DORSEY
DORSEY & WHITNEY LLP

B ANDREW BROWN
(612) 340-5612
brown.andrew@dorsey.com

June 26, 2014

VIA E-FILING

Dr. Burl W. Haar
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101-2147

Re: In the Matter of the Investigation into Environmental and Socioeconomic Costs
PUC Docket No.: E999-CI-00-1636

Dear Dr. Haar:

Enclosed for filing are the Comments of Great River Energy, Minnesota Power and Otter Tail Power Company in Response to the Report from the Minnesota Pollution Control Agency and the Minnesota Department of Commerce, and in Response to the Commission's Notice of June 16, 2014; along with an Affidavit of Service serving all parties on the service lists.

Please feel free to contact me if you have any questions.

Respectfully submitted,

/s/ B. Andrew Brown

B. Andrew Brown

BAB:mlm

Enclosures

cc: Michael J. Ahern, Esq.
Thomas Lorenzen, Esq.

STATE OF MINNESOTA

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Beverly Jones Heydinger	Chair
David C. Boyd	Commissioner
Nancy Lange	Commissioner
Dan Lipschultz	Commissioner
Betsy Wergin	Commissioner

In the matter of the Investigation into Environmental and Socioeconomic Costs Under Minn. Stat § 216B.2422, Subd. 3	Docket No. E999/CI-00-1636 Comments of Great River Energy, Minnesota Power, and Otter Tail Power Company in Response to the Report from the Minnesota Pollution Control Agency and the Minnesota Department of Commerce, and in Response to the Commission's Notice of June 16, 2014

I. INTRODUCTION

The issues involved in establishing environmental costs associated with emissions of carbon dioxide (CO_2), nitrogen oxides (NOx), sulfur dioxide (SO_2), and fine particulate matter ($PM_{2.5}$) are extremely involved and complex. The Commission's decision on these values will have a profound and long-term impact on all electric customers in the State of Minnesota. Great River Energy, Minnesota Power, and Otter Tail Power urge the Minnesota Public Utilities Commission (the "Commission") to support the determination in its February 10, 2014 Order Reopening Investigation and Convening Stakeholder Group to Provide Recommendations for Contested Case Proceeding ("Order Reopening Investigation") and proceed with a full contested case proceeding, without prejudgment or summary disposition of the critical issues.

In its Order Reopening Investigation, the Commission requested the Department of Commerce and the Minnesota Pollution Control Agency (jointly, "the Agencies") convene a

stakeholder group "to address the scope of the investigation, whether to retain an expert under Minn. Stat. § 216B.62, subd. 8, and the possible role of an expert should one be retained." On June 10, 2014, the Agencies reported to the Commission that there was *no consensus whatsoever* among the stakeholders on anything but the most basic tenets of this investigation: namely, that the best and most credible estimates for environmental cost values should be developed, and that the process and the analyses should be as transparent as possible.[1] Despite the lack of consensus, the Agencies exceeded their charge and proposed their own recommendations on the substantive matters the Commission intends to refer to the Office of Administrative Hearings. Briefly, the Agencies unilaterally recommended that the Commission effectively conclude the contested case proceeding before it has begun, by summarily resolving – with no opportunity for presentation of evidence or argument – the same significant and complex issues the Commission previously identified as appropriately resolved through a contested case before an independent finder of fact.

The Agencies' recommendations have the appearance of a rush to judgment without consideration of other stakeholders' input. As in past proceedings, and particularly given the significance and complexity of the issues involved, the Commission should not take any steps that might prejudge the outcome of the anticipated contested case proceeding or otherwise prejudice the stakeholders' rights to fully present their evidence and legal arguments regarding the appropriateness and accuracy of any proposed environmental cost, whether for CO_2 or one of the three identified criteria pollutants.

As requested, we submit our comments on the following issues:

[1] Comments of the Minnesota Department of Commerce, Division of Energy Resources and the Minnesota Pollution Control Agency at 3 (June 10, 2014) ("Agencies' Report"). Contrary to the statement in the Agencies' Report, we believe that there was no consensus even on the criteria to be used to assess the various valuation methods.

- Should the Commission adopt the Agencies' recommendation to use the federal Social Cost of Carbon (SCC) as the CO2 value, not sending that issue to hearing? If so, should the Commission clarify whether it is adopting the SCC number or the underlying methodology used to calculate the number?

- If the Commission were to adopt the SCC, would that decision be effective immediately for use in resource plans and other relevant dockets? Would adopting of the SCC include updating it any time it is updated by the federal government?

- Should the Commission specify that a damage value approach be used for developing externality values, as suggested at page 15 of the Agencies' report? Why or why not?

- Should the Commission endorse a particular model or modeling approach at this time?

- Are there any other specific findings the Commission should make with respect to the scope of this docket?

II. COMMENTS

Question: Should the Commission adopt the Agencies' recommendation to use the federal Social Cost of Carbon (SCC) as the CO2 value, not sending that issue to hearing? If so, should the Commission clarify whether it is adopting the SCC number or the underlying methodology used to calculate the number?

Response:

No, the Commission should not adopt the Agencies' recommendation that it summarily determine to use the federal SCC as the CO_2 environmental cost value. The Commission previously concluded that "the significant and complex issues raised by this investigation would be best resolved in the context of a contested case proceeding" and "[t]he Commission will therefore refer the investigation to the Office of Administrative Hearings."[2] As the Agencies themselves noted, there was no stakeholder agreement to recommend use of the federal SCC as the CO_2 value.[3] The Agencies have also failed to provide any substantial and credible basis to reverse the Commission's sound conclusions that the issues involved in this investigation are both significant and complex, and that they would be best resolved through a contested case.

[2] Order Reopening Investigation at 5.

[3] Agencies' Report, Attachment A at 3.

The Agencies state in their Report they do not believe it is in the best interests of ratepayers for the Commission to conduct a contested case proceeding to develop a new CO_2 value.[4] Instead, the Agencies urge the Commission to adopt the federal government's interim SCC values. Aside from being unrequested and unilateral, this recommendation is totally devoid of any supporting factual basis or public input, as no record has been developed to support a conclusion that the federal SCC is appropriate and sufficiently accurate for use in the sort of fine-grained decision-making that state-level resource planning decisions entail. Despite the Commission's prior determination that the issues here are sufficiently significant and complex to merit a contested case proceeding before an Administrative Law Judge ("ALJ"), the Agencies simply characterize such a proceeding as too "costly, time consuming, and duplicative" given the federal government's development of estimated SCC values, and then make the unilateral recommendation that the interim federal SCC be used as the environmental cost value.[5]

We disagree with the Agencies' recommendations and reasoning. The federal government does not appear to have anticipated that its SCC values would be used by the States in making fine-grained resource planning. It is simply wrong to say that Minnesota's contested case proceeding would be "duplicative" of the federal government's process for developing the SCC, as the Agencies contend, or to suggest that such a proceeding would therefore be unnecessarily costly or time-consuming.

The environmental costs established by the Commission are vitally important and can cause significant harm to ratepayers if they are set incorrectly. If the Commission mechanically adopts the federal SCC without state-level review, the Commission will erode its authority and

[4] Agencies' Report at 10.

[5] Agencies' Report at 14.

its discretion to do what might be in the overall best interest of Minnesota ratepayers. Environmental cost values that are set too high will unduly increase costs, thereby harming ratepayers, and could also significantly distort environmental policy by leading to the inappropriate closure or reduced use of the wrong plants. For instance, if Minnesota applies too high an environmental cost associated with CO_2 emissions, it could result in the curtailment even of lower-emitting natural gas combined cycle ("NGCC") units in the State. As a consequence, the electricity previously generated by those low-emitting units might instead be generated by a coal-fired source in another State that is not subject to the same level of regulation. An overly-high environmental cost for CO_2 emissions might in fact result in an *increase* in overall greenhouse gas emissions regionally or nationally. In sum, the environmental costs that the Commission may set as a result of this investigation will surely have consequences, many of them quite significant, and time and care should be taken to set them correctly.

The federal SCC was developed and is used by federal agencies for a very limited and specific purpose: to help federal agencies "estimate the climate benefits of rulemakings."[6] Under Executive Order 12866, federal agencies are required, to the extent permitted by law, "to assess both the costs and the benefits of [an] intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation *only upon a reasoned determination that the benefits of the intended regulation justify its costs*."[7] In short, Executive Order 12866 requires that each federal agency conduct a "go/no go" test before it may issue any significant nationwide regulation: if the benefits of the proposed regulation justify its costs, the regulation may be issued; if benefits do not justify the costs, then the regulation should not be

[6] EPA Fact Sheet: Social Cost of Carbon at 1 (Nov. 2013), available at http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf.

[7] Executive Order 12866 at 2 (Sept. 30, 1993) (emphasis added), available at http://www.archives.gov/federal-register/executive-orders/pdf/12866.pdf.

issued. The problem long has been that, while the costs of a nationwide regulation may be readily discernable, many of its benefits (including its climate benefits) may not be so easily identified or monetized for comparison to the regulation's readily monetized costs. The federal SCC provides a way of monetizing the "value of damages avoided for a small emission reduction (i.e., the benefit of a CO2 reduction)."[8] It thus permits a federal agency to better assess, in making that go/no-go determination, whether all benefits of a particular rule have been identified and valued for weighing against the identified costs of that rule.

The federal SCC is a blunt instrument that permits an agency to make "macro" decisions about whether or not to proceed with a rulemaking. Notably, when EPA has used SCC over the years since 2010 (when the first federal SCC was developed), it has done so in the context of analyzing the relative costs and benefits of nationwide rulemakings in order to make go/no-go decisions about the rules.[9] EPA and other federal agencies conspicuously have *not* relied on

[8] EPA Fact Sheet: Social Cost of Carbon at 1 (Nov. 2013).

[9] In the EPA Fact Sheet, EPA lists the following as examples of rulemakings in which it has applied SCC in conducting the cost-benefit analyses required by Executive Order 12866:

- The Joint EPA/Department of Transportation Rulemaking to establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards (2012-2016)
- Amendments to the National Emission Standards for Hazardous Air Pollutants and New Source Performance Standards (NSPS) for the Portland Cement Manufacturing Industry
- Regulatory Impact Results for the Reconsideration Proposal for National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters at Major Sources
- Proposed National Emission Standards for Hazardous Air Pollutants (NESHAP) for Mercury Emissions from Mercury Cell Chlor Alkali Plants
- Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units Standards
- Final Mercury and Air Toxics Standards
- Joint EPA/Department of Transportation Rulemaking to establish Medium- and Heavy -Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards
- Proposed Carbon Pollution Standard for Future Power Plants
- Joint EPA/Department of Transportation Rulemaking to establish 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards.

All are nationwide rulemakings. In none of these was SCC used to establish the standard itself.

SCC in local or source-specific rulemakings such as whether to permit the construction of or continue to operate a given coal-fired plant, whether to build wind generation facilities in lieu of coal- or gas-fired generating capacity, or how those units should be dispatched in relation to one another.

Indeed, as far as we can tell, though EPA relied on SCC *in its cost-benefit analysis* justifying its recently-proposed Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Generating Units, 79 Fed. Reg. 34,830 (June 18, 2014) (the "Existing Source GHG Proposal"), it did *not* rely on the federal SCC estimate in developing any of the four "building blocks" on which EPA bases the state-specific emission reduction requirements of the proposal.[10] Yet, this is *precisely* how the Agencies recommend that SCC be used by the Commission: to determine, on a "micro," unit-by-unit, and utility-by-utility basis what new generating capacity should be built in the State. Whether the federal SCC is appropriate for use in such granular decisions is an issue that the federal government never explored and that requires careful consideration of both evidence and legal argument.

Moreover, substantial concerns exist regarding the accuracy, reliability, and utility of the federal SCC estimate. As even the interagency group that developed the federal SCC recognized and accepted, the effort suffered from "serious limits of both quantification and monetization," and the issues of attempting to calculate and quantify the costs of carbon raise "serious questions of science, economics, and ethics and should be viewed as provisional."[11] The Interagency

[10] The four "building blocks" are: heat rate improvements at electric generating units ("EGUs"); dispatching lower-emitting EGUs; dispatching zero-emitting energy sources; and end-use energy efficiency. *See* 79 Fed. Reg. at 34,835 (June 18, 2014).

[11] Interagency Working Group on Social Cost of Carbon, Technical Support Document – Social Cost of Carbon for Regulatory Impact Analysis – Under Executive Order 12866, U.S. Government, at 2 (Feb. 2010), available at http://www.epa.gov/oms/climate/regulations/scc-tsd.pdf.

Group concluded by admitting the limitations of its analysis, including noting areas in which the underlying integrated assessment models are incomplete and cautioning that limited research links climate impacts to economic damages.[12]

The Interagency Group is not alone in noting the serious limitations of the analyses used to formulate the social cost of carbon. In a paper for the National Bureau of Economic Research, Robert S. Pindyck of MIT's Sloan School of Management noted that there is "plenty of disagreement" regarding the value set for the social cost of carbon.[13] Pindyck concludes that integrated assessment models, three of which were used to develop the federal social cost of carbon, are "so deeply flawed as to be close to useless as tools for policy analysis. Worse yet, their use suggests a level of knowledge and precision that is simply illusory, and can be highly misleading."[14] Pindyck further explained that the modeler can "obtain almost any desired result because key inputs can be chosen arbitrarily."[15]

In addition, there is substantial debate, as yet unresolved by the federal government, as to whether the federal SCC calculation complies with applicable White House guidance governing the conduct of cost-benefit analyses. The Office of Management and Budget ("OMB"), a critical component of the White House, has established guidelines that federal agencies apply when estimating benefits and costs of new regulations, including damage-based estimates.[16] In the fall of 2013, the OMB solicited public comment regarding the 2013 Interagency Update to the Social Cost of Carbon that the Agencies now suggest the Commission should adopt. Comments

[12] *Id.* at 33.

[13] Robert S. Pindyck, Climate Change Policy: What Do the Models Tell Us? National Bureau of Economic Research Working Paper 19244, at 1 (July 2013).

[14] *Id.* at 3.

[15] *Id.* at 16.

[16] *See* OMB Circular A-4 (Sept.17, 2003), available at http://www.whitehouse.gov/omb/circulars_a004_a-4; OMB Circular A-94 (Oct. 29, 1992), available at http://www.whitehouse.gov/omb/circulars_a094.

provided to OMB during that public comment period identified key areas in which the SCC report did not adhere to substantive areas of OMB's overall guidance in Circulars A-4 and A-94.[17] The SCC report did not justify the rationale for deviating from OMB's guidance, which introduces uncertainty as to whether the SCC derived in the report is valid for use by federal agencies, let alone state agencies. OMB has yet to address any of these comments or otherwise proceed to finalize the 2013 federal SCC values. In sum, it is not appropriate to apply the federal SCC valuation beyond the context of federal regulatory agency benefit/cost determinations, and it is certainly not appropriate to both misapply and use an SCC valuation that is in question to update how the Commission might apply environmental externalities in this proceeding.

These concerns cannot be lightly dismissed or summarily resolved because they bear on the criteria the Commission previously identified as the appropriate factors to consider when it undertook a similar investigation in 1993. In its January 3, 1997, Order Establishing Environmental Cost Values in Docket No. E-999/CI-93-583, the Commission determined in establishing environmental costs that it should: (1) "quantify the costs attributable to as many effect of by-products of generation as practical"; (2) focus on the effects of by-products that cause the most significant costs"; (3) "*concentrate on the impacts that are easiest to quantify*"; and (4) "emphasize effects attributable to the most likely resource decisions over the resource-planning horizon (15 years)."[18] While the Commission's 1997 Order also generally favored adopting a damage-cost theory of environmental cost valuation, the Commission noted that the "[c]ost-of-control method, which uses the costs of avoiding or reducing an environmental effect

[17] *See, e.g.,* Comments of Edison Electric Institute at 5-9, available at http://www.regulations.gov/contentStreamer?objectId=0900006481630878&disposition=attachment&contentType=pdf.

[18] *In the Matter of the Quanitification of Environmental Costs Pursuant to Laws of Minnesota 1993, Chapter 356, Section 3*, Docket No. E-999/CI-93-583, Order Establishing Environmental Cost Values at 12 (Jan. 3, 1997) (emphasis added).

at the source to estimate the value of the externality," may be preferable in some instances because "it may be much easier or less expensive to estimate control costs than to estimate actual damages."[19] Hence, ease of quantification of costs was a critical factor for the Commission.[20] Additionally, under the plain language of Minn. Stat § 216B.2422, subd. 3, "environmental costs" and "socioeconomic costs" are distinct categories of costs. The statute sets forth a two-stage process under which the Commission is directed to establish environmental cost values independent from its consideration of the consequences of applying those values.[21] We note that the federal SCC also appears to include costs that may be properly considered "socioeconomic costs" rather than environmental costs. If so, this may render the federal SCC inappropriate for use in establishing a Minnesota environmental cost for CO_2. This is another matter that is best resolved after a full contested case proceeding.

Given the federal government's own acknowledgement that its federal SCC estimate is hampered by "serious limits of both quantification and monetization," and that it raises "serious questions of science, economics, and ethics and should be viewed as provisional," simply adopting the federal SCC summarily as the environmental cost to be applied in Commission proceedings would be the essence of arbitrariness and capriciousness. A contested case

[19] *Id.* at 14.

[20] Administrative Law Judge Allan Klein, whose recommendations formed the basis for the Commission's 1997 Order, also recommended focusing on those emissions that have "damages [that] are relatively easy to quantify." *In the Matter of the Quanitification of Environmental Costs Pursuant to Laws of Minnesota 1993, Chapter 356, Section 3*, MPUC Docket No. E-999/CI-93-583, OAH Docket No. 6-2500-8632-2, Findings of Fact, Conclusions, Recommendation and Memorandum at 14-15 (Mar. 25, 1996).

[21] Minn. Stat. § 216B.2422, subd. 3("The commission shall, to the extent practicable, quantify and establish a range of environmental costs associated with each method of electricity generation. A utility shall use the values established by the commission in conjunction with other external factors, including socioeconomic costs, when evaluating and selecting resource options in all proceedings before the commission, including resource plan and certificate of need proceedings."); *see also In the Matter of the Quantification of Environmental Costs Pursuant to Laws of Minnesota 1993, Chapter 356, Section 3*, Docket No. E-999/CI-93-583, Order Establishing Environmental Cost Values at 3, 5 (Jan. 3, 1997).

proceeding will provide a forum in which the accuracy, reliability, and utility of federal SCC as an environmental cost can be duly assessed through the presentation of evidence and argument.

Another significant and very complex set of questions that requires factual and legal development in the context of a contested case proceeding is whether and, if so, to what extent the costs reflected in the interim draft federal SCC may be captured by and internalized in EPA's proposed rules governing greenhouse gas emissions from new, modified and reconstructed, and existing fossil fuel-fired power plants.[22] The proposed new source performance standard, if finalized, would require *new* coal-fired EGUs to emit no more than 1,100 lb. CO_2/MWh gross averaged over a 12-month period; this is the level of emission reduction that would be achieved by the installation and operation of partial carbon capture and storage (CCS) technology. Large new gas-fired plants would be required to emit at levels consistent with the operation of new, efficient NGCC units (1,000 lbs. CO_2/MWh). The proposed standard for *modified and reconstructed* sources would require CO_2 emissions at levels roughly equivalent to those achieved by the most efficient, state-of-the-art technologies for coal- and gas-fired plants. Most significantly, the proposed emission guidelines for *existing sources* is specifically designed to force massive reductions in the greenhouse gas emission rates of existing coal-fired units or to drive dispatch from those high-emitting units toward lower-emitting gas-fired units or zero-emission renewable energy sources such as wind, solar, hydroelectric, and even nuclear.

The combined effects of each of these rules, if finalized, will be to drive precisely the sorts of decisions in integrated resource planning that we understand the Commission seeks to accomplish through the revision of the environmental cost value for CO_2. EPA expects the

[22] EPA's proposed new source performance standard was published at 79 Fed. Reg. 1429 (Jan. 8, 2014). EPA's proposed performance standard for modified and reconstructed EGUs was published at 79 Fed. Reg. 34,959 (June 18, 2014). EPA's proposed emission guidelines for existing sources were published at 79 Fed. Reg. 34,829 (June 18, 2014). Information about each is available at http://www2.epa.gov/carbon-pollution-standards/regulatory-actions.

existing source rule, by itself, will result in a 30-percent reduction in greenhouse gas emissions from 2005 levels by 2030.[23] The federal SCC, however, was developed *before* the existing source and modified/reconstructed source proposals had even been crafted. Thus, its values may well be based on levels of greenhouse gas emissions that do not account for the significant greenhouse gas emission reductions that are expected to result from those rules' finalization and implementation.

These rules are expected to be finalized by June or July of 2015, likely while the contested case proceeding is underway. It is especially vital that the parties be given ample opportunity to develop a record and present argument before an ALJ regarding the extent to which any costs associated with the unregulated emissions of CO_2 are likely to be internalized within these rules, as well as the extent to which revision of the environmental cost value for CO_2 might duplicate and thereby distort the effects of the soon-to-be-finalized federal greenhouse gas standards. Summary adoption of the federal SCC as the environmental cost associated with CO_2 emissions would preclude this critical inquiry and raise serious questions about whether the Commission's CO_2 environmental cost value potentially double-counts costs.

In addition, the Commission should consider, after these issues have been fully developed and explored in the contested case, whether the federal SCC and the models upon which it is based, are sufficiently scientifically reliable to satisfy the command of the applicable Minnesota

[23] The proposed existing source rule itself sets the baseline for each State's emission reduction targets, including Minnesota's, on emission data from 2012, not 2005. Nonetheless, EPA has touted the rule as obtaining reductions as compared 2005 emission levels. *Compare, e.g.*, Goal Computation Technical Support Document for the CAA Section 111(d) Emission Guidelines for Existing Power Plants at 4 ("The EPA used 2012 state-level data to determine each state's emission rate goal.") (available at http://www2.epa.gov/sites/production/files/2014-06/documents/20140602tsd-goal-computation.pdf), with EPA's June 2, 2014, press release announcing the proposal (By 2030, rule will "[c]ut carbon emission from the power sector by 30 percent nationwide below 2005 levels, which is equal to the emissions from powering more than half the homes in the United States for one year.") (available at http://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceeac8525735900400c27/5bb6d20668b9a18485257ceb00490c98!opendocument).

statute that environmental costs be established "to the extent practicable."[24] At some point, the level of uncertainty associated with attempting to apply the federal SCC on a state scale may be great enough that it cannot be said to be "practicable" for use as an environmental cost pursuant to the statute. In that case, as the Commission recognized in 1997,[25] it may be better to consider other methods of estimating environmental costs that are more easily quantified, such as cost-of-compliance or perhaps willingness-to-pay (*e.g.*, market-based valuation through existing cap-and-trade programs).

A contested case proceeding will also allow the parties to explore, and the Commission ultimately to consider, with ample information developed through the proceeding, whether some other measure of "environmental cost" would be appropriate and practicable. The Agencies suggest in their June 10 Report that, even if the Commission declines to summarily adopt the federal SCC as the environmental cost for CO_2, it should limit the contested proceeding to examination of alternatives that fit within a "damages value" theory of how best to calculate environmental and socioeconomic costs associated with CO_2 emissions.[26] The statute, however, does not specify that a damage-based approach to determining environmental costs must be used, and the Commission should not summarily rule out other methods for calculating the environmental costs associated with CO_2. For instance, market-based values for carbon dioxide emissions might be more readily ascertainable and credible than the admittedly inaccurate federal SCC. Numerous regional cap-and-trade programs have developed for carbon emissions over the past few years – including domestic programs like the Regional Greenhouse Gas

[24] Minn. Stat. § 216B.2422, subd. 3.

[25] *In the Matter of the Quantification of Environmental Costs Pursuant to Laws of Minnesota 1993, Chapter 356, Section 3*, Docket No. E-999/CI-93-583, Order Establishing Environmental Cost Values (Jan. 3, 1997).

[26] Agencies' Report at 15.

Initiative (RGGI)[27] and international programs like the European Energy Exchange.[28] Unlike the federal SCC, such programs provide a ready, constantly-updated, and certain price for the emission of a given quantity of carbon dioxide. A contested case proceeding will allow the stakeholders to develop evidence and present argument about whether such programs, alone or in tandem, would provide an appropriate and practicable mechanism for determining environmental costs.

The Agencies, in their recommendation, ignore both the many questions regarding the accuracy and suitability of the federal SCC for use in state-level resource planning decisions and the potential availability of alternatives, including non-damage-value-based alternatives. Instead, the Agencies simply conclude that federal SCC is both accurate and suitable for use in such state-level decisionmaking and seek to foreclose any party from presenting arguments or evidence to the contrary. The Commission, however, will be in a better position to determine environmental costs if it has the benefit of fact and expert evidence and associated legal argument, developed through a contested proceeding before an ALJ, on the issue of how best and most practicably to calculate such environmental costs.

We recognize that the Commission has used the federal SCC for one limited purpose in the past. However, the urgent circumstances giving rise to its previous use do not exist here. The meteoric appearance and use of the SCC before the Commission was a result of very unique law passed by the Minnesota legislature in 2013 seeking to address solar energy as a distributed generation source.[29] The duties of both the Department and the Commission were very

[27] See http://www.rggi.org/rggi.

[28] See https://www.eex.com/en/market-data/emission-allowances/spot-market/european-emission-allowance.

[29] *See* 2013 Minn. Laws, ch. 150, art. 9-3.

specifically prescribed, as were the very short and ambitious statutory time deadlines by which certain tasks were to be completed.

The first regulatory use of the federal SCC in Minnesota was announced by the Department of Commerce as an input into the "Value of Solar (VOS) Methodology" computation released on the prescribed deadline of January 31, 2014.[30] Due to the short statutory deadlines, the Department's intent to use the federal SCC in the VOS was not previously known, nor was it subject to any prior notice, comment, public input or discussion. In turn, the Commission's approval of the entire VOS computation was required within 60 days. The Commission's modification and approval of the VOS Methodology was also subject to the unusual constraint of requiring DOC approval if the Commission proposed any modifications. Thus, the prior regulatory precedent and use of the federal SCC in Minnesota should not lend much weight or credibility to any studied consideration of the SCC. There has been no public proceeding in Minnesota to review or analyze the appropriateness of the use of the SCC as an environmental cost.

Accordingly, the Commission should reject the Agencies' recommendation that it summarily adopt the federal social cost of carbon as the "environmental cost" associated with CO2 emissions, as well as the Agencies' alternative recommendation that the contested case proceeding be limited to "damages-based" valuation methods. Given the significance and complexity of the issues involved in establishing an environmental cost for CO2 emissions, the Commission will be best served if all parties are permitted to fully develop their evidence and arguments in a contested case proceeding before an ALJ.

[30] *In the Matter of Establishing a Distributed Solar Value Methodology under Minn. Stat. §216B.164, subds. 10(e) and (f),* Docket No. E999/M-14-65, Proposal of the Minnesota Department of Commerce, Division of Energy Resources (Jan. 31, 2014).

Question: If the Commission were to adopt the SCC, would that decision be effective immediately for use in resource plans and other relevant dockets? Would adopting of the SCC include updating it any time it is updated by the federal government?

Response:

Even if the Commission ultimately adopts the federal SCC, it should do so only after a full contested case proceeding, as contemplated by the Commission's February 10, 2014 Order Reopening Investigation. Adopting the federal SCC on an immediate or interim basis, without the benefit of a prior contested case proceeding, would amount to an arbitrary and capricious action and would likely violate the due process rights of many stakeholders. We note that the Commission already has established a regulatory carbon cost planning value under Minn. Stat. § 216H.06. Recently, on April 28, 2014, the Commission decided in an Order in Docket No. E-999/CI-07-1199 to maintain that value at $9 to $34 per ton, with a start date of 2019.[31] In addition, the Department of Commerce and others can (and do) conduct sensitivity analyses using a range of different externality values when they participate in Integrated Resource Plan and Certificate of Need dockets. Regulatory carbon costs are thus captured in planning dockets, and a range of potential externality values can currently be considered in planning matters prior to any update of the values established under Minn. Stat. § 216B.2422, subd. 3. The Commission has now set out in this docket to explore, through the proper mechanism of a contested case, whether those values need updating. There exists no emergency or other basis to act precipitously by adopting the federal SCC or any other CO_2 environmental cost immediately. Doing so when there is no demonstrated emergency requiring immediate update of the existing value, especially without providing any meaningful process in which the stakeholders can

[31] *In the Matter of Establishing an Estimate of the Costs of Future Carbon Dioxide Regulation on Electricity Generation Under Minn. Stat. § 216H.06*, Docket No. E-999/CI-07-1199, Order Establishing 2014 and 2015 Estimate of Future Carbon Dioxide Regulation Costs (Apr. 28, 2014).

present evidence and argument bearing on the reasonableness of that environmental cost, would almost certainly be arbitrary and capricious.

For similar reasons, even should the Commission ultimately adopt the draft federal SCC (or some future final federal SCC) as the environmental cost for carbon emissions, it should not and need not decide now to automatically update that value anytime the federal government updates its own SCC. Instead, at a minimum, any state level changes should require an examination of the basis of the federal changes and an inquiry into the continued relevance and applicability of those changes to Minnesota.

Question: Should the Commission specify that a damage value approach be used for developing externality values, as suggested at page 15 of the Agencies' report? Why or why not?

Response:

As discussed above, the Commission should not specify that a damage value approach must be used for developing environmental cost values. The statute does not specify that a damage-based approach to determining environmental costs must be used, and the Commission should not summarily rule out other methods for calculating the environmental costs associated with CO_2. Although the Commission in 1997 favored using a damage-cost approach to setting environmental costs, it left open the possibility of using other approaches – at that time, the cost-of-control approach – in circumstances where it would be easier to calculate the costs of control than actual damages, as is almost certainly the case with CO_2.[32] We note that, since the Commission's last investigation concluded in 1997, a number of robust markets for trading carbon allowances have also arisen – including RGGI and the European Energy Exchange. Unlike the federal SCC and other damage value approaches, such market-based programs

[32] *In the Matter of the Quantification of Environmental Costs Pursuant to Laws of Minnesota 1993, Chapter 356, Section 3*, Docket No. E-999/CI-93-583, Order Establishing Environmental Cost Values at 14 (Jan. 3, 1997).

provide a ready, constantly-updated, and certain price for the emission of a given quantity of carbon dioxide. Thus, these market-based values for carbon dioxide emissions, too, might also be more readily ascertainable and credible than the admittedly inaccurate federal SCC or other damage value approaches that are necessarily imprecise. A contested case proceeding would allow the stakeholders to develop evidence and present argument about whether such programs, alone or in tandem, would provide an appropriate and practicable mechanism for determining environmental costs. The Commission should not prejudge that issue by specifying that only damage value approaches may be used to calculate environmental costs.

Question: Should the Commission endorse a particular model or modeling approach at this time?

Response:

We understand this question to relate to the three criteria pollutants (NO_x, SO_2, and $PM_{2.5}$) for which the Commission proposes to update or establish environmental costs. The Commission should not endorse a particular model or type of modeling at this time. Instead, the usefulness, accuracy, and reliability of various types of evidence regarding the health and welfare effects of the three criteria pollutants should be a matter put before the ALJ during the contested case.

The Agencies have argued in their Report that photochemical modelling would be best if the costs and time associated with its use are not too great.[33] That may or may not be correct. The Commission, however, has not received the benefit of a full record on the matter, and the parties are not in a position to evaluate and respond meaningfully to this significant and complex question in the short Notice comment period that has been provided. Rather than decide the matter now, the Commission should leave the issue open for consideration in the contested case.

[33] Agencies' Report at 5-9.

If parties decide after analyzing the issue that some other type of model is more appropriate or that there are significant flaws with photochemical modeling or a particular photochemical model, they should be free to present relevant arguments and testimony in the contested case proceeding to support that conclusion.

We note that there is a significant issue regarding the value of any environmental cost associated with emissions of NO_x, SO_2, and $PM_{2.5}$, the resolution of which clearly requires the process for development of evidence provided by a contested proceeding. Specifically, it is quite likely that the environmental costs of these three criteria pollutants are already captured by and internalized in the measures required of sources to comply with the established National Ambient Air Quality Standards ("NAAQS").

Briefly, under the Clean Air Act, EPA must set two types of NAAQS: "primary" NAAQS, which must be set at the emissions level that is "requisite to protect the public health" with "an adequate margin of safety," 42 U.S.C. § 7409(b)(1); and "secondary" NAAQS, which must be set at a level that is "requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air," 42 U.S.C. § 7409(b)(2). To be "requisite," a primary or secondary NAAQS must be "sufficient, but not more than necessary."[34] Under this standard, NAAQS generally address those health and welfare effects that are significant and reasonably ascertainable. EPA has discretion not to address a health or welfare effect where there is substantial scientific uncertainty about it.[35] Moreover, the "public welfare" protected by secondary NAAQS includes, but is not limited to, "effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather,

[34] *Whitman v. American Trucking Ass'ns,* 531 U.S. 457, 473 (2001).

[35] *Id.* at 495.

visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being, whether caused by transformation, conversion, or combination with other air pollutants."[36] The EPA administrator is required to thoroughly review NAAQS at least every five years and may review and revise criteria or promulgate new standards earlier or more frequently.[37]

In short, because of the "requisite" standard, where EPA has issued both a primary NAAQS addressing the health effects of a pollutant and a secondary NAAQS addressing its non-health effects, it has essentially protected against all reasonably ascertainable health and welfare effects associated with emissions of that pollutant. The remaining effects may well be too scientifically uncertain to ascertain or quantify.

As relevant here, the EPA has issued both primary and secondary standards for SO_2, NO_x, and $PM_{2.5}$. Each of these has been reviewed and, as appropriate, updated by EPA within the last five years.[38] Moreover, emission reduction measures contained in Minnesota's state implementation plans ("SIPs") to address NAAQS attainment already serve to internalize damage costs related to SO_2, NO_x, and $PM_{2.5}$ within the State.[39] Given that the EPA has determined primary (health-based) and secondary (non-health-based) standards for each of the criteria pollutants that are the subject of the Commission's investigation, and given that the State has adopted SIPs designed to attain these standards, one question for consideration in the

[36] 42 U.S.C. § 7602(h).

[37] 42. U.S.C. 7409(d)(1).

[38] See http://epa.gov/air/criteria.html.

[39] The situation today is thus very different from the situation in 1997, at which time EPA had not updated the NAAQS in many years. Given that, the Commission permissibly concluded in 1997 that the NAAQS could not be said to internalize the costs associated with emissions of the criteria pollutants. 1997 Order at 16-17. Today, both primary and secondary NAAQS have been promulgated for each of the three criteria pollutants within the past five years. Thus, EPA's determination that those NAAQS are "requisite" is evidence that the environmental costs associated with those pollutants have been captured by and internalized in EPA's regulations and Minnesota's SIPs.

contested case is whether there are any additional "environmental costs" associated with emissions of those pollutants that the Commission can practicably determine with any degree of scientific certainty.

Question: Are there any other specific findings the Commission should make with respect to the scope of this docket?

Response:

Great River Energy, Minnesota Power, and Otter Tail Power agree with the Commission and the Agencies that the investigation should be limited to the three criteria pollutants and carbon dioxide and that it should not include consideration of other greenhouse gases.

III. CONCLUSION

Great River Energy, Minnesota Power, and Otter Tail Power urge the Commission to reaffirm the determination in its February 10 Order Reopening Investigation that the issues involved in establishing environmental costs associated with CO_2, NO_x, SO_2, and $PM_{2.5}$ are sufficiently significant and complex to require resolution through a full contested case proceeding, without prejudgment or summary disposition of any issue. The Commission should reject the Agencies' unsolicited and unilateral recommendations regarding summary adoption of the federal Social Cost of Carbon, the alternative damage value approach suggested by the Agencies, and endorsement of any particular modeling approach. It would be inappropriate for the Commission to accede to the Agencies' recommendations and decide crucial aspects of this investigation before a record is developed and the parties have had the opportunity to participate and inform the Commission.

We respectfully request that the Commission issue a Notice and Order for Hearing referring this matter to the Office of Administrative Hearing for a robust development of the record in the context of a contested case hearing.

Dated: June 26, 2014

DORSEY & WHITNEY LLP

By s/B. Andrew Brown
B. Andrew Brown
Michael J. Ahern
Suite 1500, 50 South Sixth Street
Minneapolis, MN 55402-1498
Telephone: (612) 340-2600

Thomas A. Lorenzen
1801 K Street, NW, Suite 750
Washington, DC 20006
Telephone: (202) 442-3000

Attorneys for Great River Energy, Minnesota Power, and Otter Tail Power

AFFIDAVIT OF SERVICE

In the Matter of Investigation into Environmental and Socioeconomic Costs
Docket No.: E999-CI-00-1636

STATE OF MINNESOTA)
) ss
COUNTY OF HENNEPIN)

I, Myrna Maikkula, hereby certify that on the 26th day of June, 2014, on behalf of Great River Energy, Minnesota Power, and Otter Tail Power Company I electronically filed a true and correct copy of Comments in Response to the Report from the Minnesota Pollution Control Agency and the Minnesota Department of Commerce, and in Response to the Commission's Notice of June 16, 2014 with the Minnesota Public Utilities Commission through its eFiling system, and that eFiling system will provide service to those on the attached list who have selectee electronic service.

I further certify that a copy of the foregoing document was served upon the other participants on the attached list via U.S. mail, postage prepaid.

s/Myrna Maikkula
Myrna Maikkula

Subscribed and sworn to before
me this 26th day of June, 2014.

s/Deanna L. Bianchi-Rossi
Notary Public, State of Minnesota

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Derek	Allen	dallen@winthrop.com	Winthrop & Weinstine, P.A.	225 South Sixth Street Suite 3500 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_0-1636_1
Christopher	Anderson	canderson@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022191	Electronic Service	No	OFF_SL_0-1636_1
Julia	Anderson	Julia.Anderson@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	Electronic Service	Yes	OFF_SL_0-1636_1
Derek	Bertsch	derek.bertsch@mrenergy.com	Missouri River Energy Services	3724 West Avera Drive PO Box 88920 Sioux Falls, SD 57109-8920	Electronic Service	No	OFF_SL_0-1636_1
Brian R.	Bjella		Fleck, Mather & Strutz, Ltd.	400 E. Broadway, Suite 600 P.O. Box 2798 Bismarck, ND 58502	Paper Service	No	OFF_SL_0-1636_1
Michael	Bradley	mike.bradley@lawmoss.com	Moss & Barnett	Suite 4800 90 S 7th St Minneapolis, MN 55402-4129	Electronic Service	No	OFF_SL_0-1636_1
Jon	Brekke	jbrekke@grenergy.com	Great River Energy	12300 Elm Creek Boulevard Maple Grove, MN 553694718	Electronic Service	No	OFF_SL_0-1636_1
Kipp	Coddington	N/A	Kazmarek Mowrey Cloud Laseter LLP	1317 Vincent Place McLean, VA 22101	Paper Service	No	OFF_SL_0-1636_1
George	Crocker	gwillc@nawo.org	North American Water Office	PO Box 174 Lake Elmo, MN 55042	Electronic Service	No	OFF_SL_0-1636_1
Leigh	Currie	lcurrie@mncenter.org	Minnesota Center for Environmental Advocacy	26 E. Exchange St., Suite 206 St. Paul, Minnesota 55101	Electronic Service	No	OFF_SL_0-1636_1

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Brian	Draxten	bhdraxten@otpco.com	Otter Tail Power Company	P.O. Box 496 215 South Cascade Street Fergus Falls, MN 565380498	Electronic Service	No	OFF_SL_0-1636_1
Kristen	Eide Tollefson	HealingSystems@earthlink.net	R-CURE	P O Box 129 Frontenac, MN 55026	Paper Service	No	OFF_SL_0-1636_1
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 500 Saint Paul, MN 551012198	Electronic Service	Yes	OFF_SL_0-1636_1
Darrell	Gerber		Clean Water Action Alliance of Minnesota	308 Hennepin Ave. E. Minneapolis, MN 55414	Paper Service	No	OFF_SL_0-1636_1
Benjamin	Gerber	bgerber@mnchamber.com	Minnesota Chamber of Commerce	400 Robert Street North Suite 1500 St. Paul, Minnesota 55101	Electronic Service	No	OFF_SL_0-1636_1
David P.	Geschwind	dp.geschwind@smmpa.org	Southern Minnesota Municipal Power Agency	500 First Avenue SW Rochester, MN 55902	Electronic Service	No	OFF_SL_0-1636_1
Elizabeth	Goodpaster	bgoodpaster@mncenter.org	MN Center for Environmental Advocacy	Suite 206 26 East Exchange Street St. Paul, MN 551011667	Electronic Service	No	OFF_SL_0-1636_1
Penny	Gottier Fena	N/A	American Lung Association	490 Concordia Avenue St. Paul, MN 55103	Paper Service	No	OFF_SL_0-1636_1
Burl W.	Haar	burl.haar@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_0-1636_1
Eric	Jensen	ejensen@iwla.org	Izaak Walton League of America	Suite 202 1619 Dayton Avenue St. Paul, MN 55104	Electronic Service	No	OFF_SL_0-1636_1

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Larry	Johnston	lw.johnston@smmpa.org	SMMPA	500 1st Ave SW Rochester, MN 55902-3303	Electronic Service	No	OFF_SL_0-1636_1
Jane	Justice	jjustice@winthrop.com	Winthrop & Weinstine, P.A.	225 South Sixth Street Suite 3500 Minneapolis, MN 55402	Paper Service	No	OFF_SL_0-1636_1
Neil	Kennebeck		Dairyland Power Cooperative	PO Box 817 3200 East Avenue South LaCrosse, WI 546020817	Paper Service	No	OFF_SL_0-1636_1
Frank	Kohlasch	frank.kohlasch@state.mn.us	MN Pollution Control Agency	520 Lafayette Rd N. St. Paul, MN 55155	Electronic Service	No	OFF_SL_0-1636_1
Jeffrey L.	Landsman	jlandsman@wheelerlaw.com	Wheeler, Van Sickle & Anderson, S.C.	Suite 801 25 West Main Street Madison, WI 537033398	Electronic Service	No	OFF_SL_0-1636_1
Mark R.	Leaman	N/A	Calpine Corporation	717 Texas St, Ste 1000 Houston, TX 77002-2743	Paper Service	No	OFF_SL_0-1636_1
Valerie Matthews	Lemieux	clemieux@lemieuxlaw.com	Valerie Matthews Lemieux Law Corporation	102-500 Tache Avenue Winnipeg, MB R2H 0A2 CANADA	Paper Service	No	OFF_SL_0-1636_1
John	Lindell	agorud.ecf@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	OFF_SL_0-1636_1
Michael	Loeffler	mike.loeffler@nngco.com	Northern Natural Gas Co.	CORP HQ, 714 1111 So. 103rd Street Omaha, NE 681241000	Electronic Service	No	OFF_SL_0-1636_1

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Douglas J.	Mackenzie	dmackenzie@campbellmarr.com	Campbell, Marr, LLP	10 Donald Street Winnipeg, MB R3L 1Y5 CANADA	Paper Service	No	OFF_SL_0-1636_1
Kevin	Marquardt	Kevin.Marquardt@CenterPointEnergy.com	CenterPoint Energy	800 LaSalle Avenue, Floor 14 Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_0-1636_1
Andrew	Moratzka	apmoratzka@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_0-1636_1
Steve	Morse	N/A	Minnesota Environmental Partnership	546 Rice St, Suite 100 St. Paul, MN 55103	Paper Service	No	OFF_SL_0-1636_1
Duane	Ninneman	N/A	Clean Up the River Environment	117 South 1st St Montevideo, MN 56265	Paper Service	No	OFF_SL_0-1636_1
Margaret	Olson	maiolson@nd.gov	ND Office of Atty. Gen.	500 N. 9th St. Bismarck, North Dakota 58501-4509	Electronic Service	No	OFF_SL_0-1636_1
Audrey	Peer	audrey.peer@centerpointenergy.com	CenterPoint Energy	800 Lasalle Avenue - 14th Floor Minneapolis, Minnesota 55402	Electronic Service	No	OFF_SL_0-1636_1
Helen	Proechel	N/A	-	168 Erte St St. Paul, MN 55102-2941	Paper Service	No	OFF_SL_0-1636_1
Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy	26 E Exchange St, Ste 206 St. Paul, MN 551011667	Electronic Service	No	OFF_SL_0-1636_1

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Tim	Silverthorn			1096 Kilburn Street St. Paul, MN 551031029	Paper Service	No	OFF_SL_0-1636_1
Mrg	Simon	mrgsimon@mrenergy.com	Missouri River Energy Services	3724 W. Avera Drive P.O. Box 88920 Sioux Falls, SD 571098920	Electronic Service	No	OFF_SL_0-1636_1
David B.	Sogard	dsogard@minnkota.com	Minnkota Power Cooperative, Inc.	PO Box 13200 1822 Mill Road Grand Forks, ND 582083200	Electronic Service	No	OFF_SL_0-1636_1
Beth H.	Soholt	bsoholt@windonthewires.org	Wind on the Wires	570 Asbury Street Suite 201 St. Paul, MN 55104	Electronic Service	No	OFF_SL_0-1636_1
Wayne	Stenehjem		Office Of Attorney General	Dept. 125 600 E. Boulevard Avenue Bismarck, ND 585050040	Paper Service	No	OFF_SL_0-1636_1
Eric	Swanson	eswanson@winthrop.com	Winthrop Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	OFF_SL_0-1636_1
SaGonna	Thompson	Regulatory.Records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	OFF_SL_0-1636_1
Robyn	Woeste	robynwoeste@alliantenergy.com	Interstate Power and Light Company	200 First St SE Cedar Rapids, IA 52401	Electronic Service	No	OFF_SL_0-1636_1

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Christopher	Anderson	canderson@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022191	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Julia	Anderson	Julia.Anderson@ag.state.mn.us	Office of the Attorney General-DOC	1800 BRM Tower 445 Minnesota St St. Paul, MN 551012134	Electronic Service	Yes	SPL_SL_0-1636_2_Interested Parties
Derek	Bertsch	derek.bertsch@mrenergy.com	Missouri River Energy Services	3724 West Avera Drive PO Box 88920 Sioux Falls, SD 57109-8920	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Brian R.	Bjella		Fleck, Mather & Strutz, Ltd.	400 E. Broadway, Suite 600 P.O. Box 2798 Bismarck, ND 58502	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
William A.	Blazar	bblazar@mnchamber.com	Minnesota Chamber Of Commerce	Suite 1500 400 Robert Street North St. Paul, MN 55101	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Michael	Bradley	mike.bradley@lawmoss.com	Moss & Barnett	Suite 4800 90 S 7th St Minneapolis, MN 55402-4129	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Jon	Brekke	jbrekke@grenergy.com	Great River Energy	12300 Elm Creek Boulevard Maple Grove, MN 553694718	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Mark B.	Bring	mbring@otpco.com	Otter Tail Power Company	215 South Cascade Street PO Box 496 Fergus Falls, MN 565380496	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Christina	Brusven	cbrusven@fredlaw.com	Fredrikson & Byron, P.A.	200 S 6th St Ste 4000 Minneapolis, MN 554021425	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Tammie	Carino	tcarino@GREnergy.com	Great River Energy	12300 Elm Creek Blvd. Maple Grove, MN 55369-4718	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Douglas M.	Carnival		McGrann Shea Anderson Carnival	Straugn & Lamb 800 Nicollet Mall, Suite 2600 Minneapolis, MN 554027035	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Kenneth A.	Colburn	kcolburn@symbioticstrategies.com	Symbiotic Strategies, LLC	26 Winton Road Meredith, NH 32535413	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
George	Crocker	gwillc@nawo.org	North American Water Office	PO Box 174 Lake Elmo, MN 55042	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Mark F.	Dahlberg	markdahlberg@nweco.com	Northwestern Wisconsin Electric Company	P.O. Box 9 104 South Pine Street Grantsburg, WI 548400009	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Curt	Dieren	cdieren@dgrnet.com	L&O Power Cooperative	1302 South Union Street PO Box 511 Rock Rapids, IA 51246	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Ian	Dobson	ian.dobson@ag.state.mn.us	Office of the Attorney General-RUD	Antitrust and Utilities Division 445 Minnesota Street, 1400 BRM Tower St. Paul, MN 55101	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Brian	Draxten	bhdraxten@otpco.com	Otter Tail Power Company	P.O. Box 496 215 South Cascade Street Fergus Falls, MN 565380498	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Mike	Eggl	meggl@bepc.com	Basin Electric Power Cooperative	1717 East Interstate Avenue Bismarck, ND 58503	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Kristen	Eide Tollefson	HealingSystems@earthlink.net	R-CURE	P O Box 129 Frontenac, MN 55026	Paper Service	No	SPL_SL_0-1636_2_Interested Parties

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Oncu	Er	oncu.er@avantenergy.com	Avant Energy, Agent for MMPA	220 S. Sixth St. Ste. 1300 Minneapolis, MN 55402	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Pam	Fergen		Henepin County Government Center CAO	A2000 300 S. Sixth Street Minneapolis, MN 55487	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 500 Saint Paul, MN 551012198	Electronic Service	Yes	SPL_SL_0-1636_2_Interested Parties
Karlene	Fine	kfine@nd.gov	Industrial Commission of North Dakota	14th Floor 600 E. Boulevard Avenue, Dept. 405 Bismarck, ND 58505	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Cathy	Fogale	cfogale@otpco.com	Otter Tail Power Company	215 South Cascade Street PO Box 496 Fergus Falls, MN 56537	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Amy	Fredregill	amy@mrets.org	Midwest Renewable Energy Tracking System, Inc.	1885 University Avenue West, #315 St. Paul, MN 55104	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Gary	Garbe	Gary.Garbe@avantenergy.com	Minnesota Municipal Power Agency	220 South Sixth Street Suite 1300 Minneapolis, MN 55402	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Edward	Garvey	garveyed@aol.com	Residence	32 Lawton St Saint Paul, MN 55102	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Benjamin	Gerber	bgerber@mnchamber.com	Minnesota Chamber of Commerce	400 Robert Street North Suite 1500 St. Paul, Minnesota 55101	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Darrell	Gerber		Clean Water Action Alliance of Minnesota	308 Hennepin Ave. E. Minneapolis, MN 55414	Paper Service	No	SPL_SL_0-1636_2_Interested Parties

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Bruce	Gerhardson	bgerhardson@otpco.com	Otter Tail Power Company	PO Box 496 215 S Cascade St Fergus Falls, MN 565380496	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
David P.	Geschwind	dp.geschwind@smmpa.org	Southern Minnesota Municipal Power Agency	500 First Avenue SW Rochester, MN 55902	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Elizabeth	Goodpaster	bgoodpaster@mncenter.org	MN Center for Environmental Advocacy	Suite 206 26 East Exchange Street St. Paul, MN 551011667	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Bryan	Gower	N/A	APX, Inc.	224 Airport Parkway Suite 600 San Jose, CA 95110	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Todd J.	Guerrero	todd.guerrero@kutakrock.com	Kutak Rock LLP	Suite 1750 220 South Sixth Street Minneapolis, MN 554021425	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Burl W.	Haar	burl.haar@state.mn.us	Public Utilities Commission	Suite 350 121 7th Place East St. Paul, MN 551012147	Electronic Service	Yes	SPL_SL_0-1636_2_Interested Parties
Tony	Hainault	anthony.hainault@co.hennepin.mn.us	Hennepin County DES	701 4th Ave S Ste 700 Minneapolis, MN 55415-1842	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Bill	Heaney	billheaney@billheaney.com	IBEW Minnesota State Council	940 44th Ave NE Unite 21067 Columbia Hts, MN 55421-3099	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
John	Helmers	helmers.john@co.olmsted.mn.us	Olmsted County Waste to Energy	2122 Campus Drive SE Rochester, MN 55904-4744	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Annete	Henkel	mui@mnutilityinvestors.org	Minnesota Utility Investors	413 Wacouta Street #230 St.Paul, MN 55101	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Jessy	Hennesy	jessy.hennesy@avantenergy.com	Avant Energy	220 S. Sixth St. Ste 1300 Minneapolis, Minnesota 55402	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Ashley	Houston			120 Fairway Rd Chestnut Hill, MA 24671850	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Lori	Hoyum	lhoyum@mnpower.com	Minnesota Power	30 West Superior Street Duluth, MN 55802	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Casey	Jacobson	cjacobson@bepc.com	Basin Electric Power Cooperative	1717 East Interstate Avenue Bismarck, ND 58501	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Eric	Jensen	ejensen@iwla.org	Izaak Walton League of America	Suite 202 1619 Dayton Avenue St. Paul, MN 55104	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Paula	Johnson	paulajohnson@alliantenergy.com	Alliant Energy-Interstate Power and Light Company	P.O. Box 351 200 First Street, SE Cedar Rapids, IA 524060351	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Larry	Johnston	lw.johnston@smmpa.org	SMMPA	500 1st Ave SW Rochester, MN 55902-3303	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Nate	Jones	njones@hcpd.com	Heartland Consumers Power	PO Box 248 Madison, SD 57042	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Neil	Kennebeck		Dairyland Power Cooperative	PO Box 817 3200 East Avenue South LaCrosse, WI 546020817	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Julie	Ketchum	N/A	Waste Management	20520 Keokuk Ave Lakeville, MN 55044	Paper Service	No	SPL_SL_0-1636_2_Interested Parties

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Jeffrey L.	Landsman	jlandsman@wheelerlaw.com	Wheeler, Van Sickle & Anderson, S.C.	Suite 801 25 West Main Street Madison, WI 537033398	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Mark R.	Leaman	N/A	Calpine Corporation	717 Texas St, Ste 1000 Houston, TX 77002-2743	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Valerie Matthews	Lemieux	clemieux@lemieuxlaw.com	Valerie Matthews Lemieux Law Corporation	102-500 Tache Avenue Winnipeg, MB R2H 0A2 CANADA	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Deborah Fohr	Levchak	dlevchak@bepc.com	Basin Electric Power Cooperative	1717 East Interstate Avenue Bismarck, ND 585030564	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
John	Lindell	agorud.ecf@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	SPL_SL_0-1636_2_Interested Parties
Mark	Lindquist	N/A	The Minnesota Project	57107 422nd St New Ulm, MN 56073-4321	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Michael	Loeffler	mike.loeffler@nngco.com	Northern Natural Gas Co.	CORP HQ, 714 1111 So. 103rd Street Omaha, NE 681241000	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Douglas J.	Mackenzie	dmackenzie@campbellmarr.com	Campbell, Marr, LLP	10 Donald Street Winnipeg, MB R3L 1Y5 CANADA	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Dave	McNary	N/A	Hennepin County DES	701 Fourth Avenue South suite 700 Minneapolis, MN 55415-1842	Paper Service	No	SPL_SL_0-1636_2_Interested Parties

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
John	McWilliams	jmm@dairynet.com	Dairyland Power Cooperative	3200 East Ave SPO Box 817 La Crosse, WI 54601-7227	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Valerie	Means	valerie.means@lawmoss.com	Moss & Barnett	Suite 4800 90 South Seventh Street Minneapolis, MN 55402	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Stacy	Miller	stacy.miller@state.mn.us	Department of Commerce	State Energy Office 85 7th Place East, Suite 500 St. Paul, MN 55101	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
David	Moeller	dmoeller@allete.com	Minnesota Power	30 W Superior St Duluth, MN 558022093	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Andrew	Moratzka	apmoratzka@stoel.com	Stoel Rives LLP	33 South Sixth Street Suite 4200 Minneapolis, MN 55402	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Ben	Nelson		CMMPA	459 South Grove Street Blue Earth, MN 56013	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Peter	Nelson	peter.nelson@americanexperiment.org	Center of the American Experiment	8441 Wayzata Boulevard Suite 350 Golden Valley, MN 55426	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
David W.	Niles	david.niles@avantenergy.com	Minnesota Municipal Power Agency	Suite 300 200 South Sixth Street Minneapolis, MN 55402	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Steven	Nyhus	swnyhus@flaherty-hood.com	Flaherty & Hood PA	525 Park St Ste 470 Saint Paul, MN 55103	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Russell	Olson	N/A	Heartland Consumers Power District	PO Box 248 Madison, SD 570420248	Paper Service	No	SPL_SL_0-1636_2_Interested Parties

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Thomas L.	Osteraas	bademailthomasosteraas@leonard.com	Excelsior Energy	150 South 5th Street Suite 2300 Minneapolis, MN 55402	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Mary Beth	Peranteau	mperanteau@wheelerlaw.com	Wheeler Van Sickle & Anderson SC	Suite 801 25 West Main Street Madison, WI 537033398	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Helen	Proechel	N/A	-	168 Erte St St. Paul, MN 55102-2941	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Mark	Rathbun	mrathbun@grenergy.com	Great River Energy	12300 Elm Creek Blvd Maple Grove, MN 55369	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
John C.	Reinhardt		Laura A. Reinhardt	3552 26Th Avenue South Minneapolis, MN 55406	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Kevin	Reuther	kreuther@mncenter.org	MN Center for Environmental Advocacy	26 E Exchange St, Ste 206 St. Paul, MN 551011667	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Craig	Rustad	crustad@minnkota.com	Minnkota Power	1822 Mill Road PO Box 13200 Grand Forks, ND 582083200	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Robert K.	Sahr	bsahr@eastriver.coop	East River Electric Power Cooperative	P.O. Box 227 Madison, SD 57042	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Raymond	Sand	rms@dairynet.com	Dairyland Power Cooperative	P.O. Box 8173200 East Avenue South LaCrosse, WI 546020817	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Richard	Savelkoul	rsavelkoul@martinsquires.com	Martin & Squires, P.A.	332 Minnesota Street Ste W2750 St. Paul, MN 55101	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Matthew J.	Schuerger P.E.	mjsreg@earthlink.net	Energy Systems Consulting Services, LLC	PO Box 16129 St. Paul, MN 55116	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Dean	Sedgwick	N/A	Itasca Power Company	PO Box 457 Bigfork, MN 56628-0457	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Tim	Silverthorn			1096 Kilburn Street St. Paul, MN 551031029	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Mrg	Simon	mrgsimon@mrenergy.com	Missouri River Energy Services	3724 W. Avera Drive P.O. Box 88920 Sioux Falls, SD 571098920	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
David B.	Sogard	dsogard@minnkota.com	Minnkota Power Cooperative, Inc.	PO Box 13200 1822 Mill Road Grand Forks, ND 582083200	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Beth H.	Soholt	bsoholt@windonthewires.org	Wind on the Wires	570 Asbury Street Suite 201 St. Paul, MN 55104	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Wayne	Stenehjem		Office Of Attorney General	Dept. 125 600 E. Boulevard Avenue Bismarck, ND 585050040	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Eric	Swanson	eswanson@winthrop.com	Winthrop Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
SaGonna	Thompson	Regulatory.Records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Steve	Thompson		Central Minnesota Municipal Power Agency	459 S Grove St Blue Earth, MN 56013-2629	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
David	Thornton	J.David.Thornton@state.mn.us	MN Pollution Control Agency	520 Lafayette Road St. Paul, MN 55101	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Pat	Treseler	pat.jcplaw@comcast.net	Paulson Law Office LTD	Suite 325 7301 Ohms Lane Edina, MN 55439	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Darryl	Tveitbakk		Northern Municipal Power Agency	123 Second Street West Thief River Falls, MN 56701	Paper Service	No	SPL_SL_0-1636_2_Interested Parties
Roger	Warehime	warehimer@owatonnautilities.com	Owatonna Public Utilities	208 South WalnutPO Box 800 Owatonna, MN 55060	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Paul	White	paul.white@prcwind.com	Project Resources Corp./Tamarac Line LLC/Ridgewind	618 2nd Ave SE Minneapolis, MN 55414	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Robyn	Woeste	robynwoeste@alliantenergy.com	Interstate Power and Light Company	200 First St SE Cedar Rapids, IA 52401	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties
Thomas J.	Zaremba	TZaremba@wheelerlaw.com	WHEELER, VAN SICKLE & ANDERSON	Suite 801 25 West Main Street Madison, WI 537033398	Electronic Service	No	SPL_SL_0-1636_2_Interested Parties