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May 18, 2012

—VIA E-MAIL & U.S. MAIL—

Darrell Nitschke, Executive Secretary
North Dakota Public Service Commission
Department 408
600 East Boulevard Avenue
Bismarck, ND 58505-0480

RE: ADVANCE DETERMINATION OF PRUDENCE FOR THREE POWER PURCHASE
AND DIVERSITY EXCHANGE AGREEMENTS WITH MANITOBA HYDRO-
ELECTRIC BOARD
CASE No. PU-12-070

Dear Mr. Nitschke:

Northern States Power Company, doing business as Xcel Energy, operating in North Dakota submits to the North Dakota Public Service Commission testimony in support of our Application for Advance Determination of Prudence for three power purchase and diversity exchange agreements with Manitoba Hydro-Electric Board. We provide this information pursuant to the Commission's December 31, 2008 *Order Adopting Settlement* in Case No. PU-07-776.

Paper copies of the testimony in support of our Application are enclosed for filing. Please feel free to contact me at (701) 241-8632 if you have any questions.

SINCERELY,

A handwritten signature in blue ink that reads 'David H. Sederquist'.

DAVID H. SEDERQUIST
SR. CONSULTANT, REGULATION & FINANCE

Enclosure

Direct Testimony and Schedule
Laura McCarten

Before the North Dakota Public Service Commission of
The State of North Dakota

**IN THE MATTER OF AN APPLICATION FOR ADVANCE DETERMINATION OF
PRUDENCE FOR THREE POWER PURCHASE AND DIVERSITY EXCHANGE
AGREEMENTS WITH MANITOBA HYDRO-ELECTRIC BOARD**

Case No. PU-12-070

Exhibit____(LM-1)

Policy, Resource Planning, and Benefits Testimony

May 18, 2012

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1 **I. INTRODUCTION AND QUALIFICATIONS**

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Q. PLEASE STATE YOUR NAME AND OCCUPATION.

A. My name is Laura McCarten. I am Regional Vice President for Northern States Power Company, doing business as Xcel Energy (“Xcel Energy” or the “Company”), operating in North Dakota.

Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I am responsible for regulatory, legislative, and customer and community relations activities in North Dakota, South Dakota, and Minnesota. I provide strategic leadership regarding the development and implementation of our initiatives to most effectively serve our retail customers and the communities we serve. My resume is included as Exhibit___(LM-1), Schedule 1.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. My testimony provides support for the Commission’s issuance of an Advanced Determination of Prudence (“ADP”) for the Company’s three power purchase agreements (“PPAs”) with the Manitoba Hydro Electric Board (“Manitoba Hydro”). These PPAs will fill a significant resource need created as a result of the expiration of our current Manitoba Hydro PPAs beginning in 2015. While the new PPAs are essentially an extension of the existing PPAs, we have also taken the opportunity to clarify and update the agreements where necessary.

The PPAs provide benefits because, among other things, they contribute to a diverse resource mix on our system, provide reliable, low-cost energy for our customers, mitigate the cost risks associated with future environmental

1 legislation, and maximize the use of existing transmission infrastructure. Our
2 overall evaluation and resource selection processes ensure that the PPAs
3 provide benefits for customers and are a reasonable resource for us to meet
4 our customers' future energy needs.

5
6 Q. HOW HAVE YOU ORGANIZED THE REMAINDER OF YOUR TESTIMONY?

7 A. My testimony will:

- 8 • Describe the resource need the Manitoba Hydro PPAs will be filling
9 beginning in 2015;
- 10 • Describe the structure of the new PPAs and the material changes from
11 the existing PPAs; and
- 12 • Discuss the benefits of the PPAs to our customers.

13
14 **II. RESOURCE NEED BEGINNING 2015**

15
16 Q. PLEASE DESCRIBE THE RESOURCE NEED BEGINNING 2015 AND THE PROCESS
17 USED TO IDENTIFY THE NEED?

18 A. The resource need was first identified in our 2004 Resource Plan. The need is
19 the result of the existing 500 MW System Power and 350 MW Diversity
20 Exchange PPAs with Manitoba Hydro that expire beginning April 30, 2015.

21
22 In the 2004 Resource Plan docket, the Minnesota Commission ("MPUC")
23 agreed the Company needed 375 MW of base load capacity by 2015 and
24 approved an alternative resource acquisition process, referred to as the Two
25 Track Competitive Resource Acquisition Process. In 2006, we filed for a
26 Certificate of Need for 375 MWs that included new Manitoba Hydro PPAs as
27 the primary supply source coupled with wind resources. However, before

1 conclusion of that proceeding, we requested that it be delayed or suspended to
2 allow us time to assess the impacts on our system of the Renewable Energy
3 Standard and Energy Efficiency Act, which had been voted into law by the
4 2007 Minnesota Legislature. The proceeding was suspended and ultimately
5 terminated in 2008 while we reassessed our ongoing resource needs.

6
7 The ongoing need was eventually re-affirmed in our 2007 Resource Plan in
8 which the MPUC accepted Xcel Energy's proposal to refine our Manitoba
9 Hydro purchase proposal and bring the result back for regulatory review.

10
11 In our 2010 Resource Plan filing and 2011 10-year plan, we again identified the
12 proposed three Manitoba Hydro PPAs as a generation source needed to meet
13 our customers' future energy needs.¹

14
15 Q. PLEASE DESCRIBE THE POWER PURCHASE RELATIONSHIP BETWEEN XCEL
16 ENERGY AND MANITOBA HYDRO.

17 A. Xcel Energy has purchased significant capacity and energy resources from
18 Manitoba Hydro for well over 20 years. In 1984, Xcel Energy and Manitoba
19 Hydro entered into a long-term agreement under which Xcel Energy
20 purchased 500 MW of system capacity and associated energy. In 2002, a new
21 agreement was established that extended the 500 MW power purchase
22 agreement to April 30, 2015. The contract provides Xcel Energy with 500

¹ The Company submitted an update to its 2010 Resource Plan on December 1, 2011, which provided a lower forecast of energy and demand for the Company's system in light of slower economic growth and the loss of several wholesale customers in Wisconsin. This forecast assumed the Manitoba Hydro PPAs were renewed and in place beginning in 2015. Thus, our Updated filing supported the need that the Manitoba Hydro PPAs exist independent of the reduction in incremental forecasted customer demand and energy.

1 MW of capacity from Manitoba Hydro's system along with intermediate-load
2 energy, five days per week, 16 hours per day.

3
4 In addition, Xcel Energy and Manitoba Hydro are parties to two diversity
5 exchange agreements, which in aggregate call for the seasonal exchange of 350
6 MW of capacity along with peaking energy. During summer months when
7 Xcel Energy's customer demand peaks, Manitoba Hydro provides 350 MW of
8 reliable capacity to our system. In winter season months when Manitoba
9 Hydro's customer demand peaks, Xcel Energy provides 350 MW of reliable
10 capacity to Manitoba Hydro's system. These two diversity exchange
11 agreements also start expiring in 2015. The three new Manitoba Hydro PPAs
12 are primarily an extension of the existing contracts with Manitoba Hydro with
13 some modifications.

14
15 **III. STRUCTURE OF THE NEW PPAS AND MATERIAL**
16 **CHANGES FROM THE EXISTING PPAS**
17

18 Q. PLEASE DESCRIBE THE BASIC STRUCTURE OF THE NEW MANITOBA HYDRO
19 PPAS.

20 A. The new Manitoba Hydro PPAs are comprised of three separate agreements –
21 a 375/325 System Power Agreement, a 125 System Power Agreement, and a
22 Diversity Exchange Agreement. These agreements provide significant
23 capacity and energy, along with their substantial associated environmental
24 attributes. These three agreements work together to form a single overall
25 transaction that provides reliable and predominantly hydroelectric capacity and
26 energy for our customers that essentially extends the current suite of contracts
27 for an additional 10 years, from 2015 to 2025.

28

1 Under the 375/325 MW System Power Agreement, Manitoba Hydro is
2 required to sell us 375 MW of capacity during the summer season and 325
3 MW of capacity during the winter season. Under the 125 MW System Power
4 Agreement, the amount of capacity could be increased to 500/450 MW in
5 2021 if Manitoba Hydro proceeds with a new generation facility. These two
6 contracts are substantially identical and the 125 MW Agreement merely serves
7 to increase the amount of capacity (and contracted energy) provided to Xcel
8 Energy.

9
10 Under the 350 MW Diversity Agreement Xcel Energy receives an additional
11 350 MW of capacity during the summer and correspondingly provides
12 Manitoba Hydro 350 MW of capacity in the winter. In total, Xcel Energy
13 receives 725 MW of capacity in the summer (potentially increasing to 850 MW
14 in 2021). In the winter, Xcel Energy receives 325 MW (potentially increasing
15 to 450 MW) of capacity and provides Manitoba Hydro 350 MW of capacity in
16 the winter.

17
18 Q. PLEASE EXPLAIN THE MATERIAL CHANGES BETWEEN THE CURRENT
19 CONTRACTS AND THE NEW MANITOBA HYDRO PPAS AND THEIR BENEFITS.

20 A. The new Manitoba Hydro PPAs include a number of updates, clarifications,
21 and material contract changes that provide additional benefits to our
22 customers. These changes include:

23
24 1. *Changing the Capacity Level.* The capacity amount of our system purchase
25 was lowered from 500 MW to 375 MW to better match our projected seasonal
26 capacity and firm energy needs in the early years of the contracts. In addition,
27 the hours of the winter Fixed Priced Energy commitment was decreased from

1 16 hours per day 5 days per week (5 by 16) to 12 hours per day five days per
2 week (5 by 12). This modification better matched the forecast hourly profile
3 of our projected capacity and firm winter energy needs of our customers.

4
5 Along with the reduction of the MW capacity in the near-term years, the
6 ability to increase the MW capacity by 125 MW at a pre-determined price if
7 Manitoba Hydro builds a new hydroelectric facility better fits our projected
8 short- and long-term growth needs.

9
10 2. *Combining the Diversity Exchange Agreements.* The current 150 MW and 200
11 MW diversity exchange agreements expiring in 2015² and 2016 respectively
12 were combined into one 350 MW Diversity Agreement. The diversity
13 exchange agreement – largely a capacity swap – allows us to take advantage of
14 the summer-season capacity provided by the contract, but also maintains our
15 flexibility to access market energy. The new Diversity Agreement only
16 requires energy to be available during the four-hour MISO summer-season
17 system peak to satisfy the MISO capacity rules.

18
19 3. *Including Full Access to Firm Transmission Service and Additional Energy*
20 *Transactions (“Option Energy”).* The new PPAs provide Manitoba Hydro access
21 to the full firm transmission rights of the 892 MW transmission paths between
22 the two parties. We currently enter into separate transactions for the purchase
23 of additional energy outside of the existing PPAs from Manitoba Hydro on an
24 as needed basis. They can include hourly, daily, weekly, monthly, and even
25 seasonal purchases of energy. All of these additional energy transactions also

² Manitoba Hydro’s obligation to Xcel Energy under the 150 MW Diversity Exchange Agreement expires in 2015, but our obligation to provide Manitoba Hydro with winter capacity was until 2019.

1 use our firm transmission paths. It is expected that we will continue to enter
2 into similar transactions for additional energy on an as needed basis and at
3 agreed upon prices. However, these additional energy transactions will now
4 be conducted within the PPAs since Manitoba Hydro's access to the full firm
5 transmission rights are now embodied within the PPAs. In the event
6 Manitoba Hydro uses this firm transmission access, without an agreed upon
7 transaction price with us, our customers will benefit by receiving the energy at
8 a discounted price to the market price.

9 10 **IV. BENEFITS TO CUSTOMERS**

11
12 Q. Please describe the benefits of the new Manitoba Hydro PPAs to Xcel
13 Energy's customers.

14 A. There are a number of benefits of the new PPAs – both quantitative and
15 qualitative - including:

- 16 1. A diverse resource mix for our customers so we are not dependent
17 upon a single fuel type, technology, or vendor. The PPAs also provide
18 an inherent diversity by providing system power rather than power
19 from a single generating facility.
- 20 2. An initial 725 MW of accredited capacity (increases by 125 MW in
21 2021), including the diversity exchange agreements. The capacity value
22 of the diversity agreement helps us avoid constructing two combustion
23 turbines or obtaining capacity from another generation source.
- 24 3. A better match to our future needs. As previously mentioned, the size
25 of the PPAs were reduced from 500 MW to 375 MW summer/325 MW
26 winter and stepped up to 500 MW in summer /450 MW in winter 2021
27 – when our projections show an increased need. Additionally, the

1 winter hours were reduced from 5 by 16 to 5 by 12 to better match our
2 projected need profile.

- 3 4. A total cost of the capacity and estimated energy that is comparable to
4 other resource options evaluated.
- 5 5. A reliable source of energy at a fixed price. The fixed price not only
6 reduces our exposure to fluctuating natural gas prices, but also provides
7 some inflation protection.
- 8 6. Mitigation of risk of future environmental regulations.
- 9 7. No new transmission lines required and maximization of the existing
10 transmission infrastructure.
- 11 8. Inclusion of *all* environmental attributes (including Renewable Energy
12 Credits) associated with *all* energy purchased, including the Option
13 Energy.

14
15 Q. HOW WERE THE PPAs COMPARED TO ALTERNATIVES?

16 A. A two-step process was followed to compare the economic costs and benefits
17 of the PPAs to generic generation alternatives. In the first step, Xcel Energy
18 used the Strategist resource-planning model to compare the economic impact
19 of the PPAs on the five-state system against multiple generic generation
20 alternatives. In doing so, the cost and operating characteristics of coal
21 resources, combined cycle and combustion turbine natural gas resources were
22 modeled and Strategist was allowed to optimize the expansion plan both with
23 and without the PPAs. The present value revenue requirements (“PVRR”) of
24 the expansion plan with and without the PPAs were compared to determine
25 the impact of the PPAs on the expansion plan. The optimized expansion plan
26 is determined through Strategist’s ability to select the most economical generic
27 resources to fill the capacity need.

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Q. WHAT WAS THE “OPTIMIZED EXPANSION PLAN” CHOSEN BY STRATEGIST?

A. The optimized expansion plan included adding three to four combustion turbines between 2015 and 2025 in addition to some short term market capacity purchases. Under this optimized plan or “optimized alternative,” on average the Manitoba Hydro PPAs are replaced by 3.5 Combustion Turbines.

Q. HOW DID THE PROPOSED MANITOBA HYDRO PPAS COMPARE FROM A COST PERSPECTIVE TO THE OPTIMIZED ALTERNATIVE SELECTED BY STRATEGIST?

A. The costs of the Manitoba Hydro PPAs are approximately equal to the costs of the optimized alternative under the Strategist base assumptions. The approximately \$2 million difference in PVRR is immaterial given the uncertainty and accuracy of estimating inputs 20 years into the future. This results in an almost identical residential rate impact between the PPAs and the optimized alternative.

Q. WHAT WAS THE SECOND STEP OF THE TWO STEP PROCESS FOLLOWED TO EVALUATE ALTERNATIVES?

A. The second step involved following the Two Track Competitive Resource Acquisition Process established by the MPUC in Docket No. E002/RP-04-1752. Under the process, when we seek to add generation, we must provide the opportunity for interested parties to submit competing proposals. This process began with our submitting the information necessary to evaluate our PPA proposal and sufficient information to allow prospective competitors to make alternative proposals. The MPUC approved our filing initiating this step for the Manitoba Hydro PPAs in an order dated August 12, 2010 and allowed

1 interested parties to provide competing proposals on or before October 1,
2 2010.

3
4 Interested parties were made aware of the opportunity to submit competing
5 proposals via a press release issued by the Company on May 28, 2010.

6
7 Q. WERE ANY ALTERNATIVE PROPOSALS RECEIVED BY THE OCTOBER 1, 2010
8 DEADLINE?

9 A. No competing proposals were received. However, the lack of alternative
10 proposals should not be interpreted as an invalidation of the bidding process,
11 but rather more accurately reflects the unique nature of the PPAs, *i.e.*, a
12 combination of intermediate capacity, peaking capacity, and “spot-market”
13 energy. Similarly, the lack of proposals also reflects the value provided under
14 the proposed Manitoba Hydro PPAs.

15
16 Q. GIVEN THE COMPARABILITY OF THE COSTS OF THE MANITOBA HYDRO PPAS
17 TO THE OPTIMIZED ALTERNATIVE, WHY DID THE COMPANY CONSIDER THE
18 PPAS TO BE A MORE REASONABLE OPTION?

19 A. The Manitoba Hydro PPAs were chosen as the reasonable option in light of
20 additional benefits mentioned, such as: (1) diversification of our generation
21 supply portfolio; (2) hedging against possible fuel cost volatility; (3) protection
22 from inflation; and (4) maximizing use of existing transmission infrastructure;
23 and (6) minimizing financial and operation risk. All of these benefits are more
24 fully discussed in detail in our ADP application.

25
26 Q. PLEASE EXPLAIN HOW THE PPAS PROVIDE A DIVERSIFICATION BENEFIT TO
27 THE COMPANY’S GENERATION PORTFOLIO.

1 A. We believe a diverse resource mix provides significant benefits to our
2 customers primarily because it helps us avoid being overly reliant on any one
3 fuel type, technology, or vendor, and we can operate our system using a wide
4 variety of fuels to enhance reliability and minimize costs in this challenging
5 energy market. If we had chosen the optimized alternative over the PPAs, it
6 would have resulted in a heavier reliance on natural-gas alternatives. In
7 contrast, the PPAs substantially reduce our reliance on natural gas over this
8 time period.

9

10 Q. DESCRIBE THE BENEFITS ASSOCIATED WITH USING THE EXISTING
11 TRANSMISSION INFRASTRUCTURE.

12 A. The PPAs will use the existing transmission paths that have been developed by
13 Xcel Energy and Manitoba Hydro to facilitate the import/export of electricity
14 between the two parties. The PPAs will thus not increase the transmission
15 footprint. Further, the structure of the transaction ensures that the existing
16 transmission infrastructure will be used efficiently and to the maximum extent
17 possible. The opportunity to use existing infrastructure provides for a more
18 efficient use of resources at a lower cost to our customers without the land use
19 impacts of new transmission infrastructure.

20

21 Q. ARE THERE ANY OTHER BENEFITS OF THE NEW PPAS IN ADDITION TO THE
22 ONES DISCUSSED ABOVE?

23 A. Yes. The Option Energy component of the PPAs benefits customers by
24 providing the Company increased flexibility in purchasing additional energy
25 while also providing safeguard to customers. In addition, there are qualitative
26 benefits from an environmental standpoint. Further, the new PPAs were

1 updated to accommodate for market changes over the years such as the
2 advent of the Midwest Independent System Operator (“MISO”).

3
4 Q. PLEASE EXPLAIN HOW THE ADDITIONAL OR OPTION ENERGY COMPONENT OF
5 THE PPAs WORKS AND WHY IT IS BENEFICIAL TO CUSTOMERS?

6 A. First, we anticipate there will be times when Manitoba Hydro is able to offer
7 extra energy on a daily, weekly, monthly, or even seasonal basis, depending
8 upon water-flow projections. If the energy is available at advantageous prices
9 compared to other energy options available in the MISO market, Xcel Energy
10 has an incentive to maximize the amount of energy purchased from Manitoba
11 Hydro to minimize the cost of our overall portfolio to customers and because
12 all energy supplied by Manitoba Hydro includes the contractually-allocated
13 share of environmental attributes. In these circumstances, if the parties agree
14 upon pricing, the cost would be blended into our overall portfolio to
15 customers.

16
17 Since access to the full firm transmission rights is now embodied within the
18 PPAs, if a mutually agreeable price cannot be reached, Manitoba Hydro retains
19 the right to deliver Option Energy at a formula price. In exchange for this
20 ability to use the full firm transmission path, we have structured the formula
21 price to ensure our customers receive an advantageous price for all Option
22 Energy subject to this provision. Access to the additional energy at negotiated
23 prices benefits customers by providing us additional flexibility in meeting our
24 customers’ energy needs, while the formula price serves as a backstop to
25 ensure customers are protected when the parties cannot reach a mutually
26 agreeable price for the additional energy.

27

1 Q. DESCRIBE FURTHER THE QUALITATIVE ASSESSMENT OF BENEFITS ASSOCIATED
2 WITH THE MANITOBA HYDRO PPAs FROM AN ENVIRONMENTAL REGULATION
3 STANDPOINT.

4 A. In qualitatively considering the impact of carbon regulation, it is reasonable to
5 consider the ongoing discussion and public policy debate regarding the
6 possibility of new regulations to reduce green house gases and other
7 emissions. Since there is virtually no PVRR difference between the Manitoba
8 Hydro PPA scenario and the optimized scenario, any future emissions
9 regulation in the next two decades – be it a tax or required additional
10 investment at a plant – would increase the costs of the optimized alternative,
11 which is heavily dependent on fossil fuel plants. In light of the potential for
12 future environmental regulation to affect fossil fuel costs, the PPAs provide
13 additional benefits to customers.

14

15 V. CONCLUSION

16

17 Q. PLEASE SUMMARIZE YOUR TESTIMONY.

18 A. The expiration of the existing Manitoba Hydro PPAs eliminates 850 MW of
19 available summer capacity and energy, thus creating a significant resource need
20 starting in 2015.³ The new Manitoba Hydro PPAs are in essence an extension
21 of our existing agreements. We have also taken the opportunity to clarify and
22 update the PPAs to reflect changes in the industry and between the parties.
23 The PPAs provide highly reliable, low-cost generation which helps us

³The deficit is 725 MW in 2015.

1 maintain a diverse portfolio of generation resources, allows the existing
2 transmission infrastructure to be fully utilized, and provides significant
3 environmental benefits. Our overall evaluation process indicates the PPAs are
4 a reasonable resource for us to meet our customers' future energy needs, and
5 they provide a hedge against natural gas fuel cost increases and potential future
6 environmental regulations.

7

8 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

9 A. Yes.

Laura McCarten

Experience	2008-Present	Xcel Energy	Minneapolis, MN
	Regional Vice President, NSPM		
	<ul style="list-style-type: none"> ▪ For Xcel Energy's South Dakota service territory, responsible for regulatory and legislative interface and policy development, customer and community relations and public affairs, and provide strategic leadership on initiatives to effectively serve customers. ▪ For Xcel Energy's North Dakota service territory, responsible for regulatory and legislative interface and policy development, customer and community relations and public affairs, gas business development, and provide strategic leadership on initiatives to effectively serve customers. ▪ For Xcel Energy's Minnesota service territory, responsible for managing relationships with communities and large customer accounts, gas business development and our HomeSmart service. 		
	2006-2008	Xcel Energy	Minneapolis, MN
	Director, Regional Transmission Development		
	1997-2005	Xcel Energy	Minneapolis, MN
	Director, Minnesota Community Services		
	1994-1997	Xcel Energy	Mankato, MN
	Regional General Manager		
	1992-1994	Northern States Power	Minneapolis, MN
	Manager, Regulatory Affairs		
	1979-1991	Northern States Power	Minneapolis, MN
	Nuclear Generation: Spent Nuclear Fuel Project Manager, Engineer		
Education	1979	University of Wisconsin	Madison, WI
	Bachelor of Science in Nuclear Engineering		
Professional Development	<ul style="list-style-type: none"> ▪ Xcel Energy Leadership Advantage Program (2004) ▪ University of Michigan Business School, Strategic Marketing Planning (1998) ▪ University of Minnesota, Carlson School of Management, Minnesota Management Institute (1996) 		
Community Service	<ul style="list-style-type: none"> ▪ Lignite Energy Council, Board of Directors ▪ Minneapolis Regional Chamber of Commerce, Board of Directors ▪ North Central Electrical League, Board of Directors ▪ Ordway Center for the Performing Arts, Board of Directors ▪ University Enterprise Laboratories, Board of Directors 		