EXHIBIT

A

Public Service Commission
State of North Dakota

COMMISSIONERS
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Randy Christmann
Julie Fedorchak

Executive Secretary
Darrell Nitschke

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October 7, 2013

Darrell Nitschke, Executive Secretary
North Dakota Public Service Commission
600 E Boulevard Ave, Department 408
Bismarck, ND 58505

Re: Case Nos. PU-13-706, PU-13-707, PU-13-708, PU-13-742 and PU-13-743
Northern States Power Company
Advance Determination of Prudence – Courtenay Wind Project, Odell Wind Project, Pleasant Valley Wind Project and Border Winds Project
Public Convenience & Necessity – Border Winds Project
Applications

Dear Mr. Nitschke:

Enclosed for filing are original copies of Advocacy Staff's direct testimony and applicable exhibits in the above captioned proceedings.

Thank you.

Best regards,

Ryan M. Norrell
Legal Counsel

Enclosure

33 **PU-13-708** Filed: 10/31/2013 Pages: 68
Exhibit A
Public Service Commission

33 **PU-13-743** Filed: 10/31/2013 Pages: 68
Exhibit A
Public Service Commission

33 **PU-13-707** Filed: 10/31/2013 Pages: 68
Exhibit A
Public Service Commission

34 **PU-13-742** Filed: 10/31/2013 Pages: 68
Exhibit A
Public Service Commission

33 **PU-13-706** Filed: 10/31/2013 Pages: 68
Exhibit A
Public Service Commission

STATE OF NORTH DAKOTA
PUBLIC SERVICE COMMISSION

Northern States Power Company **Advance Determination of Prudence – Courtenay Wind Project Application**	**Case No. PU-13-706**
Northern States Power Company **Advance Determination of Prudence – Odell Wind Project Application**	**Case No. PU-13-707**
Northern States Power Company **Advance Determination of Prudence – Pleasant Valley Wind Project Application**	**Case No. PU-13-708**
Northern States Power Company **Advance Determination of Prudence – Border Winds Project Application**	**Case No. PU-13-742**
Northern States Power Company **150 MW Border Winds Project – Rolette County, ND** **Public Convenience & Necessity Application**	**Case No. PU-13-743**

State of North Dakota)
) SS
County of Burleigh)

Affidavit of Sara Cardwell

I, the undersigned, being duly sworn, depose and say that the foregoing is the Direct Testimony of the undersigned, and that such Direct Testimony and the exhibits or schedules sponsored by me to the best of my knowledge, information and belief, are true, correct, accurate and complete, and I hereby adopt said testimony as if given by me in formal hearing, under oath.

Sara Cardwell

Sara Cardwell

Subscribed and sworn to before me, this 7th day of October, 2013

John G. Hamre

Notary Public

Seal

JOHN G. HAMRE
Notary Public
State of North Dakota
My Commission Expires July 4, 2014

STATE OF NORTH DAKOTA

BEFORE THE NORTH DAKOTA PUBLIC SERVICE COMMISSION

Northern States Power Company Advance Determination of Prudence – Courtenay Wind Project Application	Case No. PU-13-706
Northern States Power Company Advance Determination of Prudence – Odell Wind Project Application	Case No. PU-13-707
Northern States Power Company Advance Determination of Prudence – Pleasant Valley Wind Project Application	Case No. PU-13-708
Northern States Power Company Advance Determination of Prudence – Border Winds Project Application	Case No. PU-13-742
Northern States Power Company 150 MW Border Winds Project – Rolette County, ND Public Convenience & Necessity Application	Case No. PU-13-743

DIRECT TESTIMONY OF
SARA CARDWELL

Submitted on Behalf of the Advocacy
Staff of the North Dakota Public Service Commission

October 7, 2013

DIRECT TESTIMONY OF

SARA CARDWELL

Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.

A. My name is Sara Cardwell. I am a Public Utility Analyst with the North Dakota Public Service Commission. My business address is 12th Floor, 600 E. Boulevard Avenue, Bismarck, ND 58505.

Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS AND EXPERIENCE.

A. Yes. Exhibit A is a summary of my qualifications and experience which includes a listing of my appearances as an expert witness before various state regulatory agencies.

Q. FOR WHOM ARE YOU APPEARING IN THIS PROCEEDING?

A. I am appearing on behalf of the Advocacy Staff of the North Dakota Public Service Commission (NDPSC).

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to respond to Northern States Power Company's (NSP or the Company) applications for approval of advance determination of prudence (ADP) to add four wind generation projects totaling 750 MW and their request to grant a certificate of public convenience and necessity for the Border Winds Project. Granting an advance determination of prudence for two of the projects would mean the costs could be recovered through the Fuel Cost Rider as the ADPs for these projects are requesting approval of 20 year Power Purchase Agreements (PPA). Two of the projects will be Company owned projects, the costs of which would be recovered through base rates once the projects are in service. One of the Company owned projects, the Border Winds Project will be located in North Dakota which results in the need for a certificate of public convenience and necessity to operate the project.

Q. DOES ADVOCACY STAFF HAVE ANY RECOMMENDATIONS IN REGARDS TO THESE PROJECTS?

A. As I discuss below, the Advocacy Staff sees both positive and negative consequences from the approval of these projects. The positive aspects are:

- Good prices; and
- Two projects are in North Dakota.

The negative aspects of the projects are:

- The potential for unintended consequences;
- Lack of need for more renewables;
- Rate increases for 2015 through 2017; and
- Contract Management Concerns.

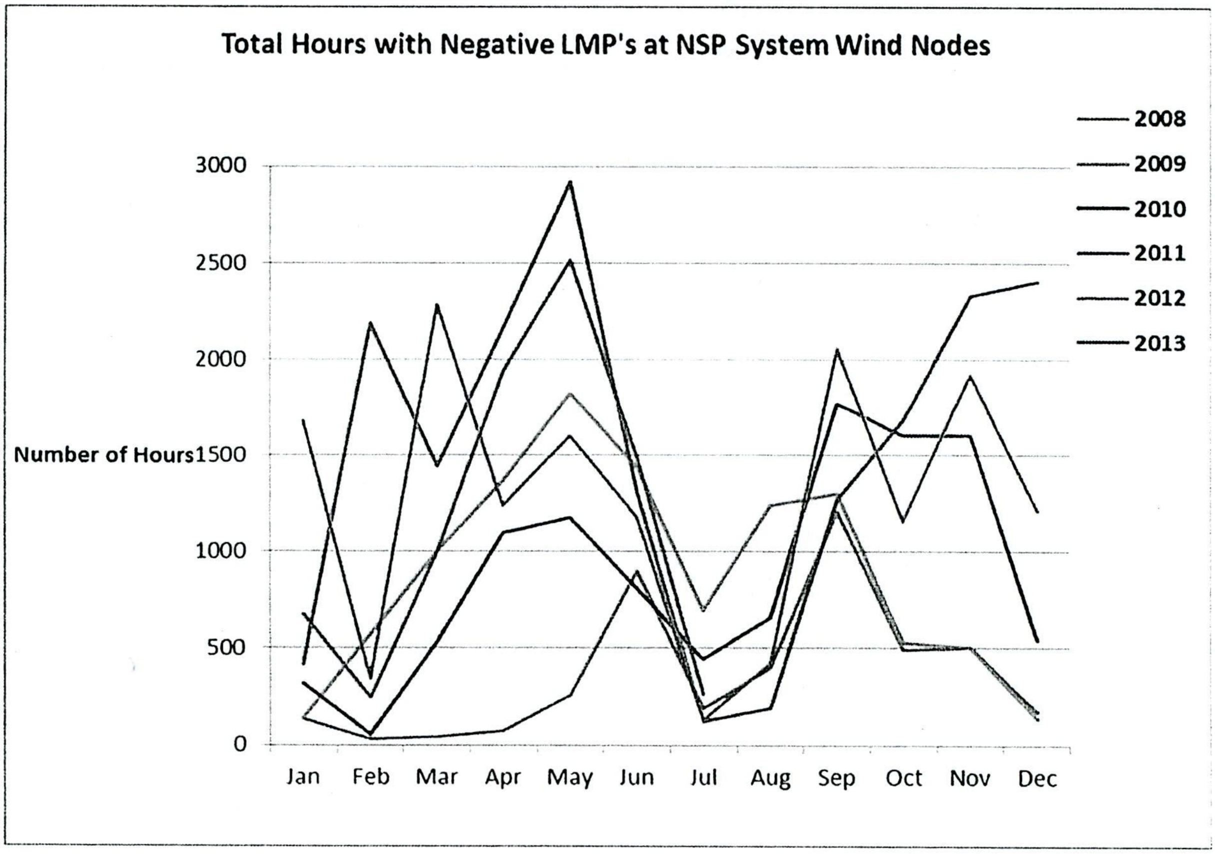
Below I elaborate on both the negative and positive aspects associated with these Projects and conclude with Advocacy Staff's recommendations.

Q. WHAT DO YOU BELIEVE TO BE THE POTENTIAL UNINTENDED CONSEQUENCES ASSOCIATED WITH THESE PROJECTS?

A. This is a lot of wind to integrate in a short period of time. One has to ask whether the Company's system and MISO are prepared and can make this work. Exhibit B shows that there is energy that can't be used for a number of years after the Projects go in service in 2015. While the Company states that the chart is conservative and the displaced energy may be less, there are other companies that are also planning to put wind projects into service within the same time frame including the 150 MW Thunder Spirit Wind Project and the 210 MW Bison 4 Wind Project in North Dakota as well as the 105 MW Stoneray Project in Minnesota. The Company also states that until the CAPX2020 and MVP projects are complete that MISO will not be accrediting any capacity to these wind projects. Thus, while the Company states the amount of wind that might be curtailed is conservative and admits to the lack of MISO accreditation until 2021, when combined with the output of additional projects in the region, these estimates may prove to be less than conservative.

The chart below shows the number of hours each month where negative prices have occurred on NSP's system due to the over availability of wind from January of 2008 through July of 2013. While the chart indicates that the highest number of negative prices occurred in May of 2011, you can also see that for the same month in 2013, the number of hours where negative pricing occurred is not far behind the 2011 peak.

Table 1



It is highly likely that the addition of 750 MW of wind will only increase, not decrease the number of hours when negative pricing occurs.

We are also concerned that this much wind will exacerbate the need for more cycling of the Company's traditional resources thereby creating additional wear and tear on these resources. Unfortunately we will not know the cost of this additional cycling until customers have to start paying for the additional maintenance costs on these machines which could be ten years from now. The Company has added $7.6M annually to its modeling analyses but, it is not clear if this is enough. We have reviewed four difference analyses of cycling costs. Of the four analyses we have reviewed, the Company's estimate is one of the lowest we have seen.

Q. YOU STATED ABOVE THAT THE COMPANY DOESN'T NEED MORE RENEWABLES. WHAT DO YOU MEAN BY THAT?

A. Starting on the bottom of page 1-5 and continuing onto the top of page 1-6 of the Company's Five Year Action Plan in the Company's 2010 Resource Plan (Case No. PU-10-580, Exhibit C) it states:

> Issue an RFP for up to 250 MW of wind power to be developed by the end of 2012 if benefits are demonstrated. Use the results to help guide the timing and size of the next addition of renewables to our system. We are committed to meeting the renewable policy goals of the states we serve. Wind power has proven to be a cost effective resource addition to our system to date. Because the Federal Production Tax Credit ("PTC") is scheduled to expire at the end of 2012, we believe we should continue to explore acquisition of wind power to capture PTC savings for our customers. However, we do not need to add wind power to comply with RES/REO milestones in the next five years. Requesting proposals for additional wind generation prior to the expiration of the PTC provides us with an opportunity to achieve pricing that remains cost-effective for customers under a variety of future scenarios. If the results of our bidding program do not provide adequate benefits we have the option to defer acquisitions and still stay on track with compliance.

The Company issued an RFP in September 2010 that was presumably to meet this portion of their Five Year Action Plan. The Prairie Rose Project was selected as a result of this RFP process. We are not aware that the Company used the Prairie Rose Project to guide the "timing and size of the next additions of renewables" beyond the Prairie Rose Project. However, it is clear from this 2010 filing that additional wind resources were not needed when the 2010 RFP was issued and were definitely not needed when the 2013 RFP was issued.

In response to our data request NDPSC-SC-008 in these cases (see Exhibit D), the Company stated that if they don't sell any RECs, they can meet the ND 10% renewable goal through 2026. These additional resources will push the renewables as a percent of resources to over 23% for the state of North Dakota.

There is currently surplus generation on the MISO system and loads are not growing in the Company's largest jurisdiction, Minnesota. Thus, these resources are clearly not currently needed to meet load growth or Minnesota mandates.

Q. WHAT IS THE EFFECT OF THESE PROJECTS ON CUSTOMERS' BILLS?

A. The Company's filings state these wind projects will save customers close to $180 million over a twenty year period. However, because both the Pleasant Valley and the Border Winds projects will be owned by the Company, the cost savings from the lower fuel costs as a result of these four projects won't be realized until 2019 when the fuel cost savings starts to overtake the costs of the additions to rate base. These increases, although currently expected to be smaller than those needed for other Company expenditures, will continue to contribute to the Company's spending cycle. In the Company's pending general rate case (PU-12-813), upon cross examination, the Company's policy witness, Laura McCarten stated the Company's need for rate increases to meet their already accounted for capital projects will not end until 2015 which is about the same time these projects are expected to be in service. Additionally, there may be other costs the Company may seek recovery of that could further continue the Company's rate increase cycle after 2015. Exhibit E shows the Company's Annual Rate Impact Analysis for the four wind projects.

It should also be noted that the NDPSC has yet to approve the Company's request to include the costs of the Prairie Rose PPA in the Fuel Cost Rider. In the first eight months of 2013, Customers have saved almost $1.5 million as a result of this disallowance. The Company states that the savings aren't this high as customers are paying an average system cost for the energy that would otherwise be charged at the Prairie Rose Project prices. We believe it is appropriate for customers to pay the average system cost in this instance as any other method would transfer risk from the Company to the North Dakota customers.

Q. ARE THERE ANY EXPLANATIONS YOU CAN OFFER AS TO WHY THE SAVINGS FROM THE PRAIRIE ROSE PROJECT AREN'T THOSE THAT WERE ANTICIPATED?

A. It may be that MISO prices are lower than those that were forecasted at the time that the project was modeled in Strategist. Another potential explanation is inherent in the modeling process itself. On page 4-10 of the Company's 2010 Resource Plan (PU-10-580, see Exhibit C) the Company states:

> Strategist does have some limitations. Although it uses hourly information, it is not a chronological model. Hourly patterns for energy demand are rearranged into load duration curves and thermal dispatch simulations are based on these curves. This Modeling and Proposed plan allows us to quickly simulate several years of operation on our system, but the model loses the ability to capture some operational detail, such as the ramp rates on our generating units. This makes it difficult for us to use the model to evaluate the benefits of quick start combustion turbines relative to our generic combustion turbines. Also, Strategist uses a simplified approach to modeling load and wind patterns. Instead of using an hourly pattern that covers every hour in an entire month, we model a typical week in that month that the model repeats several times to simulate the entire month.

In summary, the determination as to whether a project is cost effective or not should not be made merely on the basis of Strategist results. See the discussion that begins on page 8 of Exhibit F to this testimony that contains comments from the Minnesota Chamber of Commerce in the Minnesota Dockets on these projects that more thoroughly discusses the limitations of Strategist.

Q. PLEASE EXPLAIN YOUR CONTRACT MANAGEMENT CONCERNS.

A. As part of the Company's pending rate case, PU-12-813, Advocacy Staff asked a series of questions in regards to the Company's renewable resources. In data request NDPSC-1-037 (see Exhibit G) we asked: "Please provide annual production values for these production facilities as well as all owned and contracted wind production facilities for the entire Xcel Energy fleet." In data request NDPSC-2-008 (see Exhibit H) we asked: "Please provide a complete listing of the wind, solar and biomass PPAs that are flowing through the fuel clause in ND to include the price per MWh being paid, whether or not the project is a CBED project, the date that the project was included in the fuel clause and the date that the contract ends." The responses provided different resource listings. In the first response, the Company didn't include information regarding the wind facilities that were less than 2 MW in size and priced at the Company's standard contract rate. Thus, some of the inconsistencies between the responses were the result of this oversight. Other inconsistencies occurred because the project names were different in one list versus the other.

However, these two issues didn't explain all the differences. The Company provided an explanation to reconcile the first two responses and the Company's FERC Form 1 in a third response in these cases (NDPSC-SC-021, Exhibit I). In reviewing these three responses together, we noted the following:

1. It appears that the Company allows generators to cease production for a number of years without implementing nonperformance penalties.

2. The Company's data showed generation in years where projects were not yet in service according to the contract dates provided.

3. In trying to match the stated project size to the generation, sometimes the capacity factor was greater than one which means either the generation data or the size of the project reported was incorrect.

4. In one response the Company reported generation from three projects with similar names but in both the list of contracts and the reconciliation response the Company only pointed to two projects.

5. The spreadsheet generation amounts do not match with the amounts reported in the FERC Form 1 in all cases.

Q. CAN YOU ELABORATE ON YOUR CONCERNS?

A. Yes. If there are facilities that aren't producing and in particular if they are high cost projects, the Company should enforce nonperformance contract provisions. Secondly, the responses that we received were completed in different areas of the Company. It could be that the differences in the responses were merely caused because some areas of the Company responded without having a role in the PPA process, but it could also point to more serious concerns. The Company should have one group that manages PPAs and that group should respond to data requests. If the Company's PPA management functions are spread over numerous departments within the Company, it may make it more difficult to manage issues. Without knowing the background as to why the Company can't provide consistent information on its PPAs, Advocacy Staff is concerned that adding more PPAs could exacerbate these problems and result in unnecessary costs for customers.

Q. DO YOU ALSO HAVE A GENERAL CONCERN IN REGARDS TO HOW MUCH WIND GENERATION THE COMPANY SHOULD HAVE?

A. Yes, the ND Commission has been struggling for a number of years as to how to signal the Company, the Minnesota Legislature, the Minnesota Public Utilities Commission and the Minnesota Department of Commerce that North Dakota is very concerned about the policies that these Minnesota entities set that affect ND consumers. When the MN legislature passed a statute requiring the utilities in MN to include an estimate of the costs of carbon dioxide in utility planning, ND responded that this was in violation of the United States Commerce Clause. The decision on that issue is still pending. Further, the North Dakota Century Code §49-02-23 disallows the consideration of environmental externality values.

In recent rate cases in North Dakota when the Commission has expressed concerns about needing to pay for Minnesota mandates in North Dakota, the

Company's position has been it is an integrated system and to reap the benefits of this integrated system North Dakota Customers also have to pay for integrated costs which include overpriced solar, biomass and C-BED contracts.

However, it has become clear that the Commission has to provide a stronger signal to Minnesota government bodies and perhaps the Company that the renewable mandates in MN may not be practical. The lignite coal industry is a provider of jobs, electric generation and economic diversity in the state of North Dakota yet Minnesota policies take priority with the Company and do little to support North Dakota industries such as the lignite coal industry. Another example of conflicting priorities is the Minnesota C-BED laws which encourage the Company to contract for projects that provide benefits to Minnesota communities. In most cases, these projects are higher cost projects than non-C-BED projects but ND customers are asked to pay these costs without any reciprocating projects. As the Commission did with the Renewable Development Fund Projects and is currently doing with the Prairie Rose Project, we need to consider how we can continue to send signals to the Company, Minnesota Legislature, the Minnesota Public Utilities Commission and the Minnesota Department of Commerce that Minnesota decisions don't just affect Minnesota ratepayers, they also affect ratepayers in North Dakota and not necessarily in a positive way.

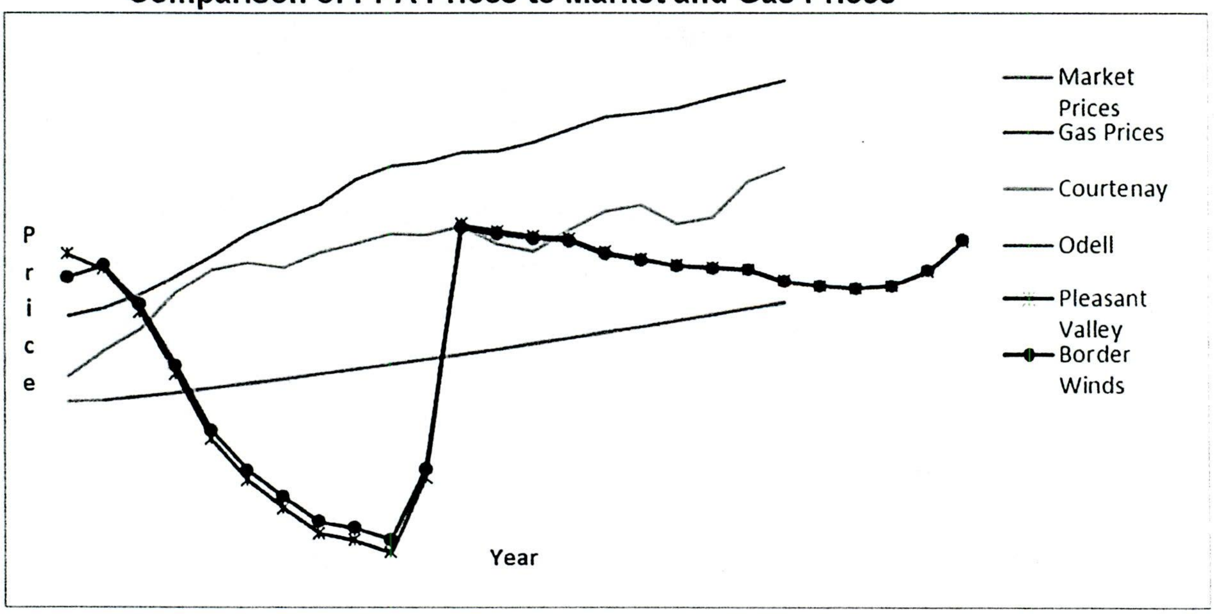
Q. YOU HAVE MENTIONED A NUMBER OF NEGATIVE FACTORS SURROUNDING THESE PROJECTS. WHAT ARE THE POSITIVE ASPECTS OF THE PROJECTS?

A. Yes. In spite of the fact there are a lot of negatives associated with these projects, there are some positive factors that more than make up for most of our concerns. It is difficult to ignore projects that offer a really good price. Even if natural gas prices only increase annually at 1.7 percent over the next 20 years, the Company's analyses demonstrates these projects are cost effective. It is only under a scenario where gas prices don't increase at all or actually decrease that we see these projects becoming non-cost effective. Due to the way natural gas is priced, these scenarios are pretty unlikely to occur.

Additionally if the trend towards greater use of natural gas in electric generation continues across the country, the demand for more natural gas will rise thereby potentially resulting in maintaining higher than inflation cost increases. Thus it would be bad to deny approval for these projects and then ten years from now find out customers are disadvantaged by this decision. Table 2 below compares the costs of these projects to MISO purchases and gas prices over the planning period. Note that values have been removed from this chart to avoid trade secret issues. The point of the graph is to demonstrate that the costs of the projects are below expected natural gas and market prices.

Table 2

Comparison of PPA Prices to Market and Gas Prices



Q. ARE THERE ANY OTHER ISSUES RELATING TO PRICES THAT THE COMMISSION SHOULD CONSIDER?

A. Yes. In 2010, NSP filed a proposal to sell excess Renewable Energy Credits (RECs) with the North Dakota Commission. The Commission approved this request in September 2010. Since October of 2012, the Company has sold

287,949 RECs and returned $1.1 million to customers as a result. In approving the sales, the Commission stated:

> All allocated RECs must be considered excess and no RECs may be considered needed for compliance until the year 2015.

It was also assumed that any RECs in excess of 10 percent starting in 2015 could be sold as well. If the Commission still believes in this course of action, this can lead to further cost savings for customers.

Q. PLEASE EXPLAIN WHY HAVING TWO OF THESE PROJECTS IN NORTH DAKOTA IS OF VALUE.

A. North Dakota Century Code (NDCC) §49-05-16 (1) (d) states:

> For facilities located or to be located in this state the commission, in determining whether the resource addition is prudent, shall consider the benefits of having the resource addition located in this state.

NDCC §49-05-16 (7) states:

> There is a rebuttable presumption that a resource addition located in the state is prudent.

In passing this legislation, the legislature recognized the importance of economic development, bringing new industries to the state, diversity in employment opportunities and promoting wind energy in the state with the best wind regime in the country. Thus, it is important that the Commission follow through with the goals of this legislation by approving the ADPs for the PPA and Company owned project that are located in North Dakota.

Q. WHAT DOES THE ADVOCACY STAFF RECOMMEND?

A. We have carefully weighed both the positive and negative aspects of these projects. As a result, we recommend the Commission approve the Company's applications for advance determination of prudence for the Courtenay Wind Project, the Odell Wind Project and the Border Winds Project. We additionally recommend the Commission approve a certificate of public convenience and necessity for the Border Winds Project. We also recommend that the

Commission adopt the approach being taken between the Company and the Minnesota Chamber of Commerce as identified in Exhibit F. The Minnesota Chamber of Commerce and the Company are working on an agreement that will be implemented prior to the final in service date of the owned wind projects. The agreement will include a mechanism whereby if the projects outperform expectations, the additional benefits are shared between the Customers and the Company and if the projects underperform, the Company will absorb the additional costs.

Q. WHY IS THE PLEASANT VALLEY WIND PROJECT BEING EXCLUDED FROM YOUR RECOMMENDATION FOR APPROVAL?

A. Advocacy Staff is trying to strike a balance between the negative and positive aspects of these projects. With the Courtenay and Odell projects being recovered through the Fuel Cost Rider, there is much less risk of potential price increases associated with these projects. However, as noted earlier, for both the Border Winds and Pleasant Valley Projects, due to the extra initial costs of ownership, we believe that there are greater risks of price increases to customers if these projects go forward. Because the Border Winds Project is located within the state, we hesitate to deny approval for this project. The same requirement of prudency does not extend to projects located in Minnesota. Approving the remaining projects adequately provides the hedge against potential gas and short term MISO price increases to achieve stable and reasonable prices for customers over the next 20 years.

However, the Company has also indicated there are potential transmission issues associated with the Border Winds Project. Thus, if the Border Winds Project does not prove to be economical after transmission costs are fully known, we anticipate the Company will withdraw any filings associated with it.

Q. DOES THIS COMPLETE YOUR PREPARED DIRECT TESTIMONY?

A. Yes. It does.

EXHIBT A- PART 1

SARA CARDWELL, MBA, CPPM

715-977-1202 • sara.cardwell@me.com • http://www.linkedin.com/in/scardwell

Summary

- Utility Industry professional with over 15 years of management, legislative, regulatory, administrative and analytical experience.
- Known as a strategic thinker with the ability to manage and leverage details to enhance results.
- Drive process improvements to completion by utilizing logic to identify efficiencies and working effectively with cross-functional teams.
- Recognized for ability to engage, motivate and lead both internal and external teams.
- Demonstrated success in achieving project management goals through the ability to break down large projects into manageable steps and monitor progress.
- Consistently exceeds internal and external customer expectations by meeting tight timeframes and providing accurate and thorough information.

Professional Experience

North Dakota Public Service Commission, Bismarck, ND **February 2013 to Present**
Public Utility Analyst

- Review utility general rate case filings and prepare data requests, review responses and recommend courses of action to Commissioners.
- Review pipeline siting filings, prepare data requests, review responses, conduct hearings and prepare draft orders with recommended courses of action.
- Review utility rider filings, prepare data requests, review responses and recommend courses of action to Commissioners.
- Review third party damage complaints, investigate complaints, prepare consent orders or recommend hearings and prepare orders.

Xcel Energy, Minneapolis, MN **2007 to 2012**
Manager, Regulatory Administration

- Filed the 2007 and 2010 resource plans.
- Prepared and submitted proposals to add or change resources and add environmental controls to generation facilities with the MN Public Utilities Commission and MN Pollution Control Agency.
- Prepared and filed annual proposals to recover costs of renewable generation facilities, MERP and pollution control equipment with the MN Public Utilities Commission.
- Filed Certificate of Need filings and Site Permit filings with the MN Public Utilities Commission for both transmission and generation facilities.
- Filed Certificates of Public Convenience and Necessity and Advanced Determination of Prudency filings with the North Dakota Commission for both transmission and generation facilities.
- Filed Rider Recovery Filings, wrote rate case testimony and comments for miscellaneous filings in North and South Dakota.
- Reviewed contracts with renewable energy providers and filed for approval of the contracts with the MN Public Utilities Commission.
- Prepared and reviewed draft legislation and participated on cross functional teams to facilitate legislative approval processes.

City of Portland, Portland, OR **2006 to 2007**

Senior Economist

- Prepared long term and short term pricing analysis that resulted in revised prices for 2007 sewer service.
- Completed 2007 bond sales auction at a competitive interest rate.

Puget Sound Energy, Bellevue, WA **2005 to 2006**

Manager, Pricing & Tariffs

- Filed and received approval on advice filings to revise consumer prices with the WA Utilities and Transportation Commission.
- Prepared electric and natural gas consumer cost of service studies, pricing analysis, testimony and tariffs for a major rate case filed with the WA Utilities and Transportation Commission.
- Implemented a new electric and natural gas consumer cost of service study model to improve efficiency.
- Implemented new load research studies to update forecasts of consumers' usage of electricity and natural gas.
- Established strong working relationships with a cross segment of other areas of the Company to ensure adequate cross pollination of ideas and implementation of results.
- Supervised a staff of four.

Portland General Electric, Portland, OR **1995 to 2005**

Manager, Tariff Administration

- Filed and received approval on approximately 25 advice filings to revise consumer prices and, or rules and regulations pertaining to pricing as presented to OR Public Utility Commission per year.
- Prepared consumer cost of service studies, price designs, testimony and tariffs for major rate cases filed with the OR Public Utility Commission and improved upon the consumer cost of service study and price designs in each case.
- Worked on legislation to create direct access in the state of Oregon and the Company's implementation processes for direct access including the creation of tariffs and rules and regulations.
- Developed and received OR Public Utility approval of consumer satisfaction metrics regarding maximum call waiting times, number of complaints, and outages.
- Developed the Company's original OATT and filed generation interconnection tariffs with FERC.
- Prepared communication plans for all filings and met with interested parties such as the City of Portland, League of OR Cities and environmental groups to work on regulatory and legislative issues.
- Supervised a staff of four.

Additional Related Experience

Federal Affairs Specialist/Pricing Analyst, Portland General Electric Company, Portland, OR
Supervisor/Senior Pricing Analyst/Pricing Analyst/Clerk, Pacific Power and Light Company, Portland, OR

Education

Certified Professional Project Manager (CPPM), University of St. Thomas, Minneapolis, MN
MBA, University of Portland, Portland, OR
BS, University of Wisconsin-Stout, Menomonie, WI

Sara J Cardwell Exhibit A Part 2

List of Major Proceedings Involvement

Minnesota Filings

Filing Date	Company	Type of Filing
June 2007	NSP	Renewable Energy Standard Rider Petition
Dec. 2007	NSP	2007 Resource Plan
Dec. 2007	NSP	Sherco 3 Mercury Plan
Dec. 2007	NSP	King Mercury Plan
Dec. 2007	NSP	Sherco 1 and 2 Emissions Reduction Plan
August 2008	NSP	Renewable Energy Standard Rider Petition/Tracker Report
October 2008	NSP	MERP Rider Adjustment Filing
April 2009	NSP	Request to add costs of Wind2Battery Project to Renewable Energy Rider
July 2009	NSP	Mercury Cost Recovery Rider Petition
July 2009	NSP	Request to add Bay Front Project in Renewable Energy Rider
October 2009	NSP	MERP Rider Adjustment Filing
Dec. 2009	NSP	Mercury Reduction Plan for Sherco Units 1 & 2
June 2010	NSP	Big Blue Power Purchase Agreement
August 2010	NSP	2010 Resource Plan Filing
October 2010	NSP	Renewable Energy Standard Rider Petition/Tracker Report
October 2010	NSP	MERP Rider Adjustment Filing
October 2010	NSP	Mercury Cost Recovery Rider Petition
March 2011	NSP	Black Dog Repowering Project Certificate of Need Filing
April 2011	NSP	Black Dog Repowering Project Site Permit Filing
October 2011	NSP	MERP Rider Adjustment Filing

South Dakota Filings

Filing Date	Company	Type of Filing
June 2009	NSP	General Rate Increase Filing-Energy Supply Testimony

North Dakota Filings

Filing Date	Company	Type of Filing
Dec. 2008	NSP	Merricourt and Nobles ADP and PCN
June/Sept. 2009	NSP	Bay Front ADP
January 2012	NSP	Peace Garden Switching Station PCN
Dec. 2012	NDPSC	NSP 2012 General Rate Case*
February 2013	NDPSC	Dakota Gasification Pipeline Corridor and Route Permit
February 2013	NDSPC	MDU Heskett Station Pipeline Corridor and Route Permit
July/August 2013	NDPSC	NSP's ADP and CPN applications for four wind Projects

Oregon Filings

Filing Date	Company	Type of Filing
October 1983	PacifiCorp	Tracker filing to increase prices to reflect changes in wholesale rates and plant additions
February 1984	PacifiCorp	General Rate Increase Filing

July 1984	PacifiCorp	Change in residential prices due to Pacific Northwest Power Planning & Conservation Act (Regional Act)
November 1984	PacifiCorp	Change in residential prices due to Regional Act benefit calculation change
May 1985	PacifiCorp	Tracker filing to reflect change in power costs and second phase of the Regional Act benefit calculation change
September 1985	PacifiCorp	Generic Pricing issue filing
June 1986	PacifiCorp	Single issue filing to add major plant addition*
December 1986	PacifiCorp	Filing to reflect first year benefit of the Tax Reform Act of 1986 (TRA) in prices*
September 1987	PacifiCorp	Tracker filing to reflect change in power costs and full year benefits of the TRA
March 1990	PGE	UE-79 - General Rate Increase Filing
Nov. 1993	PGE	UE-88-General Rate Increase Filing
Nov. 1996	PGE	UE-100-General Rate Decrease Filing
Sept. 1997	PGE	UE-102-Deregulation Filing*
October 2000	PGE	UE-115-Deregulation in accordance with new state statutes*
March 2005	PGE	UE-172-Resource Valuation Mechanism Filing
March 2006	PGE	UE-180 General Rate Case Filing

Washington Filings

<u>Filing Date</u>		<u>Type of Filing</u>
July 1984	PacifiCorp	Change in residential prices due to Pacific Northwest Power Planning & Conservation Act (Regional Act)
September 1984	PacifiCorp	General Rate Increase Filing
November 1984	PacifiCorp	Change in residential prices due to Regional Act benefit calculation change
May 1985	PacifiCorp	Second phase of the Regional Act benefit calculation change
December 1985	PacifiCorp	General Rate Increase Filing
March 1987	PacifiCorp	Filing to reflect first year benefit of the Tax Reform Act of 1986 (TRA) in prices and add major plant addition
October 1987	PacifiCorp	Tracker filing to reflect change in power costs and full year benefits of the TRA
September 1988	PacifiCorp	Based on agreement with Commission Staff, filed reduction to reflect overearnings*
April 1989	PacifiCorp	Tracker filing
January 2007	PSE	Combined gas and electric general rate increase filing
March 2007	PSE	Power Cost Adjustment Filing

Idaho Filings

<u>Filing Date</u>		<u>Type of Filing</u>
July 1983	PacifiCorp	General Rate Increase Filing*
February 1984	PacifiCorp	Power Cost Adjustment Filing

May 1984	PacifiCorp	Change in residential prices due to Pacific Northwest Power Planning & Conservation Act (Regional Act)
May 1984	PacifiCorp	General Rate Increase Filing*
November 1984	PacifiCorp	Change in residential prices due to Regional Act benefit calculation change
May 1985	PacifiCorp	Second phase of the Regional Act benefit calculation change
May 1985	PacifiCorp	General Rate Increase Filing*
Sept. 1986	PacifiCorp	General Rate Increase Filing*
Dec. 1987	PacifiCorp	Tracker filing *

Montana Filings

Filing Date		Type of Filing
May 1983	PacifiCorp	General Rate Increase Filing
May 1984	PacifiCorp	Change in residential prices due to Pacific Northwest Power Planning & Conservation Act (Regional Act)
July 1984	PacifiCorp	General Rate Increase Filing
November 1984	PacifiCorp	Change in residential prices due to Regional Act benefit calculation change
May 1985	PacifiCorp	Second phase of the Regional Act benefit calculation change
October 1985	PacifiCorp	General Rate Increase Filing*
Dec. 1986	PacifiCorp	General Rate Increase Filing
Dec. 1987	PacifiCorp	Tracker filing *

Wyoming Filings

Filing Date		Type of Filing
July 1984	PacifiCorp	General Rate Increase Filing
October 1985	PacifiCorp	General Rate Increase Filing
Nov. 1986	PacifiCorp	General Rate Increase Filing

California Filings

Filing Date		Type of Filing
May 1983	PacifiCorp	General Rate Increase Filing
January 1984	PacifiCorp	Major Plant Additions Filing
October 1984	PacifiCorp	Attrition & Electric Revenue Adjustment Mechanism (ERAM) filing
May 1985	PacifiCorp	ERAM
October 1985	PacifiCorp	ERAM & Attrition
March 1986	PacifiCorp	General Rate Increase Filing*
October 1988	PacifiCorp	Proposed elimination of ERAM
April 1989	PacifiCorp	Low Income Rate Investigation*

*Signifies witness in the case

EXHIBT A- PART 1

SARA CARDWELL, MBA, CPPM

715-977-1202 • sara.cardwell@me.com • http://www.linkedin.com/in/scardwell

Summary

- Utility Industry professional with over 15 years of management, legislative, regulatory, administrative and analytical experience.
- Known as a strategic thinker with the ability to manage and leverage details to enhance results.
- Drive process improvements to completion by utilizing logic to identify efficiencies and working effectively with cross-functional teams.
- Recognized for ability to engage, motivate and lead both internal and external teams.
- Demonstrated success in achieving project management goals through the ability to break down large projects into manageable steps and monitor progress.
- Consistently exceeds internal and external customer expectations by meeting tight timeframes and providing accurate and thorough information.

Professional Experience

North Dakota Public Service Commission, Bismarck, ND **February 2013 to Present**

Public Utility Analyst

- Review utility general rate case filings and prepare data requests, review responses and recommend courses of action to Commissioners.
- Review pipeline siting filings, prepare data requests, review responses, conduct hearings and prepare draft orders with recommended courses of action.
- Review utility rider filings, prepare data requests, review responses and recommend courses of action to Commissioners.
- Review third party damage complaints, investigate complaints, prepare consent orders or recommend hearings and prepare orders.

Xcel Energy, Minneapolis, MN **2007 to 2012**

Manager, Regulatory Administration

- Filed the 2007 and 2010 resource plans.
- Prepared and submitted proposals to add or change resources and add environmental controls to generation facilities with the MN Public Utilities Commission and MN Pollution Control Agency.
- Prepared and filed annual proposals to recover costs of renewable generation facilities, MERP and pollution control equipment with the MN Public Utilities Commission.
- Filed Certificate of Need filings and Site Permit filings with the MN Public Utilities Commission for both transmission and generation facilities.
- Filed Certificates of Public Convenience and Necessity and Advanced Determination of Prudency filings with the North Dakota Commission for both transmission and generation facilities.
- Filed Rider Recovery Filings, wrote rate case testimony and comments for miscellaneous filings in North and South Dakota.
- Reviewed contracts with renewable energy providers and filed for approval of the contracts with the MN Public Utilities Commission.
- Prepared and reviewed draft legislation and participated on cross functional teams to facilitate legislative approval processes.

City of Portland, Portland, OR **2006 to 2007**

Senior Economist

- Prepared long term and short term pricing analysis that resulted in revised prices for 2007 sewer service.
- Completed 2007 bond sales auction at a competitive interest rate.

Puget Sound Energy, Bellevue, WA **2005 to 2006**

Manager, Pricing & Tariffs

- Filed and received approval on advice filings to revise consumer prices with the WA Utilities and Transportation Commission.
- Prepared electric and natural gas consumer cost of service studies, pricing analysis, testimony and tariffs for a major rate case filed with the WA Utilities and Transportation Commission.
- Implemented a new electric and natural gas consumer cost of service study model to improve efficiency.
- Implemented new load research studies to update forecasts of consumers' usage of electricity and natural gas.
- Established strong working relationships with a cross segment of other areas of the Company to ensure adequate cross pollination of ideas and implementation of results.
- Supervised a staff of four.

Portland General Electric, Portland, OR **1995 to 2005**

Manager, Tariff Administration

- Filed and received approval on approximately 25 advice filings to revise consumer prices and, or rules and regulations pertaining to pricing as presented to OR Public Utility Commission per year.
- Prepared consumer cost of service studies, price designs, testimony and tariffs for major rate cases filed with the OR Public Utility Commission and improved upon the consumer cost of service study and price designs in each case.
- Worked on legislation to create direct access in the state of Oregon and the Company's implementation processes for direct access including the creation of tariffs and rules and regulations.
- Developed and received OR Public Utility approval of consumer satisfaction metrics regarding maximum call waiting times, number of complaints, and outages.
- Developed the Company's original OATT and filed generation interconnection tariffs with FERC.
- Prepared communication plans for all filings and met with interested parties such as the City of Portland, League of OR Cities and environmental groups to work on regulatory and legislative issues.
- Supervised a staff of four.

Additional Related Experience

Federal Affairs Specialist/Pricing Analyst, Portland General Electric Company, Portland, OR
Supervisor/Senior Pricing Analyst/Pricing Analyst/Clerk, Pacific Power and Light Company, Portland, OR

Education

Certified Professional Project Manager (CPPM), University of St. Thomas, Minneapolis, MN
MBA, University of Portland, Portland, OR
BS, University of Wisconsin-Stout, Menomonie, WI

Sara J Cardwell

List of Major Proceedings Involvement

Exhibit A Part 2

Minnesota Filings

Filing Date	Company	Type of Filing
June 2007	NSP	Renewable Energy Standard Rider Petition
Dec. 2007	NSP	2007 Resource Plan
Dec. 2007	NSP	Sherco 3 Mercury Plan
Dec. 2007	NSP	King Mercury Plan
Dec. 2007	NSP	Sherco 1 and 2 Emissions Reduction Plan
August 2008	NSP	Renewable Energy Standard Rider Petition/Tracker Report
October 2008	NSP	MERP Rider Adjustment Filing
April 2009	NSP	Request to add costs of Wind2Battery Project to Renewable Energy Rider
July 2009	NSP	Mercury Cost Recovery Rider Petition
July 2009	NSP	Request to add Bay Front Project in Renewable Energy Rider
October 2009	NSP	MERP Rider Adjustment Filing
Dec. 2009	NSP	Mercury Reduction Plan for Sherco Units 1 & 2
June 2010	NSP	Big Blue Power Purchase Agreement
August 2010	NSP	2010 Resource Plan Filing
October 2010	NSP	Renewable Energy Standard Rider Petition/Tracker Report
October 2010	NSP	MERP Rider Adjustment Filing
October 2010	NSP	Mercury Cost Recovery Rider Petition
March 2011	NSP	Black Dog Repowering Project Certificate of Need Filing
April 2011	NSP	Black Dog Repowering Project Site Permit Filing
October 2011	NSP	MERP Rider Adjustment Filing

South Dakota Filings

Filing Date	Company	Type of Filing
June 2009	NSP	General Rate Increase Filing-Energy Supply Testimony

North Dakota Filings

Filing Date	Company	Type of Filing
Dec. 2008	NSP	Merricourt and Nobles ADP and PCN
June/Sept. 2009	NSP	Bay Front ADP
January 2012	NSP	Peace Garden Switching Station PCN
Dec. 2012	NDPSC	NSP 2012 General Rate Case*
February 2013	NDPSC	Dakota Gasification Pipeline Corridor and Route Permit
February 2013	NDSPC	MDU Heskett Station Pipeline Corridor and Route Permit
July/August 2013	NDPSC	NSP's ADP and CPN applications for four wind Projects

Oregon Filings

Filing Date	Company	Type of Filing
October 1983	PacifiCorp	Tracker filing to increase prices to reflect changes in wholesale rates and plant additions
February 1984	PacifiCorp	General Rate Increase Filing

July 1984	PacifiCorp	Change in residential prices due to Pacific Northwest Power Planning & Conservation Act (Regional Act)
November 1984	PacifiCorp	Change in residential prices due to Regional Act benefit calculation change
May 1985	PacifiCorp	Tracker filing to reflect change in power costs and second phase of the Regional Act benefit calculation change
September 1985	PacifiCorp	Generic Pricing issue filing
June 1986	PacifiCorp	Single issue filing to add major plant addition*
December 1986	PacifiCorp	Filing to reflect first year benefit of the Tax Reform Act of 1986 (TRA) in prices*
September 1987	PacifiCorp	Tracker filing to reflect change in power costs and full year benefits of the TRA
March 1990	PGE	UE-79 - General Rate Increase Filing
Nov. 1993	PGE	UE-88-General Rate Increase Filing
Nov. 1996	PGE	UE-100-General Rate Decrease Filing
Sept. 1997	PGE	UE-102-Deregulation Filing*
October 2000	PGE	UE-115-Deregulation in accordance with new state statutes*
March 2005	PGE	UE-172-Resource Valuation Mechanism Filing
March 2006	PGE	UE-180 General Rate Case Filing

Washington Filings

Filing Date		Type of Filing
July 1984	PacifiCorp	Change in residential prices due to Pacific Northwest Power Planning & Conservation Act (Regional Act)
September 1984	PacifiCorp	General Rate Increase Filing
November 1984	PacifiCorp	Change in residential prices due to Regional Act benefit calculation change
May 1985	PacifiCorp	Second phase of the Regional Act benefit calculation change
December 1985	PacifiCorp	General Rate Increase Filing
March 1987	PacifiCorp	Filing to reflect first year benefit of the Tax Reform Act of 1986 (TRA) in prices and add major plant addition
October 1987	PacifiCorp	Tracker filing to reflect change in power costs and full year benefits of the TRA
September 1988	PacifiCorp	Based on agreement with Commission Staff, filed reduction to reflect overearnings*
April 1989	PacifiCorp	Tracker filing
January 2007	PSE	Combined gas and electric general rate increase filing
March 2007	PSE	Power Cost Adjustment Filing

Idaho Filings

Filing Date		Type of Filing
July 1983	PacifiCorp	General Rate Increase Filing*
February 1984	PacifiCorp	Power Cost Adjustment Filing

May 1984	PacifiCorp	Change in residential prices due to Pacific Northwest Power Planning & Conservation Act (Regional Act)
May 1984	PacifiCorp	General Rate Increase Filing*
November 1984	PacifiCorp	Change in residential prices due to Regional Act benefit calculation change
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Montana Filings

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Wyoming Filings

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California Filings

Filing Date		Type of Filing
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January 1984	PacifiCorp	Major Plant Additions Filing
October 1984	PacifiCorp	Attrition & Electric Revenue Adjustment Mechanism (ERAM) filing
May 1985	PacifiCorp	ERAM
October 1985	PacifiCorp	ERAM & Attrition
March 1986	PacifiCorp	General Rate Increase Filing*
October 1988	PacifiCorp	Proposed elimination of ERAM
April 1989	PacifiCorp	Low Income Rate Investigation*

*Signifies witness in the case

EXHIBIT B

PUBLIC DOCUMENT:
TRADE SECRET DATA EXCISED

☐ Non Public Document – Contains Trade Secret Data
☒ Public Document – Trade Secret Data Excised
☐ Public Document

Xcel Energy			
Docket No.:	PU-13-706, PU-13-707, PU-13-708		
Response To:	North Dakota Public Service Commission	Data Request No.	SC-03-007
Requestor:	Sara Cardwell		
Date Received:	September 13, 2013		

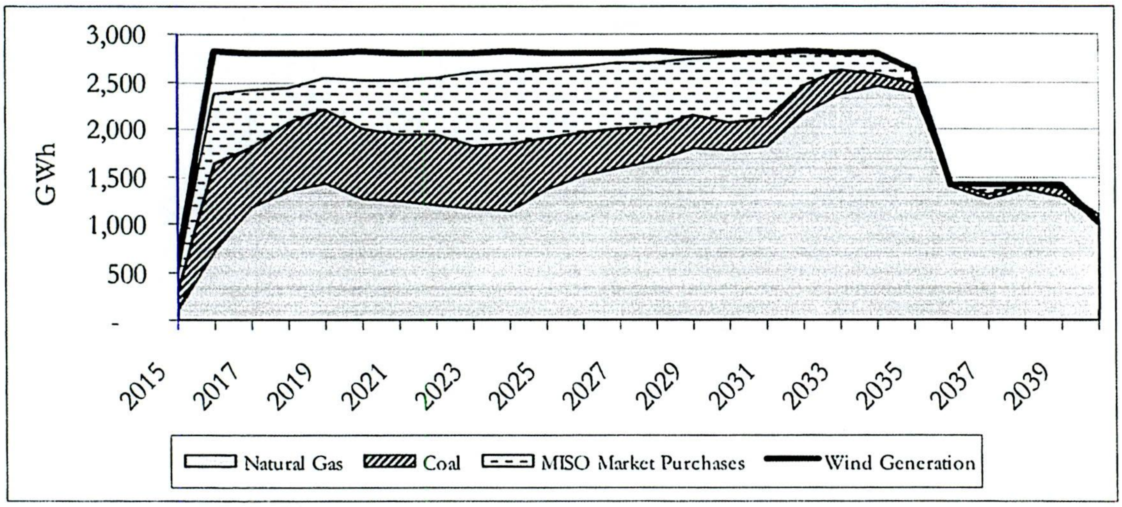
Question:

Please update Figure 2 found on page 16 of the joint application for Courtenay, Odell and Pleasant Valley to include the effect of Border Wind in the Displaced Energy Chart. Also indicate the annual amount curtailed by year.

Response:

Below is the updated Figure 2 from page 16 of the joint application for Courtenay, Odell and Pleasant Valley to include the effect of Border Wind in the Displaced Energy Chart.

UPDATED Figure 2: Strategist Simulations – Displaced Energy



Please see Attachment A to this response for supporting data and the amount curtailed by year.

Exhibit C

Exhibit C hereby incorporates by reference, and as evidence to be considered by the Commission, Chapters 1 and 4 of the 2010 Resource Plan, submitted to the North Dakota Public Service Commission by Northern States Power Company and filed on August 3, 2010 as Docket Item number 1 in North Dakota Public Service Commission Case Number PU-10-580.

Available online as:

http://www.psc.nd.gov/database/documents/10-0580/001-060.pdf

http://www.psc.nd.gov/database/documents/10-0580/001-090.pdf

EXHIBIT D

☐ **Non Public Document – Contains Trade Secret Data**
☐ **Public Document – Trade Secret Data Excised**
☒ **Public Document**

Xcel Energy			
Docket No.:	PU-13-706, PU-13-707, PU-13-708		
Response To:	North Dakota Public Service Commission	Data Request No.	SC-008
Requestor:	Sara Cardwell		
Date Received:	August 12, 2013		

Question:

In the Company's 2013 Annual Renewable Energy Objective Status Report filed on June 26, 2013, the Company states that the percent of renewable energy provided in ND is 14%. The goal is 10% by 2015. Without the acquisition of the currently pending 600 MW of wind, in what year will the Company's requirement fall below 10%? With these acquisitions, what will be the percent of renewable energy provided to ND customers?

Response:

Assuming no REC sales in future years and no acquisition of additional resources, we project the Company's North Dakota-eligible renewable energy percentage to fall below 10% in 2027.

With the 600 MW of incremental wind from these proposed projects, the North Dakota-eligible renewable energy percentage reflecting their first full year in service (2016) is forecast to be approximately 23 percent. The small difference in the renewable energy percentage identified in this response and the response to NDPSC-SC-004 reflects the difference in Minnesota's and North Dakota's designations of resources as renewable.

Preparer:	Kari Chilcott Clark
Title:	Renewable Energy Portfolio Manager
Department:	Purchased Power
Telephone:	303-571-6905
Date:	August 26, 2013

EXHIBIT E

Annual Rate Impact Analysis

	2015	2016	2017	2018	2019	2020
Base Rates - Pleasant Valley & Border Winds	0.04¢/kWh	0.14¢/kWh	0.12¢/kWh	0.09¢/kWh	0.06¢/kWh	0.04¢/kWh
Fuel Clause - Geronimo	0.01¢/kWh	0.08¢/kWh	0.08¢/kWh	0.08¢/kWh	0.08¢/kWh	0.08¢/kWh
Wind Integration & Congestion	0.01¢/kWh	0.03¢/kWh	0.03¢/kWh	0.03¢/kWh	0.03¢/kWh	0.03¢/kWh
Avoided Fuel & Purchased Power	(0.03¢/kWh)	(0.16¢/kWh)	(0.18¢/kWh)	(0.20¢/kWh)	(0.22¢/kWh)	(0.23¢/kWh)
Net Rate Impact	**0.02¢/kWh**	**0.08¢/kWh**	**0.04¢/kWh**	**0.00¢/kWh**	**(0.05¢/kWh)**	**(0.07¢/kWh)**

	2021	2022	2023	2024	2025
Base Rates - Pleasant Valley & Border Winds	0.03¢/kWh	0.02¢/kWh	0.01¢/kWh	0.01¢/kWh	0.04¢/kWh
Fuel Clause - Geronimo	0.08¢/kWh	0.08¢/kWh	0.09¢/kWh	0.09¢/kWh	0.09¢/kWh
Wind Integration & Congestion	0.04¢/kWh	0.04¢/kWh	0.04¢/kWh	0.04¢/kWh	0.04¢/kWh
Avoided Fuel & Purchased Power	(0.23¢/kWh)	(0.24¢/kWh)	(0.26¢/kWh)	(0.27¢/kWh)	(0.29¢/kWh)
Net Rate Impact	**(0.09¢/kWh)**	**(0.10¢/kWh)**	**(0.12¢/kWh)**	**(0.13¢/kWh)**	**(0.12¢/kWh)**

EXHIBIT F

STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of Petition of Northern States Power Company for Approval of the Acquisition of 600 MW and 150 MW of Wind Generation

Docket No. E002/M-13-603
Docket No. E002/M-13-716

MINNESOTA CHAMBER OF COMMERCE REPLY COMMENTS

I. INTRODUCTION

The Minnesota Chamber of Commerce ("Chamber") appreciates the opportunity to comment on the merits of Xcel's petitions seeking approval of 750 MW of wind generation. The Chamber represents over 2,300 businesses throughout the state of Minnesota, of which a significant portion are Xcel Energy ("Xcel") customers. As the voice of Minnesota businesses on statewide policy issues, the Chamber's main goal is to make Minnesota's business environment competitive relative to other states and nations. Energy is a critical component to a competitive and successful business environment. Therefore, a focal point of the Chamber's policy is ensuring Minnesota has competitively priced, reliable, and environmentally sound energy rates.

On July 16, 2013, Xcel petitioned the Minnesota Public Utilities Commission ("Commission") in Docket No. E002/M-13-603 for approval of the acquisition of 600 MW of wind generation. On August 9, 2013, Xcel filed Docket No. E002/M-13-716 for approval to acquire another 150 MW of wind (collectively "Petitions"). The Chamber originally filed comments in Docket No. E-002/M-13-603 asking the Commission to combine the Petitions with the open Commission docket *in the Matter of the Petition for Northern States Power Company to*

Initiate a Competitive Resource Docket, Docket No. E-002/CN-12-1240 ("Competitive Bid Docket") due to a chance in circumstances. However, after discussion with Xcel, the Chamber withdrew the request to combine the Competitive Bid Docket (E002/CN-12-1240) and the Petitions as long as Xcel worked with the Chamber to address its concerns about the change of circumstances.

II. SUMMARY

Xcel conducted a competitive bidding process to identify the 750MW wind portfolio, which is significantly greater than the target acquisition of 200 MW indicated in Xcel's resource plan.[1] Xcel proposed to procure 400 MW of wind generation through Power Purchase Agreements with Geronimo Energy from the Courtenay and Odell wind developments ("Geronimo PPAs"). Xcel also proposed to acquire 350 MW through a build/transfer arrangement with RES Americas for the Pleasant Valley and Borders wind development. Xcel indicates that this change in circumstance is to procure the wind generation sooner than legislatively mandated to fulfill the RPS mandate due to historically low prices.[2]

Xcel would like to expedite the process for the approval of this portfolio in order to capitalize on the federal production tax credits ("PTC") before the December 31, 2013 deadline.[3] The utility indicates that for the projects to achieve a levelized cost of less than $29/MWh these projects must qualify for and receive the PTC.[4] While some consider this a once in a lifetime opportunity, the Chamber still has concerns about the true cost of this addition to the Xcel system.

[1] *In the Matter of Xcel Energy's 2011-2025 Integrated Resource Plan*, Docket No. E002/RP-10-825, ORDER (Nov. 30, 2012).

[2] *See In the Matter of the Petition of Northern States Power Company for Approval of the Acquisition of 600 MW of Wind Generation*, Docket No. E002/M-13-603, XCEL ENERGY PROCEDURAL COMMENTS, 2 (Aug. 8, 2013) ("600 MW Wind Petition").

[3] *See id.*

[4] 600 MW Wind Petition, INITIAL FILING (July 6, 2013) at 14. We note that the levelized costs are calculated assuming 20 years for the wind PPAs and a 25 year useful life for the owned generation.

A. The Chamber remains concerned about the level of ratepayer protection in the owned wind proposals.

The Chamber appreciates the considerable efforts made to protect ratepayers from financial and operational risks associated with the proposed Geronimo PPAs. The Chamber believes similar protections are needed for the proposed ownership options in addition to the Department's recommendations. The Chamber discussed our concerns with Xcel and obtained a commitment from the utility to work with the Chamber to develop a mechanism whereby if the project's benefits to ratepayers outperform expectations, the additional benefits are shared with the utility; and if the projects underperform, the additional costs are absorbed to a significant degree, if not entirely, by the utility.

B. The Chamber believes that it is only appropriate to approve these projects as a <u>least cost renewable resource</u> and the Commission should set up a process to evaluate methods to approve future projects based on economics.

The Chamber recommends that the Commission clarify in its Order that the approval of the 750 MW wind portfolio is based on fulfilling the Renewable Portfolio Standard ("RPS"). The Chamber concedes it is appropriate to consider the proposed resources as a least cost renewable resource chosen through a competitive bidding process. However, the Strategist modeling analysis used by Xcel and the Department lacks the rigor and robustness necessary to justify approval of intermittent resources like wind purely on economics. The Chamber recommends that the Commission initiate a docket to set a new standard of review for projects that are to be approved based on economics and would welcome the opportunity to work with utilities and the Department.

C. The acquisition of 750 MW of wind along with other material changes requires the Commission to reevaluate the need in the Competitive Resource Acquisition Docket (E002/CN-12-1240).

The Chamber believes the Commission must consider the totality of the circumstances when deciding whether such a large investment—even if it appears to be a very good deal—is in the best interests of ratepayers. Xcel ratepayers continue to experience cost drivers due to mandates and company decisions that will likely erode the competitiveness of its rates on a regional and global scale.[5] Among the many examples are: Xcel's forthcoming rate case application this fall, cost increases associated with the Monticello uprate, transmission and other system upgrades, and the solar mandate requiring significant capital cost expenditures.

The Commission must not view the circumstances surrounding the erosion of Minnesota's competitive electric rates in a vacuum. While Xcel and other stakeholders cite the potential expiration of the PTC as a reason that time is of the essence, the Chamber believes that protecting ratepayer interest requires the same—if not greater—sense of urgency. It is imperative that the Commission take steps to prevent over building. Therefore, the Chamber urges the Commission and Department to re-evaluate the need in the Competitive Acquisition docket (E002/CN-12-1240) in light of material changes and provide a revised assessment for the Commission to consider.

III. REPLY COMMENTS

A. The Chamber recommends ratepayer protection against financial and operational risk for the proposed owned wind generation.

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[5] *See Xcel Rate Case*, FINDINGS OF FACT, CONCLUSIONS OF LAW AND RECOMMENDATIONS (July, 3, 2013) B-5 (discussing responses from business customers upset with rate increases); *see also* "Average Price by State by Provider 1990-2010 (EIA-861) available at http://www.eia.gov/cneaf/electricity/epa/average_price_state.xls (using average price information); *see also* David M. Shaffer, *Xcel asks for 10 percent rate increase*, Star Tribune, November 2, 2012, http://www.startribune.com/local/177008501.html (quoting Bill Blazar on competitive rates).

Similar to other PPA arrangements, the Geronimo PPAs set a price per MWh for actual delivered power without any opportunity to seek recovery on cost overruns. Furthermore, the Department's comments describe the following mechanisms that protect ratepayers against financial and operational risk in the proposed Geronimo PPAs:

- Establishment of a security fund to account for replacement energy in the event of bankruptcy and other potential damages caused by seller;
- Events constituting default include failure to deliver energy pursuant to the PPA terms aside from other events such as fraud, bankruptcy etc.;
- Payments for net energy actually delivered;
- For Odell, since Xcel identified that the project would have a higher-than-normal curtailment risk until several upgrades to the transmission system are placed in-service, the utility mitigated this risk by including terms in the PPA that specify that Geronimo will not receive compensation for curtailments imposed by MISO until the transmission upgrades are completed;
- Geronimo absorbs the transmission interconnection risk above those currently estimated for the projects.[6]

While safeguards exist to protect ratepayers in the Geronimo PPAs, Xcel's proposal regarding the Pleasant Valley and Borders owned wind projects do not protect ratepayers from cost overruns, deliverability, and/or transmission interconnection issues. For example:

- MISO studies regarding transmission interconnection associated with Pleasant Valley and Borders are not yet complete. Certain cost assumptions are included which can only be verified once the MISO studies are complete. For the Borders project, the costs could

[6] *See In the Matter of the Petition of Northern States Power Company for Approval of the Acquisition of 600 MW of Wind Generation*, Docket No. E002/M-13-603, PUBLIC COMMENTS OF THE MINNESOTA DEPARTMENT OF COMMERCE, DIVISION OF ENERGY RESOURCES, 18-21 (September 9, 2013) ("DER Comments").

be as great as $50 million higher.[7] Furthermore, since the wind generation cannot receive capacity credit until 2021, it implies that MISO will not designate these resources as Network Resource Interconnection Service ("NRIS"). If this is the case, the resources will likely remain Energy Resource Interconnection Service ("ERIS"), which means the energy could be delivered on a non-firm basis.[8] This is important to note because the propensity for higher curtailments is more likely through ERIS service until certain Multi Value projects are in service. The Chamber believes that ratepayers should be insulated from curtailment costs in the owned wind projects as they are under the PPA transactions with Geronimo.

- The cost overruns associated with the Xcel owned Nobles wind project and high increases in O&M costs for the Xcel owned Grand Meadows wind project support the Chambers concerns regarding higher than projected wind costs.[9] Furthermore, as discussed later in these comments, the European experience with wind generation seems to indicate that the useful life is typically half of the assumed time—this may result in higher costs due to earlier than anticipated repowering.

The Chamber remains concerned about the risks associated with cost overruns and operational issues including deliverability and curtailment for the proposed owned projects. The Department made efforts to protect ratepayers by recommending that Xcel not be allowed to seek cost recovery for any additional costs above certain amounts unless it can provide adequate

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[7] *See id.* at 22.
[8] "ERIS" means Energy Resource Interconnection Service. It is defined as "The interconnection of a Generation Resource to the Transmission System or distribution system, as applicable, to be eligible to deliver the Generation Resource's electric output using the existing firm **or non-firm capacity of the Transmission System on an as available basis** (emphasis added) See, MISO tariff, Module A
[9] *See In the Matter of the Application of Northern States Power Company d/b/a Xcel Energy for Authority to Increase Rates for Electric Service in Minnesota* ("Xcel Rate Case"), Docket No. E-002/GR-12-961, SURREBUTTAL TESTIMONY OF LARRY L. SCHEDIN, PE, 8 (April 12, 2013).

justification.[10] However, the Chamber believes this acquisition and the current rate environment necessitates greater protections.

Similar to the PPA provisions, ratepayers should receive further protection from financial (i.e., cost overruns, O&M costs) and operational risk (i.e. deliverability). The Chamber recognizes that Xcel is not a merchant/developer and will recover costs using traditional ratemaking. However, this method does not preclude the utility from offering some PPA-like protections regarding cost overruns and operational risks.

The Chamber discussed its concerns with Xcel and both parties made a commitment to develop a mechanism whereby the utility and ratepayers share the benefits if the projects outperform based on current project estimates and the utility absorbs to a significant degree, if not all, any costs linked to underperformance. In other words, the utility absorbs costs if either (a) the actual projects costs (including O&M, capital costs and transmission costs) are higher than the expected costs, or (b) the performance is lower than expected. At the same time, ratepayers will share with Xcel any realized net benefits if the project costs are lower than expected and/or the project meets or exceeds projected performance targets.

Xcel and the Chamber agreed to a tentative general timeline that will guide the negotiations over the terms of the mechanism describe above. It is built around the anticipated full in service date for the project of January 1, 2016. Beginning in June 2014, Xcel and the Chamber will work on the specifics of the mechanism. Both parties anticipate filing a final plan by the first quarter of 2015, thus, giving the Commission ample time to review and approve the arrangement to ensure adequate ratepayer protection.

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[10] *See* DER Comments at 22-23.

B. THE CHAMBER RECOMMENDS AN ALTERNATIVE STANDARD OF REVIEW TO APPROVE PROJECTS ON THE BASIS OF ECONOMICS.

The Chamber recommends that the Commission clarify in the Order that the approval of the 750 MW wind portfolio is based on fulfilling the renewable mandate. Approving this project based on economics could improperly set a precedent that allows approval of projects on an incomplete and flawed analysis.[11] While these projects may be considered a least cost renewable resource, the modeling analysis is deficient and lacks the rigor and robustness necessary to justify approval based purely on economics.

The Chamber is concerned with the savings analysis due to the following:

a. **The Strategist model has limited capability to conduct the type of analysis required to demonstrate approval based on economics.** For example, MISO uses a capacity expansion tool such as EGEAS (which is similar in capability as Strategist) to identify certain transmission plans for economic reasons or market efficiency. In order to verify that these transmission plans results in savings and should indeed be built for economic reasons, MISO conducts more detailed analysis using Promod under a range of possible future scenarios.[12] The analysis involving Strategist/EGEAS is a preliminary step to ascertain "go/no go" decisions about building future resources. Analysis that is more detailed is required to verify the results from this tentative analysis.

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[11] *See in the Matter of Otter Tail Power Company's Integrated Resource Plan* ("OTP IRP"), Docket No. E-017/GR-10-623, COMMENTS OF THE MINNESOTA CHAMBER OF COMMERCE, 3 (April 4, 2011) (stating "[t]he Strategist Model is a "static" model that should be supplemented with a dynamic model, particularly given that wind is drastically changing the resource characteristics from the traditional demand-based options that utilities previously invested in… The Chamber recommends that a working group be established consisting of utilities, OES, Commission staff and interested stakeholders to investigate types of models that are more applicable to the current MISO environment and supply mix, as well as evaluate how the IRP planning process can be refined to provide more meaningful plans for each utility.").

[12] The Promod model is a hourly chronological model that includes the transmission topology and has the ability to capture the operational characteristics of wind generation's and other types of generation in a realistic manner.

Examples of limited capability associated with Strategist include but is not limited to the following:

i. The model is not equipped to capture the hourly variations of wind. The model assumes that one-week's profile is representative of an entire month, which cannot simply be the case with wind generation since it is so highly dependent on weather patterns. An assumed systematic wind pattern mutes the volatility inherent in wind and will result in over estimating savings;

ii. The impact of the additional wind generation on prices is ignored since the model is not set up to capture the interactive impacts of additional wind on prices;

iii. The market prices are not calculated within the model. Rather, it is our understanding that Xcel procures average monthly on and off-peak prices from a third party and estimates hourly profiles. Promod solves for the hourly pricing within the model thereby reducing further errors due to assumed hourly profiles. Furthermore, only one market price forecast is used against various fuel price sensitivities. This is not correct because if fuel prices change, so will the market price forecast.

iv. Xcel is modeled as a standalone system, excludes the transmission typology, and is therefore, an unrealistic depiction of the actual operations. While the utility included congestion and loss estimates from MISO's 2012 analysis, such parameters should be solved for within the model. Furthermore, it seems to be inconsistent to utilize market prices from different sources than the estimates for congestion and losses.

b. **Strategist Modeling results need additional vetting:** With respect to the Strategist results, the Chamber would appreciate clarifications on the following:

   i. It is not clear how wind generation is displacing more natural gas than coal. Figure 4 in Xcel's petition seems to indicate that the majority of the energy displaced is from natural gas fired resources. This seems counter intuitive because wind conventionally displaces more energy during off peak hours than on peak hours.

   ii. Table 6 in Xcel's wind petition shows the estimated $/MWh costs and savings associated with Pleasant Valley, Odell, and Courtenay. It is not clear why the savings for Pleasant Valley are higher than Odell and Courtenay when the projects plan to enter service at roughly the same time. It is possible that the savings analysis is impacted by which units are put into the model first.

c. **Useful life of wind turbines is not well established:** The analysis conducted by Xcel and the Department assumes a 25-year useful life for the owned wind turbines to calculate the savings and levelized cost impacts. This assumption is likely faulty. A 2012 study conducted by the Renewable Energy Foundation in the United Kingdom indicates "an unambiguous and statistically significant decline in the operating performance of wind farms as they grow older."[13] The report states the following:

> The rate of decline in performance is greatest for offshore installations in Denmark, with a fall from load factors of over 40% at ages 0 and 1 to less than 15% by at ages 9 and 10. Onshore installations in the UK show a more rapid rate of decline – 0.9 percentage points per year over the first 10 years of operation – than is the case for Denmark, though the normalised Danish performance curve lies below the UK curve for the first four years. For the UK the normalized load factor falls to just over 15% at age 10 and to 11% at age 15. With such low load factors it seems likely that many

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[13] *See* Gordon Hughes, *The Performance of Wind Farms in the United Kingdom and Denmark*, RENEWABLE ENERGY FOUNDATION, 11 (2012), http://www.ref.org.uk/attachments/article/280/ref.hughes.19.12.12.pdf.

> wind farms will be re-powered – i.e. the turbines will be replaced – once they reach the age of 10 or at most 15.[14]

If the useful life is not as long as assumed, the Commission should carefully consider the following important implications:

i. Savings are over estimated by assuming a constant year over year capacity factor;

ii. If wind farms are to be re-powered significantly sooner than anticipated, the significant trade off value of procuring wind generation in advance to capitalize on the PTCs must be weighed against the useful life and subsequent repowering of the generation;

iii. The shorter useful lives suggest entering into PPAs over owned generation. If owned generation is approved, these observations further emphasize the need for some ratepayer protections. As indicated earlier, the Chamber's agreement with Xcel will assist in putting ratepayer protections in place.

The foregoing implications need to be recognized in the planning, analyzing, and decision making process. Based on the foregoing observations, the Chamber recommends that the Commission initiate a docket to set a new standard of review for projects that are to be approved on the basis of economics. We welcome the opportunity to work with utilities and the Department to develop this new standard of review.

C. THE NEED AND TYPE IN THE COMPETITIVE ACQUISITION DOCKET (E002/CN-12-1240) IS IMPACTED MATERIALLY AND SHOULD BE REVISITED.

In its initial comments, the Chamber emphasized that many factors require the Commission to revisit the forecasted need in the Competitive Acquisition Docket (E002/CN-12-1240). Two factors alone reduce the need by approximately 300 MW:

- Xcel's forecasted load requirements decreased up to 150 MW in 2017-2019;[15] and,

[14] *See id.*

- The Department estimates about 300 MW of solar installations in 2017-2019 to fulfill the solar mandate.[16] Assuming 50% accredited capacity for solar would result in a 150MW reduction.

If approved, Xcel's 750 MW wind portfolio will affect the type of resource needed in the Competitive Acquisition Docket (E002/CN-12-1240). This is because the energy produced by the wind generation will affect the projected capacity factor for the combined cycle unit thereby influencing the unit's economics. Xcel acknowledges this in the wind petition:

> "We note that a Competitive Resource Acquisition Process stemming from our most recent Resource Plan is currently pending in Docket No. E002/CN-12-1240. It appears that the wind projects we propose in this Petition will not have any accredited capacity in the 2017 to 2019 timeframe and, as the result, will not affect the capacity need that is being addressed in the 12-1240 Docket. **However, the energy provided by these proposed wind projects may impact the type of resource selected to meet that need.** The Company did not have access to the proposals of competing parties in the 12-1240 docket at the time our decisions to add these wind project were made. We believe that our acquisition of the proposed 600 MW of wind is reasonable, prudent, and necessary for our RES compliance, and that any potential impacts to the resource selection are more appropriately addressed in the 12-1240 Docket.[17]

There are many known cost drivers that will result in further deviation from competitive rates–Xcel's rate case application this fall, cost increases associated with the Monticello uprate and transmission system upgrades, and significant capital costs to meet the new solar mandate. Now more than ever, it is imperative to prevent over building. Therefore, the Chamber urges the Commission and Department to re-evaluate the Need in the Competitive Acquisition Docket

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[15] *See* 600 MW Wind Petition at 2 (citing Xcel Rate Case, XCEL RESPONSE TO MCC-IR 516 (February 4, 2013)).
[16] *See* DER at 6.
[17] *See* 600 MW Wind Petition at 10 (emphasis added).

(E002/CN-12-1240) in light of the material changes and provide a revised assessment to the Commission.[18]

IV. CONCLUSION

The Chamber recommends that the following be included in the Commission's Order:

a. Require Xcel to work with the Chamber to reach an agreement by 2015 to be approved by the Commission prior to the final in service date of the owned wind facilities. The agreement will include a mechanism whereby if the project's benefits to ratepayers outperform expectations, the additional benefits are shared with the utility; and if the projects underperform, the additional costs are absorbed to a significant degree, if not entirely, by the utility.

b. Approve Xcel's acquisition of 750 MW of wind as a least cost renewable resource and convene a docket to investigate the modeling approach and approval process the Commission will utilize to approve proposed projects on the basis of economics.

c. Reevaluate the Need in the Competitive Acquisition Docket (E002/CN-12-1240) in light of the many material changes including the wind petition.

DATED: October 1. 2013

Respectfully submitted,

/e/ Benjamin L. Gerber
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[18] The Chamber is aware that Xcel is planning to submit a Change in Circumstance in the various resource acquisition related dockets. However, at the time of developing these comments, Xcel had not yet submitted a filing.

EXHIBIT G

☐ **Non Public Document – Contains Trade Secret Data**
☐ **Public Document – Trade Secret Data Excised**
☒ **Public Document**

Xcel Energy			
Case No.:	PU-12-813		
Response To:	North Dakota Public Service Commission	Data Request No.	NDPSC-1-037
Requestor:	Michael Diller & Sara Cardwell		
Date Received:	February 26, 2013		

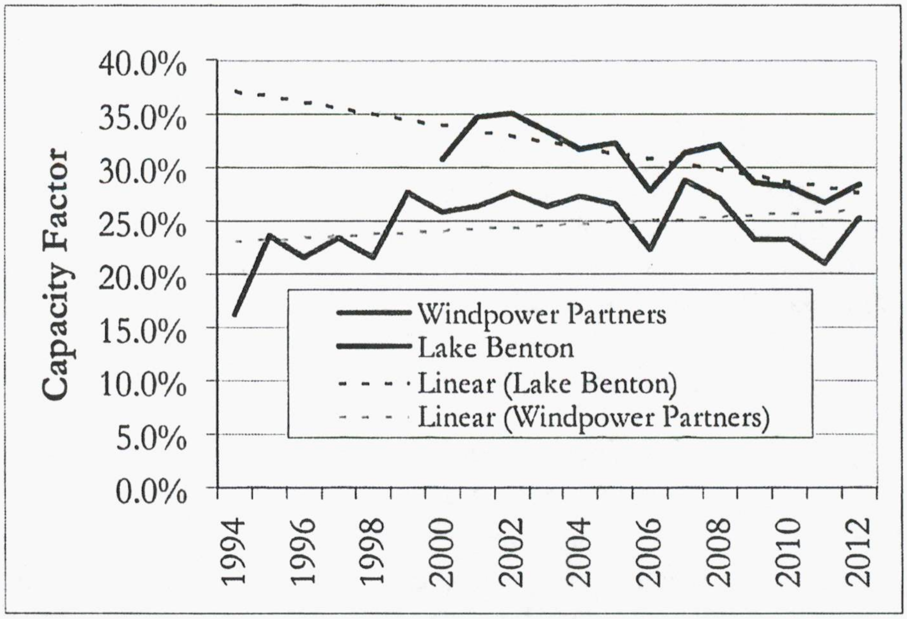
Question:

On Schedule 4, Page 3 of 4 of Perkett's Exhibit (LP-1), the remaining lives for the Company owned wind projects is based on a 25 year life. Please provide annual production values for these production facilities as well as all owned and contracted wind production facilities for the entire Xcel Energy fleet. Compare and contrast the Company's experience with renewables to the findings in the attached reports: "The Performance of Wind Farms in the United Kingdom and Denmark" which indicates the life of these facilities should be more in the range of 15 years. Additionally, the Sandia Report entitled "Continuous Reliability Enhancement for Wind (CREW) Database: Wind Plant Reliability Benchmark" which indicates on average a wind turbine operates for an average of 80 hours between downtime events and then is down for an average of 2.3 hours. Has the Company considered revising its Strategist assumptions for both degradation of production as a wind project gets older and the shorter expected life given the experience in Europe? If not, why not?

Response:

Please see Attachment A to this response for 2001-2011 data for NSP-owned and contracted wind generation.

Generally speaking the Company's experience with renewables is inconclusive with respect to degradation in production. The following chart illustrates the annual capacity factor for two of our oldest wind generation purchase power agreements. Fitting a linear trend line to the seventeen years of data for our oldest purchase indicates that the generation from the Windpower Partners project has actually increased over time. However, the production of the Lake Benton facility appears to be falling off over the ten year span charted.



Regarding the expected lifetime of wind projects, the Windpower Partners project is now 19 years old and still operating well. In fact, that project reached its highest annual production in 2007 after 15 years of service. Most of the wind projects modeled in Strategist are purchased power contracts. In the model the lives of these resources are based on the specified term of the contract. The Company has not had any experience with wind developers failing to complete their contract term and at this time we do not have any expectation that counter parties will fail to meet their contractual obligations. Our estimated project lifetimes for owned wind projects were developed with the guidance of the manufacturers, and our project evaluation included O&M and capital forecasts necessary for long term operation of the facilities. We do not believe that the 1990's vintage turbines studied in the United Kingdom and Denmark study are directly comparable to the modern turbines used at the Company's two owned facilities.

The Company plans, schedules, and budgets for its own wind turbine maintenance to meet original design specifications. We have recently begun to study issues related to longer term operation requirements and production expectations for wind turbines. Issues related to the cost effectiveness to repair major components when the turbines approach end of life is one example. Study results will be applied, as appropriate, to wind farm operations. At this time, the study is an ongoing effort and does not have results to report.

In the Sandia Report entitled "Continuous Reliability Enhancement for Wind (CREW) Database: Wind Plant Reliability Benchmark", it is not clear that the report indicates the outage rate suggested. In fact, page 20 states that:

> "As an example of how to use Table 6, one can calculate the frequency for Wind Turbine (Other) Maintenance, both Scheduled and Unscheduled. This corresponds to events where a technician has put the turbine into a maintenance or repair mode. The combined event rate is 0.00448 events per operating hour (= 1/429 + 1/465), or 223 operating hours per event, on average. In other words, a typical turbine generates for 9.3 days between technician lock-out events.

With respect to adjustments to our Strategist modeling to account for wind degradation, the Company continues to review this issue. For existing wind farms the capacity factor modeled is based on recent operating experience. So if the generation from a wind farm does indeed decrease, that degradation will be integrated into the model. In the evaluation of new wind power purchases, the assumed capacity factor does not significantly influence the outcome because these contracts are based on a $/MWh payment that does not vary with generation levels. The lifetime assumptions are based on the project life specified in the contract. In our analysis of the Grand Meadows project we included a sensitivity for a 20 year life time. Because our analysis used a discount factor of 7.4% the outer years received relatively little weight, and therefore the levelized $/MWh rose by only 6% under the twenty year lifetime assumption.

Many of our power purchase agreements generally require the owner/operator of the wind generators to meet certain capacity factor targets. Given the majority of the Company's wind resources are available through power purchase contracts, the risk of degradation impacting the capacity factor of a particular wind generator is shifted to the owner/operator and away from the Company. The contractually required capacity factor then becomes an underlying assumption in our Strategist modeling efforts.

For Company owned wind, the effect is somewhat different. Our Strategist modeling efforts take into account both the forecasted O&M costs and the capital costs over the projected lifetime of a particular project. The forecasted O&M costs are intended to address routine maintenance and repairs and associated downtime due to degradation. The Company has gained significant experience with its Nobles and Grand Meadow projects with respect to O&M issues related to Company owned wind generation resources. Informed by our experience and other industry information, sensitivity analysis can be used in our Strategist modeling to address wind turbine performance degradation when analyzing potential Company-owned wind generation additions.

In summary, while our Strategist modeling efforts are mainly geared toward identifying cost effective additions to our generation resource portfolio, we believe the current model is also sound with respect to the modeling of wind generation on a long term basis.

Witness:	Lisa Perkett
Preparer:	Kari Chilcott Clark/Steve Wishart
Title:	Manager/ Director
Department:	Purchased Power/Resource Planning
Telephone:	303-571-6905/612-330-6128
Date:	March 20, 2013

Purchased Renewable Generation (MWH)

Purchased Wind	COD	Type	State	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Adams Wind	6/9/11	Wind	MN											47,172
Agassiz	2/28/01	Wind	MN	4,796	5,335	5,670	5,430	5,944	4,550	5,665	4,923	4,909	4,727	5,324
Bisson	N/A	Wind	MN	N/A	N/A	1,147	6,300	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Boeve	8/9/03	Wind	MN	N/A	N/A	2,864	7,748	6,520	4,961	4,700	5,929	4,890	5,769	7,012
Buffalo Ridge 1	N/A	Wind	MN	61,045	63,830	60,866	63,129	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Buffalo Ridge 2	N/A	Wind	MN	303,390	311,316	273,780	266,993	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Buffalo Ridge 3	N/A	Wind	MN	138,301	136,701	121,388	118,129	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Carleton College	9/20/04	Wind	MN	N/A	N/A	N/A	N/A	3,963	4,030	3,926	4,510	3,939	3,979	3,930
Chanarambie PP	12/15/03	Wind	MN	N/A	N/A	N/A	297,340	267,247	235,004	274,783	273,729	223,478	338,198	263,822
Cisco	5/28/08	Wind	MN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12,766	21,154	25,032	27,227
CG Windfarm	N/A	Wind	MN	N/A	N/A	273	6,013	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Danielson Wind	3/11/11	Wind	MN	N/A	N/A	N/A	N/A				N/A	N/A	N/A	43,917
East Ridge	3/1/06	Wind	MN	N/A	N/A	N/A	N/A	N/A	14,118	28,077	26,540	24,415	23,093	26,213
Ewington	3/28/08	Wind	MN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	33,037	56,798	62,451	63,442
Fenton Power Partners I	11/13/07	Wind	MN	N/A	N/A	N/A	N/A	N/A	N/A	108,272	371,149	336,775	333,014	367,766
Fenton Power Partners II	11/13/07	Wind	MN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	378,940	340,330	328,900	372,003
Fey Windfarm	9/4/03	Wind	MN	N/A	N/A	2,061	7,041	6,452	5,520	5,574	5,359	5,053	4,225	6,313
PPL Mower County	12/3/06	Wind	MN	N/A	N/A	N/A	N/A	N/A	26,047	381,237	324,086	281,743	283,587	297,735
Garwin McNeilus Windfarm	8/13/02	Wind	MN	N/A	6,134	60,854	84,030	86,390	79,644	93,679	91,086	82,391	77,648	87,538
Grant County	8/9/10	Wind	MN	N/A	N/A	N/A					N/A	N/A	45,556	62,444
Hilltop	2/20/09	Wind	MN	N/A	N/A	N/A						4,249	5,015	5,011
Jeffers	10/10/08	Wind	MN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	75,244	147,714	151,654	162,989
JJN Windfarm	12/17/04	Wind	MN	N/A	N/A	N/A	N/A	5,602	4,730	5,354	5,109	4,233	3,819	2,965
K-Brink Windfarm	2/13/03	Wind	MN	N/A	N/A	6,084	6,951	5,670	6,137	6,505	5,410	4,812	5,191	7,136
KAS Brothers	12/10/01	Wind	MN	373	4,517	4,275	4,453	4,142	3,873	4,398	4,122	3,781	3,645	4,003
Lake Benton PP	12/14/98	Wind	MN	N/A	N/A	N/A	N/A	595,710	513,149	578,434	591,970	527,264	519,961	493,613
Lakota Ridge	5/1/04	Wind	MN	30,514	32,239	30,764	31,723	29,300	28,009	32,193	29,627	26,395	21,687	
Metro	3/15/01	Wind	MN	811	1,018	963	891	970	752	1,051	909	851	772	849
MinnDakota	1/1/08	Wind	MN/SD	N/A	N/A	N/A	N/A	N/A	N/A	13,342	523,906	520,453	508,120	546,219
Moraind	2/2/05	Wind	MN	N/A	N/A	N/A	N/A	36,806	33,560	35,338	19,598	12,870	29,931	35,035
Moraine Wind	12/22/03	Wind	MN	N/A	N/A	N/A	155,503	165,692	137,050	162,795	155,297	142,940	144,367	164,783
Moraine II	2/18/09	Wind	MN									152,920	165,624	188,767
Norgaard North	5/11/06	Wind	MN	N/A	N/A	N/A	N/A	N/A	8,131	13,819	13,733	12,937	12,910	10,368
Norgaard South	5/11/06	Wind	MN	N/A	N/A	N/A	N/A	N/A	5,370	10,145	10,375	10,558	10,167	8,355
North Community Turbines	5/28/11	Wind	MN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32,190
North Wind Turbines	5/28/11	Wind	MN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32,746
North Shaokatan	2/3/01	Wind	MN	30,992	38,046	38,589	36,339	30,391	30,143	34,341	34,291	30,978	30,148	28,385
Olsen	12/15/01	Wind	MN	274	4,118	4,082	4,137	4,456	3,116	4,382	3,968	3,557	2,974	2,421
Pipestone	1/1/05	Wind	MN	N/A	N/A	N/A	N/A	N/A	22,511	27,438	27,288	24,312	22,536	26,161
Ridgewind	1/13/11	Wind	MN										725	86,603
Rock Ridge	4/12/06	Wind	MN	N/A	N/A	N/A	N/A	N/A	2,011	798	4,252	6,691	6,881	7,744
Ruthton Ridge	1/23/01	Wind	MN	48,852	53,635	49,786	51,333	51,722	44,132	49,596	47,598	46,786	43,664	41,503
S&P Windfarm	N/A	Wind	MN	N/A	N/A	111	-111	N/A	N/A	N/A	N/A	N/A		
Shane	8/11/06	Wind	MN	N/A	N/A	N/A	N/A	N/A	1,588	2,644	4,043	6,344	6,633	4,273
Shaokatan	N/A	Wind	MN	N/A	N/A	3,730	11,052	861	N/A	N/A	N/A	N/A	N/A	N/A
Shaokatan Hills	5/1/04	Wind	MN	36,633	39,840	36,794	35,119	35,250	33,879	39,268	35,236	31,686	26,515	
Southridge	4/12/06	Wind	MN	N/A	N/A	N/A	N/A	N/A	1,632	3,378	5,600	6,593	6,036	6,389
St Olaf	1/1/07	Wind	MN	N/A	N/A	N/A	N/A	N/A	N/A	39	25	2,820	2,626	497
TG Windfarm	N/A	Wind	MN	N/A	N/A	775	6,107	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Thielen	9/4/05	Wind	MN	N/A	N/A	N/A	N/A	17,662	39,114	50,515	46,064	42,709	39,742	46,031
Tofteland Windfarm	N/A	Wind	MN	N/A	N/A	1,424	5,715	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Uilk	1/15/10	Wind	MN									158	11,492	13,894
Valley View	11/30/11	Wind	MN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6,101
Velva	1/19/06	Wind	ND	N/A	N/A	N/A	N/A	N/A	27,881	32,141	32,372	30,582	28,594	31,222
Viking	12/18/03	Wind	MN	N/A	N/A	N/A	43,479	40,041	36,668	37,939	39,850	36,625	36,326	
Westridge Windfarm	12/1/03	Wind	MN	N/A	N/A	939	6,070	30,716	30,756	28,549	28,464	22,505	21,180	20,866
Windcurrent Farms	5/31/03	Wind	MN	N/A	N/A	2,800	6,992	6,272	5,736	5,010	4,866	5,324	5,284	6,759
Windpower Partners	5/3/94	Wind	MN	N/A	N/A	N/A	N/A	61,487	51,662	66,344	62,841	51,709	53,592	48,579
Windridge	N/A	Wind	MN	N/A	N/A	N/A	N/A	N/A	5,098	N/A	N/A	N/A	N/A	N/A
Windvest	4/12/06	Wind	MN	N/A	N/A	N/A	N/A	N/A	2,970	1,513	3,238	4,598	5,716	7,445
Winona	10/27/11	Wind	MN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,335
Woodstock Municipal	6/24/10	Wind	MN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	847	1,412
Woodstock Hills	5/1/04	Wind	MN	26,877	28,332	26,702	25,928	25,090	23,649	26,903	25,303	21,512	19,540	
Total Purchased Wind				881,053	927,151	957,741	1,494,042	1,532,370	1,467,790	2,182,827	3,375,193	3,355,567	3,392,485	3,769,367

Owned Renewable Generation (MWH)

Owned Wind	COD	Type	State	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Grand Meadow	11/15/08	Wind	MN	N/A	N/A	N/A					29,986	296,251	275,508	306,115
Nobles Wind Farm	12/21/10	Wind	MN	N/A	N/A	N/A							43,416	577,857
Owned Wind											29,986	296,251	318,924	883,972

EXHIBIT H

PUBLIC DOCUMENT –
TRADE SECRET DATA EXCISED

☐ **Non Public Document – Contains Trade Secret Data**
☒ **Public Document – Trade Secret Data Excised**
☐ **Public Document**

Xcel Energy			
Case No.:	PU-12-813		
Response To:	North Dakota Public Service Commission	Data Request No.	NDPSC-2-008
Requestor:	Michael Diller & Sara Cardwell		
Date Received:	March 8, 2013		

Question:

Fuel Clause/Costs Question:

Please provide a complete listing of the wind, solar and biomass PPAs that are flowing through the fuel clause in ND to include the price per MWh being paid, whether or not the project is a CBED project, the date that the project was included in the fuel clause and the date that the contract ends. Also, include the Company's avoided cost at the time each PPA was signed and the Company's currently applicable avoided cost by project if it differs for specific attributes of the projects.

Response:

Attachment A provides the projects, size, current PPA price, commercial operation date of the project, contract term, contract end date, if the project is being utilized to comply with Minnesota renewable energy requirements and the docket where the individual PPA was approved in Minnesota, if applicable. The energy costs allocable to North Dakota under each PPA are recovered through the Company's North Dakota Fuel Cost Rider unless specifically excluded by Commission order. Please note that the pricing provided in Attachment A is the currently effective contract price and that such prices may be subject to escalation or de-escalation over the course of the contract term pursuant to the terms of the contract.

As indicated in Attachment A, a large majority of these generation resources (in terms of individual contracts) were acquired pursuant to an "under 2 MW small standard contract." That contract derived from our Minnesota retail electric tariff for certain qualifying wind projects as a methodology for implementation of PURPA in Minnesota. The tariff price for the output of those projects was established by a then-effective tariff at 3.3 cents per kWh. The Company submits that its avoided cost for these under 2 MW projects was the price stated in the small wind tariff established per

PURPA. To the extent that any of these projects deviate from the tariff pricing rate, the tariff rate should serve as the avoided cost.

Also, several of the listed projects were procured through competitive bidding processes, including 2007, 2009, and 2010 requests for proposals for wind generation. Consistent with certain methodologies found acceptable for the setting of avoided costs (*See,* 84 FERC ¶ 61,265; Minn. Stat. § 216B.164), the least cost, feasible bidder identified in the competitive bidding process and selected by the Company provides the Company's full avoided costs of that particular resource at that particular time.

Finally, two projects identified in Attachment A, St John's Solar and Slayton Solar, are small, solar projects that were funded, in part, by the Renewable Development Fund. The Company is an off-taker for these projects so it may develop experience with solar projects on its system. As these are experimental projects, the Company did not perform an evaluation of its avoided costs for this type of resource and consequently does not have avoided cost information available.

The PPA price information on Attachment A is commercially sensitive, non-public information subject to the Trade Secret Application in this proceeding.

Preparer:	Steve Wishart
Title:	Director
Department:	Resource Planning
Telephone:	612-330-6128
Date:	April 18, 2013

**PUBLIC DOCUMENT:
TRADE SECRET DATA EXCISED**

Summary of Power Purchase Agreements

[redacted]

Purchased Power Agreements	Type of Energy Source	Capacity Contracted MW	C-BED Project	Commercial Operations Date	Term of Contract (Years)	Termination Contract Date	Contract Prices Energy ($/MWh)	Contract Prices Capacity ($/KW)	REO * Fulfillment (Yes/No)	MPUC Docket No.
Wind							**[Trade Secret Begins**			
Adams Wind Generations	Wind	19.80	Yes	3/9/2011	20	3/8/2031		N/A	Y	E002/M-09-1366
Agassiz Beach	Wind	1.98		2/28/2001	30	2/27/2031		N/A	Y	2MW Standard Contract
Asian Children Support, Inc.	Wind	1.90		2/14/2003	25	2/13/2028		N/A	Y	2MW Standard Contract
Autumn Hills	Wind	1.98		2/15/2001	30	2/14/2031		N/A	Y	2MW Standard Contract
Bangladesh Children Support	Wind	1.90		2/14/2003	25	2/13/2028		N/A	Y	2MW Standard Contract
Bendwind	Wind	1.25		3/1/2006	20	2/28/2026		N/A	Y	2MW Standard Contract
Big Blue	Wind	36.00	Yes	12/15/2012	20	12/14/2032		N/A	Y	E002/M-10-733
Brandon Windfarm	Wind	1.50		8/24/2003	20	4/30/2025		N/A	Y	2MW Standard Contract
Breezy Bucks-I	Wind	1.25		5/11/2006	20	5/10/2026		N/A	Y	2MW Standard Contract
Breezy Bucks-II	Wind	1.25		5/11/2006	20	5/10/2026		N/A	Y	2MW Standard Contract
BT, LLC	Wind	1.80		9/26/2002	25	9/25/2027		N/A	Y	2MW Standard Contract
Buffalo Ridge Wind Farm	Wind	1.50		12/18/2003	15	12/17/2018		N/A	N	2MW Standard Contract
Burmese Children Support, Inc.	Wind	1.90		2/14/2003	25	2/13/2028		N/A	Y	2MW Standard Contract
Carleton College	Wind	1.65		9/20/2004	20	9/19/2024		N/A	Y	2MW Standard Contract
Carstensen Wind	Wind	1.65		1/1/2005	20	12/31/2024		N/A	Y	2MW Standard Contract
CG Windfarm	Wind	1.90		12/28/2003	25	12/27/2028		N/A	Y	2MW Standard Contract
Chanarambie Power Partners	Wind	85.50		12/15/2003	20	12/14/2023		N/A	Y	E002/M-00-622
Community Wind South	Wind	30.00	Yes	12/26/2012	20	12/25/1932		N/A	Y	E002/M-11-801
Danielson Wind Farms	Wind	19.80	Yes	3/11/2011	20	3/10/2031		N/A	Y	E002/M-09-1367
DeGreeff DP	Wind	1.25		4/5/2006	20	4/4/2026		N/A	Y	2MW Standard Contract
DeGreeffpa	Wind	1.25		3/8/2006	20	3/7/2026		N/A	Y	2MW Standard Contract
Ewington Energy Systems LLC	Wind	19.95	Yes	5/28/2008	20	5/27/2028		N/A	Y	E002/M-06-1472
Fenton Power Partners I	Wind	208.75		11/13/2007	25	11/12/2032		N/A	Y	E002/M-05-1850
Fey Windfarm	Wind	1.90		9/4/2003	25	9/3/2028		N/A	Y	2MW Standard Contract
Florence Hills	Wind	1.98		1/9/2001	30	1/8/2031		N/A	Y	2MW Standard Contract
FPL Mower County	Wind	98.90		12/3/2006	20	12/2/2026		N/A	Y	E002/M-05-1934
G M, LLC	Wind	1.80		9/26/2002	25	9/25/2027		N/A	Y	2MW Standard Contract
Gar Mar Wind I	Wind	1.50		8/18/2003	20	4/30/2025		N/A	Y	2MW Standard Contract
Gary J.T.	Wind	1.65		8/28/2005	20	8/27/2025		N/A	Y	2MW Standard Contract
Grant County Wind, LLC	Wind	20.00	Yes	8/9/2010	20	8/8/2030		N/A	Y	E002/M-06-1665
Greenback Energy	Wind	1.65		1/25/2005	20	1/24/2025		N/A	Y	2MW Standard Contract
Groen Wind	Wind	1.25		4/24/2006	20	4/23/2026		N/A	Y	2MW Standard Contract
Hadley Ridge LLC	Wind	1.98		12/28/2000	30	12/27/2030		N/A	Y	2MW Standard Contract
Henslin Creek Windfarm	Wind	1.50		8/24/2003	20	4/30/2025		N/A	Y	2MW Standard Contract
Hillcrest Wind	Wind	1.25		4/28/2006	20	4/27/2026		N/A	Y	2MW Standard Contract
Hilltop Power	Wind	2.00	Yes	2/20/2009	20	2/19/2029		N/A	Y	E002/M-08-0047
Hope Creek LLC	Wind	1.98		1/20/2001	30	1/19/2031		N/A	Y	2MW Standard Contract
							Trade Secret Ends]			

**PUBLIC DOCUMENT:
TRADE SECRET DATA EXCISED**

Summary of Power Purchase Agreements

Purchased Power Agreements	Type of Energy Source	Capacity Contracted MW	C-BED Project	Commercial Operations Date	Term of Contract (Years)	Termination Contract Date	Contract Prices		REO * Fulfillment (Yes/No)	MPUC Docket No.
							Energy ($/MWh)	Capacity ($/KW)		
Wind							**[Trade Secret Begins**			
Indian Children Support	Wind	1.90		2/14/2003	25	2/13/2028		N/A	Y	2MW Standard Contract
Jack River LLC	Wind	1.98		2/18/2001	30	2/17/2031		N/A	Y	2MW Standard Contract
Jeffers Wind 20, LLC	Wind	50.00	Yes	10/10/2008	20	10/9/2028		N/A	Y	E002/M-06-1234
Jenna M.T.	Wind	1.65		8/28/2005	20	8/27/2025		N/A	Y	2MW Standard Contract
Jessica Mills LLC	Wind	1.98		2/23/2001	30	2/22/2031		N/A	Y	2MW Standard Contract
Julia Hills LLC	Wind	1.98		2/24/2001	30	2/23/2031		N/A	Y	2MW Standard Contract
Kas Brothers Windfarm	Wind	1.50		12/10/2001	30	12/9/2031		N/A	Y	(Amend)
Krysta J.T.	Wind	1.65		8/28/2005	20	8/27/2025		N/A	Y	2MW Standard Contract
Lake Benton Power Partners II (LBII)	Wind	103.50		5/31/2000	25	5/30/2025		N/A	Y	E002/NI-96-1002
Lake Benton Power Partners (LBI)	Wind	105.75		12/14/1998	30	12/13/2028		N/A	Y	E002/M-94-730 E002/M-11-141
Larswind	Wind	1.25		3/20/2006	20	3/19/2026		N/A	Y	2MW Standard Contract
Lucky Wind	Wind	1.65		1/1/2005	20	12/31/2024		N/A	Y	2MW Standard Contract
Mark J.P.	Wind	1.65		8/25/2005	20	8/24/2025		N/A	Y	2MW Standard Contract
McBeth -3	Wind	1.65		9/4/2005	20	9/3/2025		N/A	Y	2MW Standard Contract
McBeth -1	Wind	1.65		9/4/2005	20	9/3/2025		N/A	Y	2MW Standard Contract
McBeth -2	Wind	1.65		9/4/2005	20	9/3/2025		N/A	Y	2MW Standard Contract
McNeilus Windfarm, LLC	Wind	1.80		9/26/2002	25	9/25/2027		N/A	Y	2MW Standard Contract
Metro Wind LLC	Wind	0.66		3/1/2001	30	2/28/2031		N/A	Y	2MW Standard Contract
MinnDakota Wind	Wind	150.00		12/31/2007	15	12/30/2022		N/A	Y	E002/M-04-404 E002/M-06-85
Moraine Wind I	Wind	51.00		12/22/2003	15	12/21/2018		N/A	Y	E002/M-02-51
Moraine Wind II	Wind	49.50		2/18/2009	10	2/17/2019		N/A	Y	E002/M-08-1487
Moulton Heights Wind Power Project	Wind	1.50		12/18/2003	15	12/17/2018		N/A	N	2MW Standard Contract
Muncie Power Partners LLC	Wind	1.50		12/18/2003	15	12/17/2018		N/A	N	2MW Standard Contract
N A E Lakota Ridge	Wind	11.25		5/1/2004	30	4/30/2034		N/A	N	E002/M-97-843
N A E Shaokatan Hills	Wind	11.88		5/1/2004	30	4/30/2034		N/A	N	E002/M-97-844
NAE Shaokatan	Wind	1.60		11/1/2003	30	10/31/2033		N/A	Y	2MW Standard Contract
North Community Turbines	Wind	15.00	Yes	5/28/2011	20	5/27/2031		N/A	Y	E002/M-10-734
North Ridge Wind Farm LLC	Wind	1.50		12/18/2003	15	12/17/2018		N/A	N	2MW Standard Contract
North Wind Turbines	Wind	15.00	Yes	5/28/2011	20	5/27/2031		N/A	Y	E002/M-10-734
Northern Lights Wind	Wind	1.65		1/25/2005	20	1/24/2025		N/A	Y	2MW Standard Contract
Olsen Windfarm	Wind	1.50		12/15/2001	30	12/14/2031		N/A	Y	2MW Standard Contract E002/M-10-314
Prairie Rose	Wind	200.00		12/11/2012	20	12/14/2032		N/A	Y	E002/M-11-713
Ridgewind Power Partners LLC	Wind	25.30	Yes	1/13/2011	20	1/12/2031		N/A	Y	E002/M-08-1428
REAP, LLC (REAP I)	Wind	1.80		9/26/2002	25	9/27/2027		N/A	Y	2MW Standard Contract
							Trade Secret Ends]			

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Summary of Power Purchase Agreements

Purchased Power Agreements	Type of Energy Source	Capacity Contracted MW	C-BED Project	Commercial Operations Date	Term of Contract (Years)	Termination Contract Date	Contract Prices		REO * Fulfillment (Yes/No)	MPUC Docket No.
							Energy ($/MWh)	Capacity ($/KW)		
Wind							**[Trade Secret Begins**			
Roadrunner-I	Wind	1.25		5/11/2006	20	5/10/2026		N/A	Y	2MW Standard Contract
Rock Ridge Power Partners	Wind	1.80		4/12/2006	15	4/11/2021		N/A	Y	2MW Standard Contract
Ruthton Ridge LLC	Wind	1.98		1/23/2001	30	1/22/2031		N/A	Y	2MW Standard Contract
Salty Dog-I	Wind	1.25		5/11/2006	20	5/10/2026		N/A	Y	2MW Standard Contract
Salty Dog-II	Wind	1.25		5/11/2006	20	5/10/2026		N/A	Y	2MW Standard Contract
Salvadoran Children Support, Inc.	Wind	1.90		2/14/2003	25	2/13/2028		N/A	Y	2MW Standard Contract
SG (JCKD)	Wind	1.80		9/26/2002	25	9/25/2027		N/A	Y	2MW Standard Contract
Shane's Wind Machine	Wind	2.00		8/11/2006	20	8/10/2026		N/A	Y	2MW Standard Contract
Sierra Wind	Wind	1.25		5/1/2006	20	4/30/2026		N/A	Y	2MW Standard Contract
Soliloque Ridge LLC	Wind	1.98		1/19/2001	30	1/18/2031		N/A	Y	2MW Standard Contract
South Ridge Power Partners	Wind	1.80		4/12/2006	15	4/11/2021		N/A	Y	2MW Standard Contract
Spartan Hills LLC	Wind	1.98		1/13/2001	30	1/12/2031		N/A	Y	2MW Standard Contract
St. Olaf	Wind	1.65		10/6/2008	20	10/5/2028		N/A	Y	E002/M-07-97
Stahl Wind Energy	Wind	1.65		1/1/2005	20	12/31/2024		N/A	Y	2MW Standard Contract
Sun River LLC	Wind	1.98		2/24/2001	30	2/23/2031		N/A	Y	2MW Standard Contract
TAIR Wind	Wind	1.25		4/23/2006	20	4/22/2026		N/A	Y	2MW Standard Contract
TG Windfarm	Wind	1.90		12/28/2003	25	12/27/2028		N/A	Y	2MW Standard Contract
Theresa M.T	Wind	1.65		8/28/2005	20	8/27/2025		N/A	Y	2MW Standard Contract
Tofteland Windfarm	Wind	1.90		12/28/2003	25	12/27/2028		N/A	Y	2MW Standard Contract
Triton Windfarm	Wind	1.50		5/12/2004	20	4/30/2025		N/A	Y	E002/RP-04-1752
Tsar Nicolas	Wind	1.98		2/17/2001	30	2/16/2031		N/A	Y	2MW Standard Contract
Twin Lake Hills	Wind	1.98		1/4/2001	30	1/3/2031		N/A	Y	2MW Standard Contract
Uilk Wind Farm	Wind	4.50	Yes	1/15/2010	20	1/14/2030		N/A	Y	E002/M-08-1502
Valley View Transmission	Wind	10.00	Yes	11/30/2011	20	11/29/2031		N/A	Y	E002/M-08-1235
Vandy South Project	Wind	1.50		12/18/2003	15	12/17/2018		N/A	N	2MW Standard Contract
Velva Windfarm	Wind	11.88		1/19/2006	20	1/18/2026		N/A	Y	E002/M-04-864
Viking Wind Farm	Wind	1.50		12/18/2003	15	12/17/2018		N/A	N	2MW Standard Contract
Vindy Power Partners	Wind	1.50		12/18/2003	15	12/17/2018		N/A	N	2MW Standard Contract
Wally's Wind Farm	Wind	1.25		5/11/2006	20	5/10/2026		N/A	Y	2MW Standard Contract
Wasioja Windfarm, LLC	Wind	1.50		5/12/2004	20	4/30/2025		N/A	Y	2MW Standard Contract
Willhelm Wind	Wind	1.50		8/15/2003	20	4/30/2025		N/A	Y	2MW Standard Contract
Wilson-West Windfarm LLC	Wind	1.50		12/18/2003	15	12/17/2018		N/A	N	2MW Standard Contract
Wind Power Partners 1993 ("WPP-93")	Wind	25.00		5/3/1994	25	5/2/2019		N/A	Y	E002/RP-93-630
Windvest Power Partners	Wind	1.80		4/12/2006	15	4/11/2021		N/A	Y	2MW Standard Contract
Windy Dog-I	Wind	1.25		5/11/2006	20	5/10/2026		N/A	Y	2MW Standard Contract
Winona County Wind	Wind	1.50	Yes	10/27/2011	20	10/26/2031		N/A	Y	E002/M-09-1247
Winter Spawn LLC	Wind	1.98		1/25/2001	30	1/24/2031		N/A	Y	2MW Standard Contract
							Trade Secret Ends]			

PUBLIC DOCUMENT:
TRADE SECRET DATA EXCISED

Summary of Power Purchase Agreements

Purchased Power Agreements	Type of Energy Source	Capacity Contracted MW	C-BED Project	Commercial Operations Date	Term of Contract (Years)	Termination Contract Date	Contract Prices		REO * Fulfillment (Yes/No)	MPUC Docket No.
							Energy ($/MWh)	Capacity ($/KW)		
Wind							[Trade Secret Begins			
Woodstock Municipal Wind, LLC	Wind	0.78	Yes	6/24/2010	20	6/23/2030		N/A	Y	E002/M-09-1055
Woodstock Wind Farm	Wind	10.20		5/1/2004	30	4/30/2034		N/A	N	E002/M-97-1580
Solar										
Best Power (St. John's Solar)	Solar (DC)	0.40		5/27/2010	20	5/26/2030		N/A	Y	E002/09-1481
Outland Solar	Solar (DC)	2.00		1/1/2013	20	12/21/2032		N/A	Y	E002/M-11-490
Biomass										
FibroMinn	Biomass	55.00		9/11/2007	21	6/30/2028		N/A	Y	E002/M-11-198
KODA Energy LLC	Biomass	12.00		5/18/2009	10	5/17/2019		N/A	Y	E002/M-08-1098
Laurentian Energy Authority I	Biomass	35.00		1/1/2007	20	12/31/2026		N/A	Y	E002/M-09-913
WM Renewable Energy (MN Methane-Burnsville)	Biomass	4.70		5/1/1994	26	3/30/2020		N/A	Y	E002/AI-94-378 E002/M-10-161
Pine Bend	Biomass	12.00		3/31/1996	30	12/31/2025		N/A	Y	PURPA E002/M-10-822
St. Paul Cogeneration	Biomass	25.00		3/25/2003	20	3/24/2023		N/A	N	E002/M-96-1405
							Trade Secret Ends]			EWG=exempt wholesale

* Renewable Energy Objectives

EXHIBIT I

☐ **Non Public Document – Contains Trade Secret Data**
☐ **Public Document – Trade Secret Data Excised**
☒ **Public Document**

Xcel Energy			
Docket No.:	PU-13-706, PU-13-707, PU-13-708		
Response To:	North Dakota Public Service Commission	Data Request No.	SC-021
Requestor:	Sara Cardwell		
Date Received:	August 12, 2013		

Question:

In Data Request Response NDPSC-1-037 in Case No. PU-12-813, the Company provided a listing of Purchased Renewable Generation projects and the associated production amounts from 2001 through 2011. In Data Request Response NDPSC-2-008 in Case No. PU-12-813, the Company provided a listing of Purchased Renewable Generation projects that were recovered through the fuel clause. These listings do not match. Does this mean that there are differences in the names between the contracts and the purchase information? Does it mean that the costs of some of these projects are not being recovered from ND customers or what? Please reconcile these two lists and the FERC Form 1 as to what contracts the Company has, how the projects are allocated to the states and what that causes any differences in treatment. Please account for each and every project and explain all differences. Provide any missing data in order that the responses are reconciled. If the information was previously provided in an Excel spreadsheet with formulas intact, please update the spreadsheets.

Response:

In Case No. PU-12-813, the responses to IR's 1-037 and 2-008 provided listings of NSP-owned and contracted wind generation resources. Upon further review, we see that the response to 1-037 was incomplete. We failed to include PPAs secured through the 2 MW Standard Contract tariff in place in our Minnesota jurisdiction. The list in 2-008 is inclusive of all wind resource contracts recovered through the North Dakota Fuel Cost Rider.

Please see Attachment A to this response for a reconciliation of the lists provided as responses to 1-037 and 2-008 and what is listed in our FERC Form 1 filing. We apologize for any confusion this may have caused.

PPA expenses are not "allocated" to state jurisdictions per se, but instead become part of each state's fuel rider rate computation which is then applied to customer bills within the respective state..

Preparer:	Mary Morrison
Title:	Resource Planning Analyst
Department:	Resource Planning and Bidding
Telephone:	612.330.5862
Date:	August 26, 2013

Northern States Power Company Name of Company or Public Authority	FERC Form 1 - 2012	Owned and Contracted Wind Production Facilities for NSP System 1-037	Wind Solar and Biomass PPA's flowing through the fuel clause in ND 2-008	Case Nos. 13-706, 13-707, 13-708 Data Request No. NDPSC-SC-021 Attachment A, Page 1 of 5 Reconciliation
1 Adams Wind Generations, LLC	x	x	x	Common to all (3) Listings
2 Agassiz Beach LLC	x	x	x	Common to all (3) Listings
3 Ameren Corporation	x			FERC Form 1 OS (other service, i.e. non-firm service)
4 Asian Children Support, Inc.			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
5 Autumn Hills			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
6 Bangladesh Children Support			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
7 Bendwind			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
8 Best Power International LLC	x		x	This is a solar project, IR 1-037 requested wind PPA's
11 Big Blue	x		x	This is not listed in 1-037 because the project was not operating in the data period of 2001-2011.
10 Big Blue	x			FERC Form 1 OS (other service, i.e. non-firm service)
9 Big Blue	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
12 Bisson Windfarm, L.L.C.	x	x		IR 2-008 did not include WindSource contracts. WindSource does not flow through the fuel clause.
13 Boeve Windfarm, L.L.C.	x	x		IR 2-008 did not include WindSource contracts. WindSource does not flow through the fuel clause.
14 Brandon Windfarm			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
15 Breezy Bucks-I			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
16 Breezy Bucks-II			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
17 BT, LLC			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
19 Buffalo Ridge 2		x		FERC Form 1 and IR 2-008 did not include resources without generation in 2012.
20 Buffalo Ridge 3		x		FERC Form 1 and IR 2-008 did not include resources without generation in 2012.
18 Buffalo Ridge Windplant WPP 1993	x	x	x	Common to all (3) Listings
21 Burmese Children Support, Inc.			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
22 Byllesby	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
23 Byllesby	x			This is a hydro project. This is listed in the FERC Form 1, but not either IR response based on the nature of the request.
24 Cannon Falls Energy Center	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
25 Cannon Falls Energy Center	x			This is listed in the FERC Form 1, but not either IR response, because it is either a non-renewable or short-term purchase.
26 Cargill Power Markets	x			FERC Form 1 OS (other service, i.e. non-firm service)
27 Carleton College	x	x	x	Common to all (3) Listings
28 Carstensen Wind			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
29 CG Windfarm, L.L.C.	x	x	x	Common to all (3) Listings
30 Chanarambie Power Partners, L.L.C.	x	x	x	Common to all (3) Listings
31 Cisco Wind Energy, L.L.C.	x	x		IR 2-008 did not include WindSource contracts. WindSource does not flow through the fuel clause.
32 Community Wind South			x	This is not listed in 1-037 because the project was not operating in the data period of 2001-2011.
33 Connexus Energy Center	x			This is listed in the FERC Form 1, but not either IR response, because it is either a non-renewable or short-term purchase.
34 Constellation Energy Commodities	x			FERC Form 1 OS (other service, i.e. non-firm service)
35 Covanta Hennepin Energy Resource Co LP	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
36 Covanta Hennepin Energy Resource Co LP	x			This is listed in the FERC Form 1, but not either IR response, because it is either a non-renewable or short-term purchase.
38 Cummins Power Generation	x			FERC Form 1 OS (other service, i.e. non-firm service)
37 Cummins Power Generation	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
39 Dairyland Electric Cooperative Incorpo	x			This is listed in the FERC Form 1, but not either IR response, because it is either a non-renewable or short-term purchase.
40 Danielson Wind Farms, LLC	x	x	x	Common to all (3) Listings
41 Darrell & Shirely Houselog	x			Distributed Generation Qualified Facility; not a PPA; generation to offset load.
42 DeGreeff DP			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
43 DeGreeffpa			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
44 East Ridge	x	x		IR 2-008 did not include WindSource contracts. WindSource does not flow through the fuel clause.
45 EDF Trading North America	x			FERC Form 1 OS (other service, i.e. non-firm service)
46 Energy Authority, Incorporated (TEA)	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response

Northern States Power Company Name of Company or Public Authority	FERC Form 1 - 2012	Owned and Contracted Wind Production Facilities for NSP System 1-037	Wind Solar and Biomass PPA's flowing through the fuel clause in ND 2-008	Case Nos. 13-706, 13-707, 13-708 Data Request No. NDPSC-SC-021 Attachment A, Page 2 of 5 Reconciliation
48 EnXco, Inc.	x			FERC Form 1 OS (other service, i.e. non-firm service)
47 EnXco, Inc.	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
49 ERCOT	x			FERC Form 1 OS (other service, i.e. non-firm service)
50 Ewington Energy Systems, LLC	x	x	x	Common to all (3) Listings
51 Fenton Power Partners I, L.L.C.	x	x	x	Common to all (3) Listings
52 Fenton Power Partners II		x		Listed as a single line item in FERC Form 1 and 2-008, two line items in 1 037
53 Fey Windfarm, L.L.C.	x	x	x	Common to all (3) Listings
55 FibroMinn	x		x	This is a biomass project, IR 1-037 requested wind PPA's
54 FibroMinn	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
56 Florence Hills			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
57 FPL Energy Mower County, L.L.C.	x	x	x	Common to all (3) Listings
59 Gar Mar Wind I			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
58 Garwin McNeilus	x	x	x	Common to all (3) Listings
60 Gary J.T.			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
61 Grant County Windfarm, LLC	x	x	x	Common to all (3) Listings
62 Greenback Energy			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
63 Groen Wind			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
64 Hadley Ridge LLC			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
65 Hastings Lock & Dam	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
66 Hastings Lock & Dam	x			This is a hydro project. This is listed in the FERC Form 1, but not either IR response based on the nature of the request.
67 Hatfield Hydro, LLC	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
68 Heartland Consumers Power District	x			This is listed in the FERC Form 1, but not either IR response, because it is either a non-renewable or short-term purchase.
69 Henslin Creek Windfarm			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
70 Hillcrest Wind			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
71 Hilltop Power, L.L.C.	x	x	x	Common to all (3) Listings
72 Hope Creek LLC			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
73 Indian Children Support			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
74 Intercontinental Exchange	x			FERC Form 1 OS (other service, i.e. non-firm service)
75 Jack River LLC			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
77 Jeffers Wind Energy Center	x	x	x	Common to all (3) Listings
76 Jeffers Wind Energy Center	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
78 Jenna M.T.			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
79 Jessica Mills LLC			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
81 JJN Windfarm, LLC	x	x		IR 2-008 did not include WindSource contracts. WindSource does not flow through the fuel clause.
80 JJN Windfarm, LLC	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
82 John Deere Renewables, L.L.C.	x			RDF Project
83 Julia Hills LLC			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
84 Kas Brothers Windfarm, L.L.C.	x	x	x	Common to all (3) Listings
85 K-Brink Windfarm, L.L.C.	x	x		IR 2-008 did not include WindSource contracts. WindSource does not flow through the fuel clause.
86 KODA Energy, LLC	x		x	This is a biomass project, IR 1-037 requested wind PPA's
87 Krysta J.T.			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
88 Lake Benton Power Partners, L.L.C. I	x	x	x	Common to all (3) Listings
89 Lake Benton Power Partners, L.L.C. II	x		x	FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
91 Lakota Ridge LLC	x	x	x	Common to all (3) Listings
90 Lakota Ridge LLC	x			FERC Form 1 OS (other service, i.e. non-firm service)
92 Larswind			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
93 Laurentian Energy Authority, L.L.C.	x		x	This is a biomass project, IR 1-037 requested wind PPA's

Northern States Power Company Name of Company or Public Authority	FERC Form 1 - 2012	Owned and Contracted Wind Production Facilities for NSP System 1-037	Wind Solar and Biomass PPA's flowing through the fuel clause in ND 2-008	Case Nos. 13-706, 13-707, 13-708 Data Request No. NDPSC-SC-021 Attachment A, Page 3 of 5 Reconciliation
94 LCO Hydro	x			This is a hydro project. This is listed in the FERC Form 1, but not either IR response based on the nature of the request.
95 LSP Cottage Grove Incorporated	x			This is listed in the FERC Form 1, but not either IR response, because it is either a non-renewable or short-term purchase.
96 Lucky Wind			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
98 Macquarie Energy	x			FERC Form 1 OS (other service, i.e. non-firm service)
99 Manitoba Hydro	x			This is a hydro project. This is listed in the FERC Form 1, but not either IR response based on the nature of the request.
100 Mankato Energy Center, L.L.C.	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
101 Mankato Energy Center, L.L.C.	x			This is listed in the FERC Form 1, but not either IR response, because it is either a non-renewable or short-term purchase.
97 Mark J.P.			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
103 McBeth -1			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
104 McBeth -2			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
102 McBeth -3			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
105 McNeilus Windfarm, LLC			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
106 Metro Wind LLC	x	x	x	Common to all (3) Listings
108 Midwest ISO	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
107 Midwest ISO	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
110 MinnDakota	x	x	x	Common to all (3) Listings
109 MinnDakota	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
111 Minnesota Power Incorporated	x			This is listed in the FERC Form 1, but not either IR response, because it is either a non-renewable or short-term purchase.
112 Minnkota Power Cooperative Incorporate	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
113 Minnkota Power Cooperative Incorporate	x			This is listed in the FERC Form 1, but not either IR response, because it is either a non-renewable or short-term purchase.
114 Minwind Energy, L.L.C.	x	x		IR 2-008 did not include WindSource contracts. WindSource does not flow through the fuel clause.
115 Miscellaneous	x			FERC Form 1 OS (other service, i.e. non-firm service)
116 Miscellaneous	x			This is listed in the FERC Form 1, but not either IR response, because it is either a non-renewable or short-term purchase.
118 Moraine Wind, L.L.C.	x	x	x	Common to all (3) Listings
117 Moraine Wind, L.L.C.	x	x	x	FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
119 Moulton Heights Wind Power Project			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
120 Muncie Power Partners LLC			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
121 N A E Shaokatan Hills, LLC	x	x	x	Common to all (3) Listings
122 NAE Shaokatan, LLC	x	x	x	Common to all (3) Listings
125 Neshkoro Power Associates	x			FERC Form 1 OS (other service, i.e. non-firm service)
123 Neshonoc	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
124 Neshonoc	x			This is a hydro project. This is listed in the FERC Form 1, but not either IR response based on the nature of the request.
127 New England ISO	x			FERC Form 1 OS (other service, i.e. non-firm service)
126 New England ISO	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
128 New Ulm Public Utilities Commission	x			FERC Form 1 OS (other service, i.e. non-firm service)
129 New York ISO	x			FERC Form 1 OS (other service, i.e. non-firm service)
130 Norgaard North		x		FERC Form 1 and IR 2-008 did not include resources without generation in 2012.
131 Norgaard South		x		FERC Form 1 and IR 2-008 did not include resources without generation in 2012.
132 North Community Turbines LLC	x	x	x	Common to all (3) Listings
133 North Ridge Wind Farm LLC			x	Also identified as Windridge in IR 1-037
134 North Wind Turbines LLC	x	x	x	Common to all (3) Listings
135 Northern Lights Wind		x	x	A/K/A NAE
136 Olsen Wind Farm	x	x	x	Common to all (3) Listings
137 Otter Tail Power Company	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
138 Outland Solar		x		RDF Project
138 Pine Bend	x		x	This is a biomass project, IR 1-037 requested wind PPA's
139 Pipestone	x	x		IR 2-008 did not include WindSource contracts. WindSource does not flow through the fuel clause.

Northern States Power Company Name of Company or Public Authority	FERC Form 1 - 2012	Owned and Contracted Wind Production Facilities for NSP System 1-037	Wind Solar and Biomass PPA's flowing through the fuel clause in ND 2-008	Case Nos. 13-706, 13-707, 13-708 Data Request No. NDPSC-SC-021 Attachment A, Page 4 of 5 Reconciliation
141 PJM Interconnection LLC	x			FERC Form 1 OS (other service, i.e. non-firm service)
140 PJM Interconnection LLC	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
142 Prairie Rose Wind LLC	x		x	This is not listed in 1-037 because the project was not operating in the data period of 2001-2011.
143 Rapidan Hydroelectric Facility	x			This is a hydro project. This is listed in the FERC Form 1, but not either IR response based on the nature of the request.
145 REAP, LLC (REAP I)			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
144 Ridgewind Power Partners, LLC	x	x	x	Common to all (3) Listings
146 Roadrunner-I			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
147 Rock Ridge Power Partners LLC	x	x	x	Common to all (3) Listings
148 Ruthton Ridge LLC	x	x	x	Common to all (3) Listings
159 S&P Windfarm		x		FERC Form 1 and IR 2-008 did not include resources without generation in 2012.
149 SAF Hydroelectric, LLC	x			This is a hydro project. This is listed in the FERC Form 1, but not either IR response based on the nature of the request.
150 Salty Dog-I			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
154 Shane's Wind Machine LLC	x	x	x	Common to all (3) Listings
153 Shaokatan Power Partners	x			A/K/A NAE Shaokaton
152 Shaokatan Power Partners	x			FERC Form 1 OS (other service, i.e. non-firm service)
151 Shaokatan Power Partners	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
155 Sierra Wind			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
156 Soliloque Ridge LLC			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
157 South Ridge	x	x	x	Common to all (3) Listings
158 Spartan Hills LLC			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
160 St Cloud	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
161 St Cloud	x			This is a hydro project. This is listed in the FERC Form 1, but not either IR response based on the nature of the request.
163 St. Olaf College	x	x	x	Common to all (3) Listings
162 St. Olaf College	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
164 St. Paul Cogeneration	x		x	FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
165 St. Paul Cogeneration	x		x	This is a biomass project, IR 1-037 requested wind PPA's
166 Stahl Wind Energy			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
167 Sun River LLC			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
168 TAIR Wind			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
169 TG Windfarm, L.L.C.	x	x	x	Common to all (3) Listings
170 Theresa M.T			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
171 Tholen	x	x		IR 2-008 did not include WindSource contracts. WindSource does not flow through the fuel clause.
172 Tofteland Windfarm, L.L.C.	x	x	x	Common to all (3) Listings
173 Triton Windfarm			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
174 Tsar Nicolas			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
175 Twin Lake Hills			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
176 Uilk Wind Farm, LLC	x	x	x	Common to all (3) Listings
177 Union Electric Company	x			FERC Form 1 OS (other service, i.e. non-firm service)
178 University of Minnesota	x			RDF Project
179 Valley View Transmission	x	x	x	Common to all (3) Listings
180 Vandy South Project			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
181 Velva Windfarm, LLC	x	x	x	Common to all (3) Listings
182 Viking Wind Partners	x	x	x	Common to all (3) Listings
183 Vindy Power Partners			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
184 Wally's Wind Farm			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
185 Wasioja Windfarm, LLC			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
186 Western Area Power Administration	x			This is listed in the FERC Form 1, but not either IR response, because it is either a non-renewable or short-term purchase.

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187 Westridge Windfarm, L.L.C.	x	x		IR 2-008 did not include WindSource contracts. WindSource does not flow through the fuel clause.
188 Willhelm Wind			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
190 Wilson-West Windfarm LLC			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
189 Windcurrent Farms, L.L.C.	x	x		IR 2-008 did not include WindSource contracts. WindSource does not flow through the fuel clause.
191 Windpower Partners 1993, Limited Partn	x	x	x	Common to all (3) Listings
192 Windridge		x		Also identified as North Ridge Wind Farm LLC in IR 2-008
193 Windvest	x	x	x	Common to all (3) Listings
194 Windy Dog-I			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
195 Winona County Wind LLC	x	x	x	Common to all (3) Listings
197 Winter Spawn LLC			x	IR 1-037 did not include PPA's secured through the MN 2 MW Standard Contract tariff.
196 WM Renewable Energy, LLC	x		x	This is a biomass project, IR 1-037 requested wind PPA's
199 Woodstock Hills, L.L.C.	x	x	x	Common to all (3) Listings
198 Woodstock Municipal Wind, LLC	x	x	x	Common to all (3) Listings
200 WPPI	x			FERC Form 1 AD (out-of-period adjustment); no correlation to either IR response
201 Zephyr Wind	x			This is not listed in 1-037 and 2-008 because the project was not operating in the data period of 2001-2011.

STATE OF NORTH DAKOTA

PUBLIC SERVICE COMMISSION

Northern States Power Company **Advance Determination of Prudence- Courtenay Wind Project Application**	**Case No. PU-13-706**
Northern States Power Company **Advance Determination of Prudence- Odell Wind Project Application**	**Case No. PU-13-707**
Northern States Power Company **Advance Determination of Prudence- Pleasant Valley Wind Project**	**Case No. PU-13-708**
Northern States Power Company **Advance Determination of Prudence- Border Winds Project Application**	**Case No. PU-13-742**
Northern States Power Company **150 MW Border Winds Project- Rolette County, ND** **Public Convenience & Necessity**	**Case No. PU-13-743**

AFFIDAVIT OF SERVICE BY ELECTRONIC MAIL

STATE OF NORTH DAKOTA
COUNTY OF BURLEIGH

Cara DeSaye deposes and says that:

she is over the age of 18 years and not a party to this action and, on the 7th day of **October, 2013,** she electronically mailed to **4** recipients, electronic copies of:

Direct Testimony of Sara Cardwell and Exhibits

The electronic mails were addressed as follows:

James.r.alders@xcelenergy.com
James Alders
Northern States Power Company

Dave.sederquist@xcelenergy.com
Dave Sederquist
Northern States Power Company

zsimpser@briggs.com
Zeviel Simpser
Briggs and Morgan

Kari.l.valley@xcelenergy.com
Kari L. Valley
Northern States Power Company

Each email address is the respective addressee's last reasonably ascertainable electronic mailing address.

Cara DeSaye

Subscribed and sworn to before me
this 7th day of **October, 2013.**

SEAL

JOHN G. HAMRE
Notary Public
State of North Dakota
My Commission Expires July 4, 2014

John G. Hamre
Notary Public