS Base Marginal Capacity (MW)[15]	0	0	-10,765	-54,100
Δ 95% - Xcel CFS Base Marginal Capacity (MW)	0	0	-14,546	-59,568
Δ 90% - Xcel CFS Base Marginal Capacity (MW)	0	0	-18,252	-64,557

The Department tests two additional market export scenarios with stricter export limits to observe the model behavior, and to test whether the model builds additional capacity with the market turned on. The results are presented in Tables 8 and 9. The 1150 Market Export Scenario, which allows for 50 percent exports, builds 19,024 MW of marginal capacity in 2040. The 575 Market Export Scenario, which allows for 25 percent exports, builds 23,189 MW of marginal capacity in 2040. This trend of increasing capacity buildout with lower export capacity demonstrates that market exports reduce the need for new capacity.

Table 8: Comparison of 1150 Market Export + DOC Base Marginal Capacity to Xcel CFS Base Marginal Capacity

1150 Mkt Export + DOC Base	2030	2035	2040	2045
100% CFS (All New Generic Marginal CFS Cap. MW)	0	0	19,024	33,858
95% CFS (All New Generic Marginal CFS Cap. MW)	0	0	14,687	27,000
90% CFS (All New Generic Marginal CFS Cap. MW)	0	0	13,294	19,884
Δ 100% - Xcel CFS Base Marginal Capacity (MW)	0	0	-2,768	-36,507
Δ 95% - Xcel CFS Base Marginal Capacity (MW)	0	0	-7,105	-43,365
Δ 90% - Xcel CFS Base Marginal Capacity (MW)	0	0	-8,498	-50,481

[15] All Δ values reference the change in capacity compared to the Xcel CFS Base Scenario, as presented in Table 2. Positive values indicate more capacity than the Xcel CFS Base Scenario, and negative values indicate less capacity.

Table 9: Comparison of 575 Market Export + DOC Base Marginal Capacity to Xcel CFS Base Marginal Capacity

575 Mkt Export + DOC Base	2030	2035	2040	2045
100% CFS (All New Generic Marginal CFS Cap. MW)	0	0	23,189	40,302
95% CFS (All New Generic Marginal CFS Cap. MW)	0	0	19,278	36,322
90% CFS (All New Generic Marginal CFS Cap. MW)	0	0	17,101	28,946
Δ 100% - Xcel CFS Base Marginal Capacity (MW)	0	0	1,397	-30,063
Δ 95% - Xcel CFS Base Marginal Capacity (MW)	0	0	-2,514	-34,043
Δ 90% - Xcel CFS Base Marginal Capacity (MW)	0	0	-4,691	-41,419

I. COMPLIANCE COST CAP

EnCompass can also build less capacity if a reasonable limit for CFS compliance cost is set. As discussed in Section II.A, Xcel set the compliance penalty at $1,000,000 / MWh, which means that EnCompass will continue to build capacity until it costs more than $1,000,000 / MWh. While this assumption is set very high, it ensures that EnCompass will build sufficient capacity for hourly matching. In real-world conditions, the penalty would be set much lower. For example, the Princeton Hourly Matching Study uses a $300 / MWh scenario to stop CFS compliance.[16]

Table 10 shows the results of several compliance cost cap scenarios. It is not useful to model CFS percentages below 100 percent because the compliance cost cap effectively lowers the CFS requirement, and therefore the results present only the 100 percent CFS requirement. The results range from a 1,251 MW drop in capacity compared to the Xcel CFS Base Scenario in 2040 under the $1,000 / MWh Scenario to a 21,792 MW drop in capacity under the $50 / MWh Scenario, which builds no new capacity at all. Hourly matching ranges from 97.8 percent in the $1,000 / MWh Scenario to 78.1 percent in the $50 / MWh Scenario, which is the same as the Base Scenario with no CFS requirement. The 2040 Energy Penalty highlights the MWh shortfall that EnCompass does not serve, which may need to be offset by energy attribute certificates (EACs) if the energy is not counted in exports during a production cost run. There is a clear cost threshold present between the 2040 $300 / MWh Scenario and the 2040 $500 / MWh Scenario, whereby marginal capacity increases from 6,584 MW to 20,528 MW, respectively, which suggests that a cost cap price in this range will be highly consequential for capacity buildout. In addition, the cost threshold between the 2040 $300 / MWh Scenario and the 2040 $200 / MWh Scenario is also significant, which increases marginal capacity from 1,883 MW to 6,614 MW. The $1,000 / MWh, $500 / MWh, $300 / MWh, $200 / MWh, $100 / MWh, and $50 / MWh scenarios build marginal capacity in 2040 compared to the Xcel CFS Base that is 5.7, 15.2, 69.6, 91.4, 98.7, and 100 percent lower, respectively.

[16] See Department Supplemental Comments - Appendix B at 6. Wilson Rick and Jesse Jenkins. *Policy Memo: Impacts and Feasibility of an Hourly-Matched Clean Electricity Standard in Minnesota*. Princeton University: Zero Lab, (April 14, 2025).

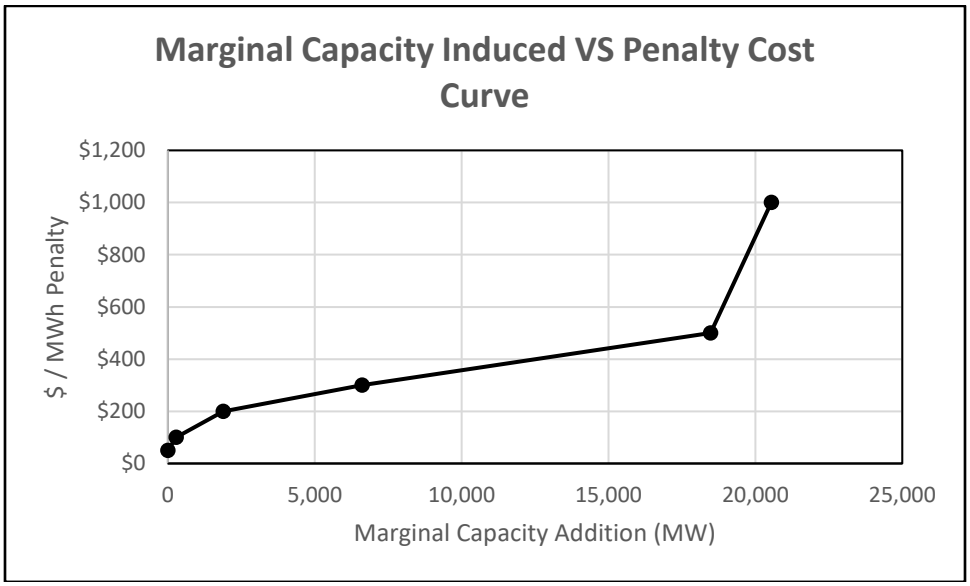
Table 10: Comparison of 100% CFS With Compliance Cost Cap Scenarios + DOC Base to Xcel CFS Base Marginal Capacity and Energy Penalty Results

100% CFS With Compliance Cost Cap Scenarios + DOC Base	2040 Generic Marginal CFS Capacity (MW)	2045 Generic Marginal CFS Capacity (MW)	2040 Energy Penalty (MWh)	2040 % Hourly Matching w/o EACs
$1,000 / MWh	20,541	37,654	1,081,523	97.8%
$500 / MWh	18,479	20,528	1,759,936	96.4%
$300 / MWh	6,614	6,584	7,032,137	85.5%
$200 / MWh	1,883	1,699	9,588,725	80.2%
$100 / MWh	278	176	10,410,169	78.5%
$50 / MWh	0	-6	10,583,949	78.1%
Δ $1,000 / MWh - Xcel CFS Base Marginal Capacity (MW)[17]	-1,251	-32,711		
Δ $500 / MWh - Xcel CFS Base Marginal Capacity (MW)	-3,313	-49,837		
Δ $300 / MWh - Xcel CFS Base Marginal Capacity (MW)	-15,178	-63,781		
Δ $200 / MWh - Xcel CFS Base Marginal Capacity (MW)	-19,909	-68,666		
Δ $100 / MWh - Xcel CFS Base Marginal Capacity (MW)	-21,514	-70,189		
Δ $50 / MWh - Xcel CFS Base Marginal Capacity (MW)	-21,792	-70,371		

The marginal capacity induced by higher penalty costs is shown in Figure 1, which plots data from Table 10. This figure demonstrates that the cost to meet the CFS increases rapidly above $500 / MWh, which means that the final 1,251 MW of capacity is above $1,000 / MWh. A reasonable penalty cost may tie the $ / MWh penalty cost to the social cost of carbon,[18] which could offer an alternative means to optimize for societal costs, without affecting production costs.

[17] All Δ values reference the change in capacity compared to the Xcel CFS Base Scenario, as presented in Table 2. Positive values indicate more capacity than the Xcel CFS Base Scenario, and negative values indicate less capacity.
[18] This value would have to assume an emissions rate from a particular power plant, such as a combined cycle natural gas plant, for example.

Figure 1: Marginal Capacity Induced VS Penalty Cost Curve for the 100% CFS With Compliance Cost Cap Scenarios + DOC Base



J. ALLOWANCE OF MARKET EXPORTS & COMPLIANCE COST CAP

The preceding two sections demonstrate significantly lower capacity buildout when these constraints are modified in isolation, however the interactions between the two constraints are not apparent. Tables 10 and 11 show the results of five combined scenarios. The Department models one "High" constrained scenario with a high cost cap of $500 / MWh and a low Market Export of 575 MW (25%). The Department models two "Medium" constrained scenarios, with the Medium 1 Scenario testing a $300 / MWh cost cap with a 1,150 MW Market Export (50%), while the Medium 2 Scenario tests the same cost cap with a more constrained 575 MW Market Export (25%). The Department models two "Low" constrained scenarios, with the Low 1 Scenario testing a $200 / MWh cost cap with a 2,300 MW Market Export (100%), while the Low 2 Scenario tests the same cost cap with a more constrained 1,150 MW Market Export (50%).

Table 11 compares the difference in capacity and total energy served by the CFS. In every scenario studied, the addition of market exports adds capacity compared to the Cost Cap Only baseline. Rather than disincentivizing storage buildout by increasing export capacity, and therefore storage needs, increased export capacity stimulates additional capacity buildout. This opposite effect observed from the Market Export-only scenarios is explained by the cost effectiveness of new capacity, which delivers significantly higher hourly matching percentages that range from 4.3 to 22.4 percent higher than the Cost Cap-only scenarios.

Table 11: Comparison of Combined Cost Cap + Market Export Scenarios to Cost Cap Only Scenarios

Combined Cost Cap + Mkt Export Scenario	Cost Cap Only Scenario	Difference: 2040 All New Generic Marginal CFS Cap. (MW; Combined - Cost Cap Only)*	Difference: 2040 Energy Penalty (MWh; Combined - Cost Cap Only)*	Difference: 2040 % Hourly Matching w/o EACs (Combined - Cost Cap Only)*
High $500 Pen. + 575 Mkt Exp.	$500 Penalty	2,131	-2,742,656	4.3%
Med 1 $300 Pen. + 1150 Mkt Exp.	$300 Penalty	4,539	-6,432,611	13.3%
Med 2 $300 Pen. + 575 Mkt Exp.	$300 Penalty	2,190	-3,229,894	6.7%
Low 1 $200 Pen. + 2300 Mkt Exp.	$200 Penalty	4,482	-10,824,918	22.4%
Low 2 $200 Pen. + 1150 Mkt Exp.	$200 Penalty	2,874	-5,654,839	11.7%
*Baseline values are different for each Scenario. Refer to Tables 10 and 12 for actual values.				

Table 12: Comparison of 100% CFS With Compliance Cost Cap Scenarios + Market Exports to Xcel CFS Base Marginal Capacity and Energy Penalty Results

100% CFS With Compliance Cost Cap & Mkt Exports	2040 Generic Marginal CFS Capacity (MW)	2045 Generic Marginal CFS Capacity (MW)	2040 Energy Penalty (MWh)	2040 % Hourly Matching w/o EACs
High $500 Pen. + 575 Mkt Exp.	20,610	20,203	-982,720	102.0%
Med 1 $300 Pen. + 1150 Mkt Exp.	11,153	10,916	599,526	98.8%
Med 2 $300 Pen. + 575 Mkt Exp.	8,804	8,586	3,802,243	92.1%
Low 1 $200 Pen. + 2300 Mkt Exp.	6,365	6,271	-1,236,193	102.6%
Low 2 $200 Pen. + 1150 Mkt Exp.	4,757	4,350	3,933,886	91.9%
Δ High $500 Pen. + 575 Mkt Exp. - Xcel CFS Base Marginal Capacity (MW)[19]	-1,182	-50,162		
Δ Med 1 $300 Pen. + 1150 Mkt Exp. - Xcel CFS Base Marginal Capacity (MW)	-10,639	-59,449		
Δ Med 2 $300 Pen. + 575 Mkt Exp. - Xcel CFS Base Marginal Capacity (MW)	-12,988	-61,779		
Δ Low 1 $200 Pen. + 2300 Mkt Exp. - Xcel CFS Base Marginal Capacity (MW)	-15,427	-64,094		
Δ Low 2 $200 Pen. + 1150 Mkt Exp. - Xcel CFS Base Marginal Capacity (MW)	-17,035	-66,015		

[19] All Δ values reference the change in capacity compared to the Xcel CFS Base Scenario, as presented in Table 2. Positive values indicate more capacity than the Xcel CFS Base Scenario, and negative values indicate less capacity.

The Department also notes that full hourly matching is achieved in the Low 1 and High Scenarios, as shown in Table 12. The Low 1 Scenario achieves hourly compliance mainly because of its access to full market exports of 2,300 MW, while the High Scenario achieves hourly matching because of its significantly higher capacity buildout. The marginal capacity buildout compared to the Xcel CFS Base is 5.4 and 70.8 percent lower, respectively, which further demonstrates the impact of market access in capacity expansion planning.

Despite the clear impact of market access on achieving full hourly matching, access to the market in capacity expansion planning may not be necessary at all to keep costs low for 100 percent CFS compliance. Production cost runs with access to the market will increase the percent of eligible energy compared to the capacity expansion plan if the model experiences congestion, which is likely under a 100 percent CFS scenario. Therefore, the inclusion of market access in capacity expansion plans may only be necessary if full compliance cannot otherwise be demonstrated at low cost without market access.

V. CONCLUSION

The Department demonstrates multiple areas in which Xcel's analysis of hourly matching can be modeled differently, which can reduce the impact in capacity buildout. The analysis does not include potentially lower cost long-duration energy storage technologies that may include hydrogen, iron-air batteries, or other technologies that could be lower cost than 4-hour batteries. When market exports are allowed, the analysis presented also does not count any exported EAC generation towards the CFS, which will lower capacity costs at the expense of reduced hourly matching. While this discussion is intended to focus on hourly matching, the analysis demonstrates important considerations for annual CFS matching in addition to hourly matching. As utilities approach higher levels of CFS compliance, with or without hourly matching, it will become increasingly important to consider alternative modeling practices and the various risks those choices create to ensure that ratepayer costs and reliability risks are minimized. The Department presents data to support the formation of a cost cap to contain costs as CFS compliance reaches 100 percent. The analysis also does not explore EAC imports as a means to reduce capacity, however the compliance cost could also serve as a proxy for the maximum willingness to pay for hourly EACs outside of the modeled system in EnCompass.

This analysis does not attempt to explore the optimization of revenue requirements or social costs. While ratepayer cost minimization is a goal of the Department, the Department is also interested in the optimization of social costs via hourly matching, or by any other means. The above analysis should be viewed as a starting point to discuss how well existing modeling practices fit into future CFS compliance. This analysis demonstrates that additional analysis and discussion around annual and hourly CFS matching, allocation, REC markets, and other topics is warranted in a working grou

VI. DEPARTMENT RECOMMENDATIONS (CORRECTED)

Based on analysis of Minn. Stat. § 216B.1691 and the information in the record, the Department has prepared recommendations, which are provided below. The recommendations correspond to the subheadings of Section III from the Department's Initial Comments.

A. WHEN AND HOW SHOULD UTILITIES REPORT PREPAREDNESS FOR MEETING UPCOMING CFS REQUIREMENTS?

- A.1. The Department recommends the Commission order electric utilities to begin to report CFS compliance in 2029 for generation year 2028.
- A.2. The Department recommends that any decisions regarding modifications to the existing REC tracking system be made in Docket No. E-999/CI-24-352.

B. BY WHICH CRITERIA AND STANDARDS SHOULD THE COMMISSION MEASURE AN ELECTRIC UTILITY'S COMPLIANCE WITH THE CFS?

- B.1.1.1. The Department recommends the Commission order electric utilities to report all sales and purchases of EACs at the time interval required for CFS matching.
- B.1.1.2. The Department recommends the Commission order electric utilities to report all hourly Minnesota retail electric sales.
- B.1.2.1. The Department recommends that the Commission modify order points 1 and 3 from its December 18, 2007 Order in Docket Nos. E-999/CI-04-1616 and E999/CI-03-869 and modify order point 6 of the Commission's December 6, 2023 Order in Docket E-999/CI- 23-151 to remove "All renewable energy credits generated from such facilities will be eligible for use in the year of generation and for four years following the year of generation," and replace the language with "All renewable energy credits generated from such facilities will be eligible for use in the year of generation and for one year following the year of generation." These orders will be modified effective January 1, 2030.
- B.1.2.2.1. The Department recommends the Commission order the creation of a Commission-led stakeholder workgroup that is tasked with the analysis, development, testing, and recommendation of best practices for the optimization of societal costs as they pertain to:
  A. Hourly matching for CFS compliance;
  B. Methodologies to implement hourly matching scenario requirements in integrated resource plans;
  C. The integration of transmission constraints in integrated resource plans;
  D. The integration of energy attribute certificates and allocation thereof in integrated resource plans;
  E. Stochastic modeling of variable renewable generation into integrated resource plans; and
  F. The co-optimization of transmission and generation resources.

- B.1.2.2.2 The Department recommends the Commission order a CFS compliance true up period of three months after the conclusion of the reporting year.
- B.1.2.3. The Department recommends the Commission order all integrated resource plans where the utility uses a capacity expansion model to incorporate hourly matching constraints in the models to demonstrate CFS compliance.
- B.1.3. The Department recommends the Commission order:
  A. EACs be issued equivalent to metered generation on a per MWh basis;
  B. A single REC be issued for all generation that may be retired to demonstrate both EETS and CFS compliance;
  C. A carbon-free allocator, which defines the percentage of CFS eligible generation, must be used for any generation facility that is partially CFS compliant;
  D. For all generation made in a CFS partial compliant facility that is also eligible for the EETS, metered generation in A. shall be:
     - Multiplied by C. to determine the whole number of RECs to issue that are fully eligible for both the EETS and CFS;
     - Multiplied by one minus C. to determine the whole number of RECs to issue that are only eligible for the EETS;
  E. For all generation made in a CFS partial compliant facility that is not eligible for the EETS, metered generation in A. shall be multiplied by C. to determine the whole number of AECs to issue that are only eligible for the CFS; and
  F. The methodology to determine the carbon-free allocation shall be decided in Docket No. E-999/CI-24-352.
- B.6. The Department recommends that all decisions made regarding criteria and standards to measure a utility's partial compliance with the CFS be made in Docket No. E-999/CI-24-352.
- B.7. The Department recommends the Commission order CFS and RES compliance measurement to factor in line losses to determine compliance with each standard.
- B.8. The Department recommends the Commission order all procurements of physical assets, PPAs, and any other contract that involves EACs necessary to meet Minn. Stat. § 216B.1691 compliance requirements be subject to the following geographic preference reporting requirements at the time the procurement decision is proposed:
  A. Procurements Within Minnesota:
     1. The number of EACs expected to be procured each year.
  B. Procurements in Counties or Municipal Divisions Bordering Minnesota:
     1. The number of EACs expected to be procured each year.
     2. The state and county or municipal division and country of procurement.
  C. Procurements in the MISO territory of Non-Border Counties of North Dakota, South Dakota, Iowa, Wisconsin, and Manitoba:
     1. The number of EACs expected to be procured each year.

2. The state and county or municipal division and country of procurement.
3. Explanation of any technical, cost, or other constraints that preclude a procurement under A. or B.
4. Explanation of any local benefits including jobs, tax revenue, other economic factors, air quality, and environmental justice considerations that will not be received by Minnesota ratepayers.

D. Procurements in all Other Locations:

1. The number of EACs expected to be procured each year.
2. The state and county or province of procurement.
3. Discounted cash flow that demonstrates why a procurement under A., B., or C. is financially harmful to Minnesota ratepayers.
4. Technical analysis of why there is insufficient transmission, siting, or unbundled EAC availability under A., B., or C.
5. Quantification of any local benefits including jobs, tax revenue, direct and indirect economic factors, air quality, and environmental justice considerations that will not be received by Minnesota ratepayers.

C. WHAT CONSIDERATIONS SHOULD THE COMMISSION TAKE INTO ACCOUNT REGARDING THE DOUBLE COUNTING OF RENEWABLE ENERGY CREDITS (RECS) TO MEET MULTIPLE REQUIREMENTS?

- None.

D. HOW SHOULD NET MARKET PURCHASES BE COUNTED TOWARDS CFS COMPLIANCE?

- D.1. The Department recommends that all decisions made regarding criteria and standards to measure a utility's net market purchases be made in Docket No. E-999/CI-24-352.
- D.2. The Department recommends the Commission order:
  A. Net market purchases shall only be quantified for CFS compliance when the carbon-free share of the systemwide annual fuel mix or an applicable subregional fuel mix is necessary to demonstrate CFS compliance.
  B. EACs must be purchased in the first three months of the subsequent reporting year for the carbon-free share of the systemwide annual fuel mix or an applicable subregional fuel mix that is necessary to demonstrate CFS compliance.

E. ARE THERE OTHER ISSUES OR CONCERNS RELATED TO THIS MATTER?

- E.1. The Department recommends the Commission order the Commissioner of Commerce to seek authority from the Commissioner of Management and Budget to incur costs for specialty services to provide auditing of all CFS reports for up to three years

CERTIFICATE OF SERVICE

I, Nicole Westling, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

Minnesota Department of Commerce
Supplemental Comments

Docket No. E999/CI-23-151

Dated this **23rd** day of **May 2025**

/s/Nicole Westling

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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	23-151Official
49	Marc	Child	mchild@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	23-151Official
50	Michael	Childs, Jr.	michael.childsjr@piic.org	Prairie Island Indian Community		Prairie Island Indian Community 5636 Sturgeon Lake Road Welch MN, 55089 United States	Electronic Service		No	23-151Official
51	Ray	Choquette	rchoquette@agp.com	Ag Processing Inc.		12700 West Dodge Road PO Box 2047 Omaha NE, 68103-2047 United States	Electronic Service		No	23-151Official
52	Steve W.	Chriss	stephen.chriss@walmart.com	Wal-Mart		2001 SE 10th St. Bentonville AR, 72716-5530 United States	Electronic Service		No	23-151Official
53	John	Coffman	john@johncoffman.net	AARP		871 Tuxedo Blvd. St, Louis MO, 63119-2044 United States	Electronic Service		No	23-151Official
54	Kenneth A.	Colburn	kcolburn@symbioticstrategies.com	Symbiotic Strategies, LLC		26 Winton Road Meredith NH, 32535413 United States	Electronic Service		No	23-151Official
55	Generic	Commerce Attorneys	commerce.attorneys@ag.state.mn.us		Office of the Attorney General -	445 Minnesota Street Suite	Electronic Service		Yes	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
					Department of Commerce	1400 St. Paul MN, 55101 United States				
56	Jean	Comstock	jean.comstock.dbcc@gmail.com	St. Paul 350		729 6th St E St. Paul MN, 55106 United States	Electronic Service		No	23-151Official
57	Christopher	Cooper	chris.cooper@resource-solutions.org			1012 Torney Avenue San Francisco CA, 94129 United States	Electronic Service		No	23-151Official
58	Hillary	Creurer	hcreurer@allete.com	Minnesota Power		30 W Superior St Duluth MN, 55802 United States	Electronic Service		No	23-151Official
59	George	Crocker	gwillc@nawo.org	North American Water Office		5093 Keats Avenue Lake Elmo MN, 55042 United States	Electronic Service		No	23-151Official
60	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	23-151Official
61	Brooke	Cunningham	health.review@state.mn.us	Minnesota Department of Health		PO Box 64975 St. Paul MN, 55164-0975 United States	Electronic Service		No	23-151Official
62	Stacy	Dahl	sdahl@minnkota.com	Minnkota Power Cooperative, Inc.		5301 32nd Ave S Grand Forks ND, 58201 United States	Electronic Service		No	23-151Official
63	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	23-151Official
64	Lorene	Damsits	lorened@cmpasgroup.org	Central MN MPA		459 S Grove St Blue Earth MN, 56013 United States	Electronic Service		No	23-151Official
65	Lisa	Daniels	lisadaniels@windustry.org	Windustry		201 Ridgewood Ave Minneapolis MN, 55403 United States	Electronic Service		No	23-151Official
66	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	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
67	Chris	Davis	christopher.davis@state.mn.us		Department of Commerce	Suite 280 85 Seventh Place East St. Paul MN, 55101-2198 United States	Electronic Service		No	23-151Official
68	Rob	Davis	rob@mrets.org	M-RETS		60 S 6th Street Suite 2800 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official
69	Jason	Decker	jason.decker@llojibwe.net	Leech Lake Band of Ojibwe		190 Sailstar Drive NW Cass Lake MN, 56633 United States	Electronic Service		No	23-151Official
70	James	Denniston	james.r.denniston@xcelenergy.com	Xcel Energy Services, Inc.		414 Nicollet Mall, 401-8 Minneapolis MN, 55401 United States	Electronic Service		No	23-151Official
71	Bobby	Deschampe	robertdeschampe@grandportage.com	Grand Portage Band of Lake Superior Chippewa		PO Box 428 Grand Portage MN, 55605 United States	Electronic Service		No	23-151Official
72	Curt	Dieren	curt.dieren@dgr.com	L&O Power Cooperative		1302 S Union St Rock Rapids IA, 51246 United States	Electronic Service		No	23-151Official
73	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	23-151Official
74	Becky	Dobbs	bdobbs@grenergy.com			null null, null United States	Electronic Service		No	23-151Official
75	J.	Drake Hamilton	hamilton@fresh-energy.org	Fresh Energy		408 St Peter St Ste 350 Saint Paul MN, 55101 United States	Electronic Service		No	23-151Official
76	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	23-151Official
77	Jeremy	Duehr	jduehr@fredlaw.com	Fredrikson & Byron, P.A.		60 S Sixth St Ste 1500 Minneapolis MN, 55402-4400 United States	Electronic Service		No	23-151Official
78	Adam	Duininck	aduininck@ncsrcc.org	North Central States Regional Council of Carpenters		700 Olive Street St. Paul MN, 55130 United States	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
79	Kristin W	Duncanson	kw.duncanson@gmail.com			57746 Highway 30 Mapleton MN, 56065 United States	Electronic Service		No	23-151Official
80	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	23-151Official
81	Kevin	Dupuis, Sr.	kevindupuis@fdlrez.com			Reservation Business Committee 1720 Big Lake Rd Cloquet MN, 55720 United States	Electronic Service		No	23-151Official
82	Brian	Edstrom	briane@cubminnesota.org	Citizens Utility Board of Minnesota		332 Minnesota St Ste W1360 Saint Paul MN, 55101 United States	Electronic Service		No	23-151Official
83	Jamie	Edwards	jamie.edwards@millelacsband.com	Mille Lacs Band of Ojibwe		43408 Oodena Drive Onamia MN, 56358 United States	Electronic Service		No	23-151Official
84	Kristen	Eide Tollefson	healingsystems69@gmail.com	R-CURE		28477 N Lake Ave Frontenac MN, 55026-1044 United States	Electronic Service		No	23-151Official
85	Betsy	Engelking	betsy@nationalgridrenewables.com	National Grid Renewables		8400 Normandale Lake Blvd Ste 1200 Bloomington MN, 55437 United States	Electronic Service		No	23-151Official
86	Michael	Fairbanks	michael.fairbanks@whiteearth-nsn.gov	White Earth Reservation Business Committee		PO Box 418 White Earth MN, 56591 United States	Electronic Service		No	23-151Official
87	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	23-151Official
88	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	23-151Official
89	Terri	Finn	terri.goggleye@llojibwe.net			null null, null United States	Electronic Service		No	23-151Official
90	Mike	Fiterman	mikefiterman@libertydiversified.com	Liberty Diversified International		5600 N Highway 169 Minneapolis MN,	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						55428-3096 United States				
91	Christine	Fox	cfox@itasca-mantrap.com	Itasca-Mantrap Coop. Electric Assn.		PO Box 192 Park Rapids MN, 56470 United States	Electronic Service		No	23-151Official
92	Lucas	Franco	lfranco@liunagroc.com	LIUNA		81 Little Canada Rd E Little Canada MN, 55117 United States	Electronic Service		No	23-151Official
93	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	23-151Official
94	Nathan	Franzen	nathan@nationalgridrenewables.com	Geronimo Energy, LLC		8400 Normandale Lake Blvd Ste 1200 Bloomington MN, 55437 United States	Electronic Service		No	23-151Official
95	Gary	Frazer	gfrazer@mnchippewatribe.org	Minnesota Chippewa Tribe		PO Box 217 Cass Lake MN, 56633 United States	Electronic Service		No	23-151Official
96	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	23-151Official
97	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	23-151Official
98	Stacey	Fujii	sfujii@grenergy.com	Great River Energy		12300 Elm Creek Boulevard Maple Grove MN, 55369-4718 United States	Electronic Service		No	23-151Official
99	Jessica	Fyhrie	jfyhrie@otpco.com	Otter Tail Power Company		PO Box 496 Fergus Falls MN, 56538-0496 United States	Electronic Service		Yes	23-151Official
100	Edward	Garvey	garveyed@aol.com	Residence		32 Lawton St Saint Paul MN, 55102 United States	Electronic Service		No	23-151Official
101	Benjamin	Gerber	ben@mrets.org	Midwest Renewable Energy Tracking System		60 South Sixth Street Suite 2800 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official
102	David P.	Geschwind	dp.geschwind@smmpa.org	Southern Minnesota Municipal Power		500 First Avenue SW Rochester MN, 55902	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
				Agency		United States				
103	Shannon	Geshick	shannon.geshick@state.mn.us	Minnesota Indian Affairs Council (MIAC)		null null, null United States	Electronic Service		No	23-151Official
104	Allen	Gleckner	gleckner@fresh-energy.org	Fresh Energy		408 St. Peter Street Ste 350 Saint Paul MN, 55102 United States	Electronic Service		No	23-151Official
105	Jenny	Glumack	jenny@mrea.org	Minnesota Rural Electric Association		11640 73rd Ave N Maple Grove MN, 55369 United States	Electronic Service		No	23-151Official
106	Julie	Goehring	julie@redriverbasincommission.org			708 70 Ave NW Moorhead MN, 56560 United States	Electronic Service		No	23-151Official
107	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	23-151Official
108	Tessa	Haagenson	tessa.haagenson@connexusenergy.com	Connexus Energy		14601 Ramsey Blvd NW Ramsey MN, 55303 United States	Electronic Service		No	23-151Official
109	Jeffrey	Haase	jhaase@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	23-151Official
110	Hal	Halpern	halhalpern@clpower.com	Cooperative Light & Power		1554 Hwy 2 P0 Box 69 Two Harbors MN, 55616 United States	Electronic Service		No	23-151Official
111	Jeremy	Hamilton	jhamilton@uppersiouxcommunity-nsn.gov	Upper Sioux Community		Upper Sioux Community PO Box 147 Granite Falls MN, 56241 United States	Electronic Service		No	23-151Official
112	David A.	Hansen	hansen@federatedrea.coop	Federated Rural Electric Association		77100 U.S. Highway 71 PO Box 69 Jackson MN, 56143 United States	Electronic Service		No	23-151Official
113	James	Hartson				59931 300th Street Waltham MN, 55982 United States	Paper Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
114	Amy	Hastings	amyh@uppersiouxcommunity-nsn.gov	Upper Sioux Community		5722 Travers Lane PO Box 147 Granite Falls MN, 56241 United States	Electronic Service		No	23-151Official
115	Erik	Hatlestad	erik@cureriver.org			117 1st St Montevideo MN, 56265 United States	Electronic Service		No	23-151Official
116	Kim	Havey	kim.havey@minneapolismn.gov	City of Minneapolis		350 South 5th Street, Suite 315M Minneapolis MN, 55415 United States	Electronic Service		No	23-151Official
117	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	23-151Official
118	Adam	Heinen	aheinen@dakotaelectric.com	Dakota Electric Association		4300 220th St W Farmington MN, 55024 United States	Electronic Service		No	23-151Official
119	Annete	Henkel	mui@mnutilityinvestors.org	Minnesota Utility Investors		413 Wacouta Street #230 St.Paul MN, 55101 United States	Electronic Service		No	23-151Official
120	Jessy	Hennesy	jessy.hennesy@avantenergy.com	Avant Energy		220 S. Sixth St. Ste 1300 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official
121	Kristin	Henry	kristin.henry@sierraclub.org	Sierra Club		2101 Webster St Ste 1300 Oakland CA, 94612 United States	Electronic Service		No	23-151Official
122	Benjamin	Hertz	bhertz@bepc.com	Basin Electric Power Cooperative		1717 E Interstate Ave Bismarck ND, 58503 United States	Electronic Service		Yes	23-151Official
123	Holly	Hinman	holly.r.hinman@xcelenergy.com	Xcel Energy		414 Nicollet Mall, 7th Floor Minneapolis MN, 55401 United States	Electronic Service		No	23-151Official
124	Joe	Hoffman	ja.hoffman@smmpa.org	SMMPA		500 First Ave SW Rochester MN, 55902-3303 United States	Electronic Service		No	23-151Official
125	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	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
126	Ronald	Horman	rhorman@redwoodelectric.com	Redwood Electric Cooperative		60 Pine Street Clements MN, 56224 United States	Electronic Service		No	23-151Official
127	Rick	Horton	rhorton@minnesotaforests.com	Minnesota Forest Industries		324 West Superior Street 903 Medical Arts Building Duluth MN, 55802 United States	Electronic Service		No	23-151Official
128	Robbie	Howe	robbie.howe@llojibwe.net	Leech Lake Band of Ojibwe		190 Sailstar Drive NW Cass Lake MN, 56633 United States	Electronic Service		No	23-151Official
129	John	Ihle	ljihle@rrt.net	PlainStates Energy LLC		27451 S Hwy 34 Barnesville MN, 56514 United States	Electronic Service		No	23-151Official
130	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	23-151Official
131	Faron	Jackson, Sr.	faron.jackson@llojibwe.net			190 Sailstar Drive NW Cass Lake MN, 56633 United States	Electronic Service		No	23-151Official
132	Casey	Jacobson	cjacobson@bepc.com	Basin Electric Power Cooperative		1717 East Interstate Avenue Bismarck ND, 58501 United States	Electronic Service		No	23-151Official
133	Justin	Jahnz	justin.jahnz@ecemn.com	East Central Energy		412 Main Ave N Braham MN, 55006 United States	Electronic Service		No	23-151Official
134	Alan	Jenkins	aj@jenkinsatlaw.com	Jenkins at Law		2950 Yellowtail Ave. Marathon FL, 33050 United States	Electronic Service		No	23-151Official
135	Nathan	Jensen	njensen@otpco.com	Otter Tail Power Company		215 S. Cascade St. Fergus Falls MN, 56537 United States	Electronic Service		No	23-151Official
136	Kevin	Jensvold	kevinj@uppersiouxcommunity-nsn.gov	Upper Sioux Community		PO Box 147 Granite Falls MN, 56241-0147 United States	Electronic Service		No	23-151Official
137	Annette	Johnson	annette.johnson@redlakenation.org	Red Lake Nation		15484 Migizi Drive Red Lake MN, 56671 United States	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
138	Jody	Johnson	jody.johnson@piic.org	Prairie Island Indian Community		5636 Sturgeon Lake Rd Welch MN, 55089 United States	Electronic Service		No	23-151Official
139	Johnny	Johnson	johnny.johnson@piic.org	Prairie Island Indian Community		5636 Sturgeon Lake Road Welch MN, 55089 United States	Electronic Service		No	23-151Official
140	Richard	Johnson	rick.johnson@lawmoss.com	Moss & Barnett		150 S. 5th Street Suite 1200 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official
141	Sarah	Johnson Phillips	sjphillips@stoel.com	Stoel Rives LLP		33 South Sixth Street Suite 4200 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official
142	Nate	Jones	njones@hcpd.com	Heartland Consumers Power		PO Box 248 Madison SD, 57042 United States	Electronic Service		No	23-151Official
143	Nick	Kaneski	nick.kaneski@enbridge.com	Enbridge Energy Company, Inc.		11 East Superior St Ste 125 Duluth MN, 55802 United States	Electronic Service		No	23-151Official
144	Veda	Kanitz	vmkanitz@gmail.com			null null, null United States	Electronic Service		No	23-151Official
145	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	23-151Official
146	David	Kempf	dkempf@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	23-151Official
147	William	Kenworthy	will@votesolar.org			1 South Dearborn St Ste 2000 Chicago IL, 60603 United States	Electronic Service		No	23-151Official
148	Becky	Kern	bkern@bepc.com	Basin Electric Power Cooperative		1717 E Interstate Ave Bismarck ND, 58501 United States	Electronic Service		Yes	23-151Official
149	Samuel B.	Ketchum	sketchum@kennedy-graven.com	Kennedy & Graven, Chartered		150 S 5th St Ste 700 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
150	Nazir	Khan	nazir@mnejtable.org	Minnesota Environmental Justice Table		2720 E 22nd St Minneapolis MN, 55406 United States	Electronic Service		No	23-151Official
151	Hudson	Kingston	hudson@curemn.org			PO Box 712 Ely MN, 55731 United States	Electronic Service		No	23-151Official
152	Kate	Knuth	kate.knuth@gmail.com			2347 14th Terrace NW New Brighton MN, 55112 United States	Electronic Service		No	23-151Official
153	Frank	Kohlasch	frank.kohlasch@state.mn.us		Minnesota Pollution Control Agency	520 Lafayette Rd N. St. Paul MN, 55155 United States	Electronic Service		No	23-151Official
154	Brian	Kolbinger	brian@beckertownship.org	Becker Township Board		PO Box 248 12165 Hancock St Becker MN, 55308 United States	Electronic Service		No	23-151Official
155	Seth	Koneczny	st.koneczny@smmpa.org	SMMPA		500 First Avenue, SW Rochester MN, 55902-3303 United States	Electronic Service		No	23-151Official
156	Brian	Krambeer	bkrambeer@mienergy.coop	MiEnergy Cooperative		PO Box 626 31110 Cooperative Way Rushford MN, 55971 United States	Electronic Service		No	23-151Official
157	Randy	Kramer	rlkramer89@gmail.com	Water and Soil Resources Board		42808 Co. Rd. 11 Bird Island MN, 55310 United States	Electronic Service		No	23-151Official
158	Allen	Krug	allen.krug@xcelenergy.com	Xcel Energy		414 Nicollet Mall-7th fl Minneapolis MN, 55401 United States	Electronic Service		No	23-151Official
159	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	23-151Official
160	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	23-151Official
161	Therese	LaCanne	tlacanne@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
162	Matthew	Lacey	mlacey@grenergy.com	Great River Energy		12300 Elm Creek Boulevard Maple Grove MN, 55369-4718 United States	Electronic Service		No	23-151Official
163	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	23-151Official
164	Carmel	Laney	carmel.laney@stoel.com	Stoel Rives LLP		33 South Sixth Street Suite 4200 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official
165	Arthur	LaRose	arthur.larose@llojibwe.net	Leech Lake Band of Ojibwe		190 Sailstar Drive NW Cass Lake MN, 56633 United States	Electronic Service		No	23-151Official
166	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	23-151Official
167	Emily	Larson	elarson@duluthmn.gov	City of Duluth		411 W 1st St Rm 403 Duluth MN, 55802 United States	Electronic Service		No	23-151Official
168	James D.	Larson	james.larson@avantenergy.com	Avant Energy Services		220 S 6th St Ste 1300 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official
169	Mark	Larson	mlarson@meeker.coop	Meeker Coop Light & Power Assn		1725 Highway 12 E Ste 100 Litchfield MN, 55355 United States	Electronic Service		No	23-151Official
170	Peder	Larson	plarson@larkinhoffman.com	Larkin Hoffman Daly & Lindgren, Ltd.		8300 Norman Center Drive Suite 1000 Bloomington MN, 55437 United States	Electronic Service		No	23-151Official
171	Rachel	Leonard	rachel.leonard@ci.monticello.mn.us	City of Monticello		505 Walnut St Ste 1 Monticello MN, 55362 United States	Electronic Service		No	23-151Official
172	Dan	Lesher	dlesher@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	23-151Official
173	Annie	Levenson Falk	annielf@cubminnesota.org	Citizens Utility Board of Minnesota		332 Minnesota Street, Suite W1360 St. Paul MN,	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						55101 United States				
174	Jesse	Levine	jesse_levine@afandpa.org			1101 K St NW Suite 700 Washington DC, 20005 United States	Electronic Service		No	23-151Official
175	Amy	Liberkowski	amy.a.liberkowski@xcelenergy.com	Xcel Energy		414 Nicollet Mall 7th Floor Minneapolis MN, 55401-1993 United States	Electronic Service		No	23-151Official
176	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	23-151Official
177	Eric	Lipman	eric.lipman@state.mn.us		Office of Administrative Hearings	PO Box 64620 St. Paul MN, 55164-0620 United States	Electronic Service		Yes	23-151Official
178	Michelle	Lommel	mlommel@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	23-151Official
179	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	23-151Official
180	Nicole	Luckey	nluckey@invenergyllc.com	Invenergy LLC		1 S. Wacker Suite 1800 Chicago IL, 60606 United States	Electronic Service		No	23-151Official
181	Susan	Ludwig	sludwig@mnpower.com	Minnesota Power		30 West Superior Street Duluth MN, 55802 United States	Electronic Service		No	23-151Official
182	Robert	Lunder	robert.lunder@mdu.com	Montana-Dakota Utilities (ET)		400 N 4th St Bismark ND, 58501 United States	Electronic Service		No	23-151Official
183	Alice	Madden	alice@communitypowermn.org	Community Power		2720 E 22nd St Minneapolis MN, 55406 United States	Electronic Service		No	23-151Official
184	Scott	Magnuson	smagnuson@bpu.org	Brainerd Public Utilities		8027 Highland Scenic Rd Baxter MN, 56425 United States	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
185	Kavita	Maini	kmaini@wi.rr.com	KM Energy Consulting, LLC		961 N Lost Woods Rd Oconomowoc WI, 53066 United States	Electronic Service		No	23-151Official
186	Emily	Marshall	emarshall@lourismarshall.com	Miller O'Brien Jensen, PA		120 S. 6th Street Suite 2400 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official
187	Mary	Martinka	mary.a.martinka@xcelenergy.com	Xcel Energy Inc		414 Nicollet Mall 7th Floor Minneapolis MN, 55401 United States	Electronic Service		No	23-151Official
188	Gregg	Mast	gmast@cleanenergyeconomymn.org	Clean Energy Economy Minnesota		4808 10th Avenue S Minneapolis MN, 55417 United States	Electronic Service		No	23-151Official
189	Shena	Matrious	shena.matrious@millelacsband.com	Mille Lacs Band of Ojibwe		43408 Oodena Drive Onamia MN, 56349 United States	Electronic Service		No	23-151Official
190	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	23-151Official
191	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	23-151Official
192	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	23-151Official
193	April	McCormick	aprilm@grandportage.com	Grand Portage Band of Lake Superior Chippewa		PO Box 428 Grand Portage MN, 55605 United States	Electronic Service		No	23-151Official
194	Jess	McCullough	jmccullough@mnpower.com	Minnesota Power		30 W Superior St Duluth MN, 55802 United States	Electronic Service		No	23-151Official
195	Sara G	McGrane	smcgrane@felhaber.com	Felhaber Larson		220 S 6th St Ste 2200 Minneapolis MN, 55420 United States	Electronic Service		No	23-151Official
196	Natalie	McIntire	natalie.mcintire@gmail.com	Wind on the Wires		570 Asbury St Ste 201 Saint Paul MN,	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						55104-1850 United States				
197	Harvey	McMahon	hmcmahon@otpco.com	Otter Tail Power Company		215 South Cascade Street Fergus Falls MN, 56537 United States	Electronic Service		No	23-151Official
198	Taylor	McNair	taylor@gridlab.org			668 Capp Street San Francisco CA, 94110 United States	Electronic Service		No	23-151Official
199	Ronald	Meier	rmeier@mcleodcoop.com	Mcleod Cooperative Power		3515 11th St East Glencoe MN, 55336 United States	Electronic Service		No	23-151Official
200	Melanie	Mesko Lee	melanie.lee@burnsvillemn.gov	City of Burnsville		100 Civic Center Parkway Burnsville MN, 55337-3867 United States	Electronic Service		No	23-151Official
201	Peder	Mewis	pmewis@cleangridalliance.org	Clean Grid Alliance		570 Asbury St. St. Paul MN, 55104 United States	Electronic Service		No	23-151Official
202	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	23-151Official
203	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	23-151Official
204	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	23-151Official
205	Stacy	Miller	stacy.miller@minneapolismn.gov	City of Minneapolis		350 S. 5th Street Room M 301 Minneapolis MN, 55415 United States	Electronic Service		No	23-151Official
206	David	Moeller	dmoeller@allete.com	Minnesota Power			Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
207	Dalene	Monsebroten	dalene.monsebroten@nmpagency.com	Northern Municipal Power Agency		123 2nd St W Thief River Falls MN, 56701 United States	Electronic Service		No	23-151Official
208	Sarah	Mooradian	sarah@curemn.org	CURE		117 South 1st Street Montevideo MN, 56265 United States	Electronic Service		No	23-151Official
209	Andrew	Moratzka	andrew.moratzka@stoel.com	Stoel Rives LLP		33 South Sixth St Ste 4200 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official
210	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	23-151Official
211	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	23-151Official
212	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	23-151Official
213	Alan	Muller	alan@greendel.org	Energy & Environmental Consulting		1110 West Avenue Red Wing MN, 55066 United States	Electronic Service		No	23-151Official
214	Sonny	Myers	smyers@1854treatyauthority.org	1854 Treaty Authority		4428 Haines Rd Duluth MN, 55811-1524 United States	Electronic Service		No	23-151Official
215	Ben	Nelson	benn@cmpasgroup.org	CMMPA		459 South Grove Street Blue Earth MN, 56013 United States	Electronic Service		No	23-151Official
216	Carl	Nelson	cnelson@mncee.org	Center for Energy and Environment		212 3rd Ave N Ste 560 Minneapolis MN, 55401 United States	Electronic Service		No	23-151Official
217	Deb	Nelson	dnelson@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
218	David	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency		220 South Sixth Street Suite 1300 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official
219	Duane	Ninneman	duane@cureriver.org	Clean Up the River Environment		117 South 1st St Montevideo MN, 56265 United States	Electronic Service		No	23-151Official
220	Michael	Noble	noble@fresh-energy.org	Fresh Energy		408 Saint Peter St Ste 350 Saint Paul MN, 55102 United States	Electronic Service		No	23-151Official
221	Rolf	Nordstrom	rnordstrom@gpisd.net	Great Plains Institute		2801 21ST AVE S STE 220 Minneapolis MN, 55407-1229 United States	Electronic Service		No	23-151Official
222	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	23-151Official
223	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	23-151Official
224	Ric	O'Connell	ric@gridlab.org	GridLab		2120 University Ave Berkeley CA, 94704 United States	Electronic Service		No	23-151Official
225	Joseph	OBrien	joey.obrien@lowersioux.com			39527 Highway 1 Morton MN, 56270 United States	Electronic Service		No	23-151Official
226	Matthew	Olsen	molsen@otpco.com	Otter Tail Power Company		215 South Cascade Street Fergus Falls MN, 56537 United States	Electronic Service		No	23-151Official
227	Russell	Olson	rolson@hcpd.com	Heartland Consumers Power District		PO Box 248 Madison SD, 57042-0248 United States	Electronic Service		No	23-151Official
228	Debra	Opatz	dopatz@otpco.com	Otter Tail Power Company		215 South Cascade Street Fergus Falls MN, 56537 United States	Electronic Service		No	23-151Official
229	Mikayla	Osterman	mosterman@otpco.com	Otter Tail Power Company		215 S Cascade St PO Box 496 Fergus Falls MN, 56537	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						United States				
230	Jamie	Overgaard	jovergaard@minnkota.com	Minnkota Power Cooperative, Inc.		5301 32nd Ave S Grand Forks ND, 58201 United States	Electronic Service		No	23-151Official
231	Carol A.	Overland	overland@legalectric.org	Legalectric - Overland Law Office		1110 West Avenue Red Wing MN, 55066 United States	Electronic Service		No	23-151Official
232	Gregory	Padden	gpadden@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	23-151Official
233	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	23-151Official
234	Marsha	Parlow	mparlow@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	23-151Official
235	Priti	Patel	ppatel@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369-4718 United States	Electronic Service		No	23-151Official
236	Gerad	Paul	gpaul@minnkota.com	Minnkota Power Cooperative		5301 32nd Ave S Grand Forks ND, 58201 United States	Electronic Service		No	23-151Official
237	Earl	Pendleton	earl.pendleton@lowersioux.com	Lower Sioux Indian Community		39527 Highway 1 Morton MN, 56270 United States	Electronic Service		No	23-151Official
238	Mary Beth	Peranteau	mperanteau@fredlaw.com	Fredrikson & Byron, P.A.		44 East Mifflin Street Suite 1000 Madison WI, 53703 United States	Electronic Service		No	23-151Official
239	Thom	Petersen	thom.petersen@state.mn.us		Minnesota Department of Agriculture	625 North Robert St Saint Paul MN, 55155 United States	Electronic Service		No	23-151Official
240	Luke	Peterson	luke.peterson@hpuc.com	Hibbing Public Utilities Commission		1902 Sixth Ave E Hibbing MN, 55746 United States	Electronic Service		No	23-151Official
241	Neil	Peterson	info@nclucb.org	Northern Counties Land Use Coordinating Board		null null, null United States	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
242	Gordon	Pietsch	gpietsch@grenergy.com	Great River Energy		12300 Elm Creek Blvd. Maple Grove MN, 55369-4718 United States	Electronic Service		No	23-151Official
243	Joe	Plumer	joe.plumer@redlakenation.org	Red Lake Nation		15484 Migizi Drive Red Lake MN, 56671 United States	Electronic Service		No	23-151Official
244	J.	Porter	greg.porter@nngco.com	Northern Natural Gas Company		1111 South 103rd St Omaha NE, 68124 United States	Electronic Service		No	23-151Official
245	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	23-151Official
246	Robert	Prescott	bob.prescott@lowersioux.com	Lower Sioux Indian Community		39527 Highway 1 Morton MN, 56270 United States	Electronic Service		No	23-151Official
247	David	Raatz	draatz@bepc.com	Basin Electric Power Cooperative		1717 East Interstate Avenue Bismarck ND, 58501 United States	Electronic Service		No	23-151Official
248	John C.	Reinhardt		Laura A. Reinhardt		3552 26th Ave S Minneapolis MN, 55406 United States	Paper Service		No	23-151Official
249	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	23-151Official
250	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	23-151Official
251	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	23-151Official
252	John	Richards	johnrichards@nweco.com	Northwestern Wisconsin Electric Company		104 S. Pine St. Grantsburg WI, 54840 United States	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
253	Susan	Romans	sromans@allete.com	Minnesota Power		30 West Superior Street Legal Dept Duulth MN, 55802 United States	Electronic Service		No	23-151Official
254	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	23-151Official
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	23-151Official
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	23-151Official
257	Nathaniel	Runke	nrunke@local49.org			611 28th St. NW Rochester MN, 55901 United States	Electronic Service		No	23-151Official
258	Zachary	Ruzycki	zruzycki@grenergy.com	Great River Energy		12300 Elm Creek Boulevard Maple Grove MN, 55369 United States	Electronic Service		No	23-151Official
259	Robert K.	Sahr	bsahr@eastriver.coop	East River Electric Power Cooperative		P.O. Box 227 Madison SD, 57042 United States	Electronic Service		No	23-151Official
260	Todd	Sailer		Minnetonka Power Cooperative		5301 32nd Ave. S Grand Forks ND, 58201 United States	Paper Service		No	23-151Official
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	23-151Official
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	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
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	23-151Official
264	John	Saxhaug	john_saxhaug@yahoo.com			3940 Harriet Ave Minneapolis MN, 55409 United States	Electronic Service		No	23-151Official
265	Jean	Schafer	jeans@bepc.com	Basin Electric Power Cooperative		1717 E Interstate Ave Bismarck ND, 58501 United States	Electronic Service		No	23-151Official
266	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	23-151Official
267	Kay	Schraeder	kschraeder@minnkota.com	Minnkota Power		5301 32nd Ave S Grand Forks ND, 58201 United States	Electronic Service		No	23-151Official
268	Kathleen	Schuler	keschuler47@gmail.com			1520 10th Ave S #2 Minneapolis MN, 55404 United States	Electronic Service		No	23-151Official
269	Robert H.	Schulte	rhs@schulteassociates.com	Schulte Associates LLC		1742 Patriot Rd Northfield MN, 55057 United States	Electronic Service		No	23-151Official
270	J.P.	Schumacher	jps@mrenergy.com	Missouri River Energy Services		null null, null United States	Electronic Service		No	23-151Official
271	Kevin	Schumacher	kevin@mrets.org	Midwest Renewable Energy Tracking System		null null, null United States	Electronic Service		No	23-151Official
272	Ronald J.	Schwartau	rschwartau@noblesce.com	Nobles Electric Cooperative		22636 U.S. Hwy. 59 Worthington MN, 56187 United States	Electronic Service		No	23-151Official
273	Christine	Schwartz	regulatory.records@xcelenergy.com	Xcel Energy		414 Nicollet Mall, MN1180-07-MCA Minneapolis MN, 55401-1993 United States	Electronic Service		No	23-151Official
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	23-151Official
275	Dean	Sedgwick	sedgwick@itascapower.com	Itasca Power Company		PO Box 455 Spring Lake MN, 56680 United States	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
276	Jessie	Seim	jessie.seim@piic.org	Prairie Island Indian Community		5636 Sturgeon Lake Rd Welch MN, 55089 United States	Electronic Service		No	23-151Official
277	Darrell	Seki, Sr.	dseki@redlakenation.org			15484 Migizi Drive Red Lake MN, 56671 United States	Electronic Service		No	23-151Official
278	Will	Seuffert	will.seuffert@state.mn.us		Public Utilities Commission	121 7th Pl E Ste 350 Saint Paul MN, 55101 United States	Electronic Service		Yes	23-151Official
279	Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates		7400 Lyndale Ave S Ste 190 Richfield MN, 55423 United States	Electronic Service		Yes	23-151Official
280	Bria	Shea	bria.e.shea@xcelenergy.com	Xcel Energy		414 Nicollet Mall Minneapolis MN, 55401 United States	Electronic Service		No	23-151Official
281	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	23-151Official
282	Doug	Shoemaker	dougs@charter.net	Minnesota Renewable Energy		2928 5th Ave S Minneapolis MN, 55408 United States	Electronic Service		No	23-151Official
283	Beth	Smith	bsmith@greatermankato.com	Greater Mankato Growth		1961 Premier Dr Ste 100 Mankato MN, 56001 United States	Electronic Service		No	23-151Official
284	Joel	Smith	jsmith@mnchippewatribe.org	Minnesota Chippewa Tribe		PO Box 217 Cass Lake MN, 56633 United States	Electronic Service		No	23-151Official
285	Joshua	Smith	joshua.smith@sierraclub.org			85 Second St FL 2 San Francisco CA, 94105 United States	Electronic Service		No	23-151Official
286	Ken	Smith	ken.smith@districtenergy.com	District Energy St. Paul Inc.		76 W Kellogg Blvd St. Paul MN, 55102 United States	Electronic Service		No	23-151Official
287	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	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
288	Trevor	Smith	trevor.smith@avantenergy.com	Avant Energy, Inc.		220 South Sixth Street Suite 1300 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official
289	Roger	Smith, Sr.	rogermsmithsr@fdlrez.com			1720 Big Lake Road Cloquet MN, 55720 United States	Electronic Service		No	23-151Official
290	Beth	Soholt	bsoholt@cleangridalliance.org	Clean Grid Alliance		570 Asbury Street Suite 201 St. Paul MN, 55104 United States	Electronic Service		No	23-151Official
291	Anna	Sommer	asommer@energyfuturesgroup.com	Energy Futures Group		PO Box 692 Canton NY, 13617 United States	Electronic Service		No	23-151Official
292	Marie	Spry	mariespry@grandportage.com			PO Box 428 Grand Portage MN, 55605 United States	Electronic Service		No	23-151Official
293	Mark	Spurr	mspurr@fvbenergy.com	International District Energy Association		222 South Ninth St., Suite 825 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official
294	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	23-151Official
295	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	23-151Official
296	Byron E.	Starns	byron.starns@stinson.com	STINSON LLP		50 S 6th St Ste 2600 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official
297	Cary	Stephenson	cstephenson@otpco.com	Otter Tail Power Company		215 South Cascade Street Fergus Falls MN, 56537 United States	Electronic Service		Yes	23-151Official
298	Mark	Strohfus	mstrohfus@grenergy.com	Great River Energy		12300 Elm Creek Boulevard Maple Grove MN, 55369-4718 United States	Electronic Service		No	23-151Official
299	James M	Strommen	jstrommen@kennedy-graven.com	Kennedy & Graven, Chartered		150 S 5th St Ste 700 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
300	Samuel	Strong	sam.strong@redlakenation.org	Red Lake Nation		15484 Migizi Drive Red Lake MN, 56671 United States	Electronic Service		No	23-151Official
301	Kent	Sulem	ksulem@mmua.org			3131 Fernbrook Ln N Ste 200 Plymouth MN, 55447-5337 United States	Electronic Service		No	23-151Official
302	Timothy	Sullivan	tsullivan@whe.org	Wright Hennepin Coop. Electric Assn.		6800 Electric Drive PO Box 330 Rockford MN, 55373 United States	Electronic Service		No	23-151Official
303	David	Sunderman	daves@benco.org	BENCO (DUPLICATE)		PO Box 8 Mankato MN, 56002-0008 United States	Electronic Service		No	23-151Official
304	Randy	Synstelien	rsynstelien@otpco.com	Otter Tail Power Company		215 S Cascade St Fergus Falls MN, 56537 United States	Electronic Service		No	23-151Official
305	Camille	Tanhoff	kamip@uppersiouxcommunity-nsn.gov	Upper Sioux Community		5722 Travers Lane PO BOX 147 Granite Falls MN, 56241 United States	Electronic Service		No	23-151Official
306	Mikayala	Thompson	mmthompson@otpco.com	Otter Tail Power Company		null null, null United States	Electronic Service		No	23-151Official
307	Tim	Thompson	tthompson@lrec.coop	Lake Region Electric Cooperative		PO Box 643 1401 South Broadway Pelican Rapids MN, 56572 United States	Electronic Service		No	23-151Official
308	Stuart	Tommerdahl	stommerdahl@otpco.com	Otter Tail Power Company		215 S Cascade St PO Box 496 Fergus Falls MN, 56537 United States	Electronic Service		Yes	23-151Official
309	Pat	Treseler	pat.jcplaw@comcast.net	Paulson Law Office LTD		4445 W 77th Street Suite 224 Edina MN, 55435 United States	Electronic Service		No	23-151Official
310	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	23-151Official
311	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	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
312	Jackie	Van Norman	jvannorman@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	23-151Official
313	Analeisha	Vang	avang@mnpower.com			30 W Superior St Duluth MN, 55802-2093 United States	Electronic Service		Yes	23-151Official
314	Adrian	Varga	avarga@actcommodities.com	ACT Commodities		437 Madison Ave New York City NY, 10022 United States	Electronic Service		No	23-151Official
315	Sam	Villella	sdvillella@gmail.com			10534 Alamo Street NE Blaine MN, 55449 United States	Electronic Service		No	23-151Official
316	Julie	Voeck	julie.voeck@nee.com	NextEra Energy Resources, LLC		700 Universe Blvd Juno Beach FL, 33408 United States	Electronic Service		No	23-151Official
317	Amelia	Vohs	avohs@mncenter.org	Minnesota Center for Environmental Advocacy		1919 University Avenue West Suite 515 St. Paul MN, 55104 United States	Electronic Service		Yes	23-151Official
318	Michael	Volker	mvolker@eastriver.coop	East River Electric Power Coop		211 S. Harth Ave Madison SD, 57042 United States	Electronic Service		No	23-151Official
319	Toni	Volkmeier	toni.volkmeier@state.mn.us	MPCA		520 Lafayette Rd. N. St. Paul MN, 55155 United States	Electronic Service		No	23-151Official
320	Trent	Waite	twaite@grenergy.com			null null, null United States	Electronic Service		No	23-151Official
321	Laurance R	Waldoch	larrywaldoch@gmail.com	Attorney		2597 Parkview Dr Saint Paul MN, 55110 United States	Electronic Service		No	23-151Official
322	Greg	Wannier	greg.wannier@sierraclub.org	Sierra Club		2101 Webster St Ste 1300 Oakland CA, 94612 United States	Electronic Service		No	23-151Official
323	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	23-151Official
324	Cynthia	Warzecha	cynthia.warzecha@state.mn.us	Minnesota Department of Natural Resources		500 Lafayette Road Box 25 St. Paul MN, 55155-4040	Electronic Service		No	23-151Official

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						United States				
325	Carol	Westergard	cwestergard@otpco.com	Otter Tail Power Company		215 S Cascade St Fergus Falls MN, 56537 United States	Electronic Service		No	23-151Official
326	Heather	Westra	heather.westra@piic.org	Prairie Island Indian Community		5636 Sturgeon Lake Rd Welch MN, 55089 United States	Electronic Service		No	23-151Official
327	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	23-151Official
328	Steve	White	steve.white@llojibwe.net	Leech Lake Band of Ojibwe		190 Sailstar Drive NW Cass Lake MN, 56633 United States	Electronic Service		No	23-151Official
329	Cody	Whitebear	cody.whitebear@piic.org	Prairie Island Indian Community		5636 Sturgeon Lake Road Welch MN, 55089 United States	Electronic Service		No	23-151Official
330	John	Williams	jwilliams@grenergy.com	Great River Energy		12300 Elm Creek Blvd Maple Grove MN, 55369 United States	Electronic Service		No	23-151Official
331	Laurie	Williams	laurie.williams@sierraclub.org	Sierra Club		Environmental Law Program 1536 Wynkoop St Ste 200 Denver CO, 80202 United States	Electronic Service		No	23-151Official
332	Virgil	Wind	virgil.wind@millelacsband.com	Mille Lacs Band of Ojibwe		43408 Oodena Drive Onamia MN, 56359 United States	Electronic Service		No	23-151Official
333	Joseph	Windler	jwindler@winthrop.com	Winthrop & Weinstine		225 South Sixth Street, Suite 3500 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official
334	Robyn	Woeste	robynwoeste@alliantenergy.com	Interstate Power and Light Company		200 First St SE Cedar Rapids IA, 52401 United States	Electronic Service		No	23-151Official
335	Sara	Wolff	sara@mnipl.org			710 Linwood Avenue St Paul MN, 55105 United States	Electronic Service		No	23-151Official
336	Tim	Wulling	t.wulling@earthlink.net			1495 Raymond Ave. Saint Paul	Electronic Service		No	23-151Official

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						MN, 55108 United States				
337	Laurie	York	laurie.york@whiteearth-nsn.gov	White Earth Reservation Business Committee		PO Box 418 White Earth MN, 56591 United States	Electronic Service		No	23-151Official
338	Kurt	Zimmerman	kwz@ibew160.org	Local Union #160, IBEW		2909 Anthony Ln St Anthony Village MN, 55418-3238 United States	Electronic Service		No	23-151Official
339	Emily	Ziring	eziring@stlouispark.org	City of St. Louis Park		5005 Minnetonka Blvd St. Louis Park MN, 55416 United States	Electronic Service		No	23-151Official
340	Patrick	Zomer	pat.zomer@lawmoss.com	Moss & Barnett PA		150 S 5th St #1200 Minneapolis MN, 55402 United States	Electronic Service		No	23-151Official