

Rebuttal Testimony and Schedule
Kurtis J. Haeger

Before the North Dakota Public Service Commission
State of North Dakota

In the Matter of the Application of
Northern States Power Company, a Minnesota Corporation
for an Advance Determination of Prudence for a
200 MW Prairie Rose Wind Generation Project and
Power Purchase Agreement with Geronimo Wind Energy, LLC

Case No. PU-12-059
Exhibit ____ (KJH-2)

Resource Planning

October 4, 2012

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I. INTRODUCTION

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Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Kurtis J. Haeger. My business address is 1800 Larimer Street, Suite 1400, Denver, CO 80202.

Q. ARE YOU THE SAME KURTIS HAEGER WHO SUBMITTED PRE-FILED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my rebuttal testimony is to address a number of the policy issues discussed in Mr. Hahn’s testimony in this proceeding, and to continue to support the prudence of the Company’s Power Purchase Agreement (PPA) with Prairie Rose Wind, LLC (PRW or Prairie Rose). In this rebuttal testimony I:

- Discuss the appropriate standard for determining the reasonableness of the Company’s decision to enter into the PPA;
- Address the benefits of the PRW project for the long-term good of NSP System customers, which includes all of our customers in North Dakota, South Dakota, Minnesota, Wisconsin, and Michigan;
- Explain why the Prairie Rose PPA was the most prudent choice in our 2010 Wind Request for Proposal (RFP) process; and
- Support the reasonableness of our modeling process and results, as well as the conservative nature of our assumptions.

1 **II. STANDARD FOR PRUDENCE DETERMINATION**

2
3 Q. WHAT IS YOUR RESPONSE TO MR. HAHN’S POSITION REGARDING THE BASIS FOR
4 DETERMINING PRUDENCE OF THE PRAIRIE ROSE PROJECT?

5 A. I take issue with Mr. Hahn’s suggestion that the prudence of the project should
6 be judged on the basis of circumstances existing at the time the Company filed
7 its application for an Advance Determination of Prudence (ADP), rather than on
8 the facts known at the time the Company selected the PRW project and entered
9 into the Purchase Power Agreement.

10
11 Q. PLEASE EXPLAIN.

12 A. It would be impossible for the Company to make resource planning decisions on
13 the basis of future developments and facts not yet known. It would be equally
14 impossible to determine how regulatory bodies would view those decisions. For
15 example, most resource planning decisions made today revolve around the
16 commodity price of natural gas, but those prices have changed considerably and
17 continue to change. In addition, an RFP for a new resource typically takes 9 to
18 18 months to assemble, receive and evaluate bids, negotiate terms, and obtain
19 regulatory approvals. If it was not possible to establish the natural gas price
20 assumptions to be used for a specific resource at the time of the evaluation,
21 selection, and contracting, the process would become chaotic and uncertain.

22
23 While it is reasonable to update the natural gas price assumptions at the time of
24 final selection and contract negotiations, it does not make sense to change those
25 assumptions after that point in time. Once a project has been selected and the
26 terms and conditions for the PPA have been established, both the Company and

1 the developer are relying on those natural gas price assumptions and analyses
2 used to finalize the agreement.

3
4 Q. EXPLAIN HOW THESE ASSUMPTIONS ARE RELIED UPON.

5 A. This mutual reliance provides protection for both the utility and the developer,
6 and ultimately for our customers. For example, in a situation where the forecast
7 prices for natural gas drop, the developer should have some assurance that the
8 Company will stick with the bargain struck during negotiations and the project
9 will not be cancelled simply because alternate fuel costs change between the time
10 of PPA execution and the project in-service date. Likewise, if the forecast prices
11 for natural gas rise, as they did in the period of 2005 through 2008, the Company
12 should be confident the developer will stick with the bargain that was struck in
13 negotiations even though the wind project could have received a significantly
14 higher price with the updated gas price assumptions.

15
16 Adhering to the traditional regulatory philosophy of using the best information
17 available at the time the decision was made provides a stable environment for
18 customers and for developers. Conversely, invoking a standard that the
19 prudence of utility projects may be determined on the basis of facts not known
20 at the time of the project contract, produces untenable financial and regulatory
21 risk.

22
23 Q. WHAT DO YOU PROPOSE IS THE CORRECT STANDARD FOR DETERMINING
24 WHETHER A PROJECT OR FACILITY AGREEMENT WAS PRUDENT?

25 A. The question should be whether the Company made a prudent decision on the
26 basis of facts known (or that should have been known) at the time the decision

1 was made. As I understand, this standard has been advocated by Commission
2 Staff in other ADP proceedings.

3
4 Q. SHOULD THE ADP STANDARD BE DIFFERENT IF THE PROJECT NEGOTIATIONS
5 ARE BEING FINALIZED VERSUS IF THE PPA BEING EVALUATED HAS BEEN
6 EXECUTED?

7 A. No. The analysis the Company must undertake is the same, and the facts that
8 both the Company and the developer rely upon are those known at the time the
9 decision was made. Likewise, in a rate case setting, the prudence of in-service
10 projects is judged on the basis of facts known at the time the decision was made
11 to proceed with the project. It therefore makes sense to determine the prudence
12 of executed contracts in the same manner.

13
14 That being said, if natural gas prices were to drop significantly between the time
15 of RFP bid submissions and vendor selection and PPA execution, the Company
16 would consider whether to simply reject all bids and issue a new RPF. Once the
17 vendor and the Company have agreed to the basic PPA terms, however, both
18 parties need to be able to mutually rely on those price assumptions.

19
20 Q. HOW DOES THE APPLICABLE STANDARD AFFECT THE DETERMINATION OF
21 PRUDENCE IN THIS DOCKET?

22 A. This standard determines the overall perspective from which the Company's
23 decision to enter the Prairie Rose PPA will be viewed. As a specific example,
24 Mr. Hahn suggests that the company's modeling should have incorporated
25 natural gas pricing as of January 2012 (when this Application was submitted to
26 the North Dakota Public Service Commission) rather than as of January 2011
27 (when the Prairie Rose PPA was selected in the RFP and final negotiations were

1 However, this does not mean the project is unnecessary or not beneficial to
2 ratepayers.

3
4 In operating the system on a minute-to-minute or hour-to-hour basis, the
5 Company is always in need of energy to serve its loads. The real-time dispatch
6 function determines the most economical source of energy for that period of
7 time, and that is the energy that is ultimately delivered to the customer. Wind
8 energy from a project like Prairie Rose competes to be that source of energy for
9 our customers just like energy from certain coal-fired units or from our natural
10 gas combined cycle at High Bridge. As a result, over the next 20 years the energy
11 from a wind project is just as important to the system as the energy from other
12 resources already on the system. The real issue at hand is at what price the wind
13 energy will be the most economical source of energy for the NSP System. The
14 fundamental focus of our economic modeling of the wind project is to
15 determine at what price the energy from the wind project will be lower than the
16 price of the energy from other generation sources on the system.

17
18 In addition to analyzing head-to-head competition for the most economical way
19 to meet the real-time energy needs of our customers, we do include a whole host
20 of other factors, some qualitative and some quantitative, based on future
21 environmental and regulatory requirements or risks. Besides the need to comply
22 with the future renewable energy goals of the various states we serve, we are also
23 mindful of minimizing, where feasible, the risk of future carbon regulation.
24 Although I am aware that the issues surrounding the sources and impacts of
25 carbon emissions are subject to significant debate today, it is reasonable to
26 assume there is some risk of carbon regulation in the future. As a result,
27 minimizing this risk makes sense when the Company can do it cost-effectively.

1 Moreover, it is frequently the case that pricing is best when the need for a
2 purchase is not yet critical or there is some uncertainty as to the real value of the
3 resource; therefore, it benefits our customers to take advantage of opportunities
4 to increase our renewable energy portfolio as those opportunities arise.
5

6 “Timing” a market has inherent risks. However, the Company believes that the
7 Prairie Rose project is one of the lowest- and most advantageously-priced wind
8 facilities we have ever seen in the region. The inability to predict if and when the
9 Production Tax Credit would continue to be available suggested it was prudent
10 to take advantage of very good energy pricing for a project that was viable and
11 able to meet the December 31, 2012 PTC deadline.
12

13 Q. DOES THE PROCUREMENT OF PRAIRIE ROSE WIND GENERATION PROVIDE
14 IMMEDIATE BENEFIT FOR CUSTOMERS?

15 A. Yes. As I explained in my direct testimony, wind generation is one of the first in
16 the sequence of dispatching our generation fleet. Because other sources of
17 generation are displaced when the wind is blowing and therefore the need to
18 purchase these other fuels is reduced, adding wind power to our system provides
19 economic benefit to customers as soon as the wind project is in service.
20

21 Q. DOES THAT BENEFIT ACCRUE EVEN AS NATURAL GAS PRICES HAVE DECLINED?

22 A. Yes, indirectly. As the price of one energy resource declines, the price of other
23 forms of electric generation must also decline in order to remain competitive.
24 The reduced price of wind generation resulting from the decline in natural gas
25 prices since 2008 is a key reason we were able to obtain such a favorable price in
26 the 2010 RFP process and for the Prairie Rose project specifically. Coupled with
27 the Production Tax Credit, the Prairie Rose PPA is particularly advantageous to

1 customers. As discussed in my direct testimony and in further detail below, our
2 Strategist modeling shows that the Prairie Rose PPA is a prudent purchase that
3 will provide benefits to our customers (including customers in North Dakota)
4 for many years to come.

5
6 **IV. PRAIRIE ROSE BENEFITS**
7

8 Q. MR. HAHN SUGGESTS THAT MODELING ASSUMPTIONS ARE KEY TO HOW ONE
9 VIEWS THIS PPA. CAN YOU SUMMARIZE THE KEY MODELING ASSUMPTIONS THAT
10 DRIVE THE ECONOMIC ANALYSIS OF THE PRAIRIE ROSE WIND PROJECT?

11 A. Since the Prairie Rose project is primarily an energy resource (as opposed to
12 being primarily a capacity resource), it must compete with other energy resources
13 to provide value to our customers. As a result, the primary modeling factor in
14 the economic analysis is the cost of the energy that the wind energy will displace.
15 Here, the assumptions about the price of natural gas, the amount of natural gas-
16 generated energy, and the quantity of coal energy displaced will be the primary
17 drivers in the economic analysis. The Company uses the Strategist model to
18 capture and quantify this data.

19
20 Q. HOW DOES THE COST OF THE PRAIRIE ROSE WIND ENERGY COMPARE TO THE
21 VALUE OF THE ENERGY DISPLACED BY THIS WIND ENERGY?

22 A. As explained by Mr. Wishart and summarized below, the contract cost of the
23 Prairie Rose wind energy is \$280.6 million (Present Value of Revenue
24 Requirement or PVRR) over the term of the PPA. In comparison, the PVRR of
25 the energy displaced by the Prairie Rose wind energy is \$286.3 million.
26 Consequently, an apples-to-apples comparison indicates the wind energy is \$5.7
27 million less expensive than the natural gas and coal-based energy that it will

1 displace. Not taking into account some of the other modeling assumptions used
2 to round out the economic analysis, the wind energy on a stand-alone basis
3 provides real customer savings.

4
5 Q. DOES MR. HAHN DISPUTE THE VALUE OF THE WIND ENERGY GENERATED BY
6 THE PRAIRIE ROSE PROJECT?

7 A. No. While Mr. Hahn does debate which natural gas price forecast should be
8 used, he does not offer any evidence to dispute the validity of the Company’s
9 Strategist modeling or the energy savings associated with the wind project.

10
11 Q. WHAT ARE THE OTHER KEY MODELING ASSUMPTIONS THAT IMPACT THE
12 OVERALL ECONOMIC EVALUATION OF THE PRAIRIE ROSE WIND PROJECT?

13 A. Beyond determining the value of the wind energy, other key modeling factors
14 include the value of any capacity credit afforded the Prairie Rose project, the cost
15 of integrating the wind energy, the value of the Renewable Energy Credits
16 (RECs) and the value of any risk mitigation characteristics associated with
17 reduced emissions and less price volatility the wind may have relative to other
18 sources of energy.

19
20 Q. DO YOU AGREE WITH MR. HAHN’S ASSERTION THAT SINCE THE PRAIRIE ROSE
21 PROJECT IS NOT CURRENTLY ELIGIBLE FOR A CAPACITY CREDIT; THE COMPANY
22 SHOULD NOT HAVE INCLUDED ANY CAPACITY CREDIT IN ITS STRATEGIST
23 MODELING AND SUBSEQUENT PVRR CALCULATION?

24 A. No. While the PPA is structured so that the Prairie Rose project will function as
25 a net zero interconnection (NZI) and will not create an immediate capacity
26 credit, this does not preclude converting the project to a conventional
27 interconnection arrangement at a future date. While neither Prairie Rose or the

1 Company has submitted a traditional interconnection request and will not likely
2 consider doing so until sometime closer to 2017 or 2018, the opportunity to
3 capture the value of the capacity credit created by the Prairie Rose project in the
4 future still exists and can be reassessed when the NSP System has a need for new
5 capacity. As described in Mr. Oye’s testimony, it is reasonable to conclude that
6 no significant transmission upgrades beyond those already planned will be
7 required to convert the PRW project from an NZI to a traditional
8 interconnection under the MISO interconnection process. This means that
9 PRW could represent a very low cost capacity addition in the 2017-2018 time
10 frame.

11
12 Because the Prairie Rose project would represent a low cost capacity addition if
13 converted from an energy-only resource to a capacity and energy resource in the
14 future, it is reasonable to assume that the Company would use such a capacity
15 resource to meet its future capacity obligations. Given this information, it is
16 reasonable for our modeling assumptions to assume some capacity credit in
17 future years for the Prairie Rose Project.

18
19 As Mr. Wishart discusses in his rebuttal testimony, the Prairie Rose capacity cost
20 upon conversion to conventional interconnection would generate additional
21 savings of approximately \$14 million beginning in 2018.¹ Including the
22 potential capacity savings in the economic analysis, the range of overall savings
23 to customers is expected to be between approximately \$6 million and \$20
24 million:

¹ The Company’s modeling originally suggested the value of the capacity credit would be \$18 M based on the value of the credit beginning in 2013. Upon further review the Company agrees that a more appropriate timeframe for reflecting the credit in our modeling is 2018.

1 Q. DOES YOUR ANALYSIS OF THE REASONABLENESS OF THE PPA CHANGE IF IT IS
2 ASSUMED THE PROJECT NEVER BECOMES ELIGIBLE FOR THE CAPACITY CREDIT?

3 A. No. Mr. Hahn and I appear to agree that the impact of removing the accredited
4 capacity from the cost assumptions would add \$18 million (now revised to be
5 \$14 million) to the net cost of the project. (Haeger Direct Testimony at p. 14;
6 Hahn Direct Testimony at p. 20.) However, even if this conversion never
7 occurs, the Prairie Rose project will still likely provide customer savings over its
8 entire 20-year term, for the reasons previously discussed in this testimony.

9

10 Q. YOUR DIRECT TESTIMONY IDENTIFIED SOME OF THE WAYS IN WHICH
11 CONSERVATIVE ASSUMPTIONS WERE INCORPORATED INTO THE STRATEGIST
12 MODELING. CAN YOU ELABORATE FURTHER ON THE COMPANY'S APPROACH TO
13 MODELING?

14 A. Yes. Modeling of any kind requires a set of assumptions that can only be
15 developed on the facts available at the time. As discussed in my direct
16 testimony, we prefer to take a conservative approach to quantifying the level of
17 benefits for any project. Moreover, the selection of assumptions is complex.
18 There are typically ranges of possible inputs, resulting in a range of possible
19 outcomes. Our selection of modeling assumptions is therefore based upon the
20 expertise of those who work in the relevant areas every day, as well as on data
21 available at the time. While modeling cannot, by definition, be exact, we believe
22 our modeling process is robust and reliable for these reasons.

23

1 Q. YOU PROVIDE EXAMPLES OF CONSERVATIVE MODELING ASSUMPTIONS IN YOUR
2 DIRECT TESTIMONY, PARTICULARLY WITH REGARD TO WIND INTEGRATION COSTS
3 AND RENEWABLE ENERGY CREDITS. CAN YOU ELABORATE FURTHER ON HOW A
4 DIFFERENT APPROACH TO THOSE ASSUMPTIONS WOULD AFFECT THE POTENTIAL
5 PVRR OF THE PRAIRIE ROSE PROJECT?

6 A. As I discussed in my Direct Testimony, the natural gas price assumption used in
7 the 2006 Wind Integration Study was based on a forecasted 2020 natural gas
8 price of \$9.00/MMbtu. Mr. Hahn was not able to verify the impact of changed
9 natural gas prices on the cost of integrating the wind. In reviewing the 2006
10 Wind Integration Study, the Company verified the 2020 wind integration costs
11 identified in the study were based on \$9/MMbtu (nominal basis) and that the
12 Company's natural gas price forecast at the time of the Prairie Rose analysis was
13 \$7.48/MMbtu in 2020 (nominal basis). Therefore the wind integration costs for
14 2020 were overstated in the Company's original analysis and in my Direct
15 Testimony.

16
17 In addition, the Company's original analysis of Prairie Rose project incorporated
18 a very conservative assumption for wind integration costs consistent with a
19 wind penetration level of 25% (based on a future build-out of additional wind
20 projects), as opposed to a 15% penetration level that is more representative of
21 the level of wind that will be on the NSP System in 2013 with the completion of
22 the Prairie Rose project. Mr. Wishart provides a more detailed discussion of the
23 adjustments made to the wind integration costs as a result of fine-tuning the
24 analysis to more closely reflect the specific impacts expected as a result of the
25 Prairie Rose project. The wind integration costs for the Prairie Rose project,
26 updated to be consistent with the results of the 2006 Wind Integration Study,
27 expected gas prices, and level of wind penetration known at the time of the

1 evaluation is now \$15.2 million (PVRR) over the PPA term, or \$14.1 million less
2 than originally modeled. When the updated wind integration costs are added to
3 the Company's economic analysis, the result is a reasonable range of PVRR
4 impacts for the Prairie Rose project from a \$4.5 million savings to a \$9.5 million
5 cost.

6
7 Q. WHAT ASSUMPTIONS DID THE COMPANY MAKE RELATIVE TO SULFUR DIOXIDE
8 (SOX) EMISSIONS AND CARBON DIOXIDE EMISSIONS?

9 A. In performing the economic analysis, the Company's Strategist modeling
10 indicated a customer savings associated with the reduction in SOx emissions of
11 \$400,000 (PVRR) and assigned no benefit for reduction in carbon dioxide
12 emissions. I do note, however, that procuring wind resources as a hedge against
13 future carbon regulation, whenever it may happen, provides significant value to
14 our customers given the very attractive energy price offered by PRW.

15
16 Q. WHAT ASSUMPTIONS IS THE COMPANY MAKING WITH REGARD TO RECs?

17 A. In my Direct Testimony I suggested a possible REC price in the \$3/REC
18 range. As described in the Rebuttal Testimony of Ms. Kari Chilcott Clark, the
19 then-current market for RECs would suggest using a REC price ranging from
20 \$1.29/REC for 2013 vintage RECs to \$2.05/REC for 2016 vintage RECs
21 (adjusted for inflation thereafter) with a REC value averaging just over
22 \$2.26/REC².

23
24 Based on discussions with Staff and as described in Ms. Clark's Rebuttal
25 Testimony, the Company and Staff will continue to work through the best way
26 for the Company to capture value for our customers through the disposition of

² Current forecast REC pricing escalated at a 1.9% inflation factor per year beginning in 2017.

1 RECs, including those RECs accrued from the PRW project. However, it is
2 reasonable to assume that at some future time, the Company will dispose of
3 North Dakota-allocated RECs; therefore, it is reasonable to include REC sales
4 in the assumptions for Strategist modeling. We believe that beginning to
5 dispose of RECs in the 2015-2016 time frame is a reasonable assumption.

6
7 Based on these updated REC values and sales beginning in 2016, the total value
8 of the RECs used in the analysis ranges from \$9.2 million (PVRR) on the
9 conservative end of the spectrum to \$14.1 million on the expected end of the
10 spectrum. Exhibit ___(KJH), Schedule 1 summarizes these possible ranges for
11 REC values. Adding these factors to the Company’s economic analysis results
12 in a reasonable range of savings/cost from a savings of \$0.2 million on the
13 conservative side to an expected savings of \$19 million as shown below:

Reasonable Range of Economic Analysis
PVRR Impacts (\$millions)

| | As Filed Strategist Analysis | Updated Strategist Analysis | Updated Conservative Analysis |
|------------------------|---------------------------------------------|--------------------------------------------|----------------------------------------------|
| Net Energy Savings | (\$5.7) | (\$5.7) | (\$5.7) |
| Capacity Credits | (\$17.7) | (\$13.5) | \$0.0 |
| Wind Integration Costs | \$29.3 | \$15.2 | \$15.2 |
| <u>SOx Value</u> | <u>(\$0.4)</u> | <u>(\$0.4)</u> | <u>(\$0.4)</u> |
| Total | \$5.4 | (\$4.5) | \$9.0 |
| | | | |
| <u>REC Value*</u> | <u>-NA-</u> | <u>(\$14.1)</u> | <u>(\$9.2)</u> |
| Total With RECs | \$5.4 | (\$18.6) | (\$0.2) |

18
19 * REC value estimate not included in typical Strategist modeling
20

1 Q. HAVE YOU CALCULATED THE REC PRICE THAT WOULD BE NEEDED TO ENSURE
2 THAT CUSTOMERS WOULD PAY NO MORE FOR PRAIRIE ROSE WIND USING THE
3 MOST PESSIMISTIC ASSUMPTIONS?

4 A. Yes, the REC price that would ensure customers pay no more for Prairie Rose
5 wind under the most pessimistic assumptions is a REC price that averages
6 \$0.77/REC less than the indicative current market prices, assuming REC sales
7 begin in 2016. A REC price averaging only \$1.51 per REC over the **entire** 20
8 year PPA term (shown in the table in the “Updated Conservative Analysis”
9 column) will ensure that customers receive a benefit from the Prairie Rose
10 project even without any capacity credit. In conclusion, even using conservative
11 assumptions Prairie Rose provides customers a small savings (approximately
12 \$10,000 for North Dakota customers ($\$0.2M * 5\%$)).

13

14 **V. ECONOMIC VALUE OF NET ZERO INTERCONNECTION**
15 **AND COMPETING BIDS**

16

17 Q. MR. HAHN QUESTIONS WHETHER THE COMPANY FULLY CAPTURED THE VALUE
18 OF NZI FOR NORTH DAKOTA CUSTOMERS. HOW DID THE COMPANY ASSESS THE
19 VALUE OF NZI FOR PURPOSES OF EVALUATING THE 2010 RFP BIDS?

20 A. In the case of the 2010 RFP, NSP System customers were going to be the
21 recipients of both any perceived value of the NZI at the Angus Anson location
22 and the cost of the wind that would use the NZI. This is important because any
23 payment to the Company for use of the NZI at Anson would have been
24 expected to be included in the wind price offered to the Company. Because
25 NZI was available to all RFP bidders, it is the Company’s belief that the value of
26 the NZI was embedded in the prices that were offered in the RFP. As a result,
27 the lowest-priced, feasible bid would include the value of the NZI.

1

2 Q. DOES THIS SAME ANALYSIS HOLD TRUE FOR WIND BIDS THAT USED A
3 TRADITIONAL INTERCONNECTION RATHER THAN AN NZI?

4 A. No. For bids that used a traditional interconnection, any perceived value of the
5 NZI would remain with the Company and not be used by the current bid. To
6 account for this difference in value, the Company needed to estimate the
7 perceived value of the NZI and add that value (cost) to the NZI bid when
8 comparing to a non-NZI bid.

9

10 Q. WHY DO YOU USE THE TERM “PERCEIVED VALUE OF THE NZI” WHEN
11 DESCRIBING THE COMPARISON OF AN NZI BID TO A NON-NZI BID?

12 A. The value of an NZI is very subjective. NZI only has value when the demand to
13 interconnect to the transmission system is greater than the available
14 interconnection capacity, and is evident in the cost to interconnect in the form of
15 potential network upgrades. In the case of the availability of transmission
16 deliverability from Anson or other locations in the NSP System, there are
17 restrictions today but the transmission reinforcements that have been approved
18 by MISO and are expected to be completed over the next five or six years will
19 likely substantially reduce the value of NZI compared to traditional
20 interconnections for a significant period of time. In addition, the likely
21 expiration of the federal PTCs and MISO’s queue reform mean that the ability
22 to interconnect will likely become less valuable -- therefore also reducing the
23 number of projects attempting to interconnect and the overall perceived value of
24 an NZI.

25

26 Q. DID THE COMPANY DETERMINE IF A NON-NZI BID WAS SUFFICIENTLY CLOSE IN
27 PRICE TO PRAIRIE ROSE THAT THE VALUE OF AN NZI WOULD BE A CONCERN?

1 A. Yes. We compared the Prairie Rose project to the next lowest-priced, feasible
2 project without an NZI. We determined that adding a \$10 million to \$15 million
3 value for the NZI would not have changed the results of the RFP.

4
5 Q. HOW CAN YOU BE SURE THE FULL VALUE OF NZI IS RETURNED TO NORTH
6 DAKOTA CUSTOMERS?

7 A. Since the value of the NZI was embedded in the energy price offered by Prairie
8 Rose, all NSP System customers, including North Dakota customers, benefit
9 from the NZI at Anson.

10

11 Q. WHAT IS YOUR RESPONSE TO MR. HAHN'S ASSERTION THAT THE COMPANY
12 SHOULD HAVE MORE STRONGLY CONSIDERED THE [TRADE SECRET
13 **BEGINS** **TRADE SECRET ENDS**] BID (THE PROJECT) IN
14 THE 2010 RFP?

15 A. We considered the Project very carefully. Even though the bid was not
16 compliant with the terms of the 2010 RFP, the Company wanted to give the
17 Project every opportunity to succeed. However, after additional review, it was
18 determined that the Project did not have a realistic chance of being completed
19 for various reasons. The proposed pricing was based on qualifying for the
20 federal PTCs, which meant the Project had to be in service before the end of
21 2012. However, as discussed by Mr. Oye, the Project had not even made it
22 through the MISO study process at the time of the RFP, and early indications
23 suggested that the necessary transmission upgrades would be costly and take a
24 significant time to complete. Accordingly, it became apparent the Project could
25 not be completed for the price that was listed in the bid. Mr. Oye explains why
26 the transmission upgrades necessary to implement this Project would have been
27 very costly.

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Mr. Oye will also address the timing of the Project, which could not have been completed sufficiently early to capture the value of the Production Tax Credit. Because the Prairie Rose project proposed to use NZI, it significantly increased the probability the project could be completed in time to qualify for the federal PTCs and would not be exposed to significant network upgrade costs. In contrast, the Project essentially had no chance to qualify for the PTCs and likely could not get financing in time due to the uncertainty associated with the exposure to large transmission upgrade costs. In the end, while the Project was priced attractively in the bid package, the Company’s due diligence activity indicated strongly that the Project could not be successful at the price it had offered.

Q. HAS THE COMPANY OBTAINED ADDITIONAL INFORMATION SINCE ITS INITIAL DUE DILIGENCE REVIEW TO CORROBERATE ITS ORIGINAL CONCLUSION?

A. Yes. As described more completely by Mr. Oye, MISO studies completed in late 2011 indicate significant transmission upgrade costs that would have been borne by the Project and created a significant delay in getting its transmission interconnection. As a result, the additional information available today reinforces the Company decision not to proceed with the Project.

VI. CONCLUSION

Q. PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY.

A. In summary, the selection of the Prairie Rose Wind project was the best option available to the Company from the 2010 RFP. The Company’s economic analysis shows that under a reasonable range of assumptions known at the time

1 the decision was made to enter into an agreement with PRW, the proposed wind
2 project will be at least as beneficial to customers as the alternative of not
3 pursuing the wind project and will most likely provide additional savings in
4 comparison to the no-wind alternative over the entire 20 year life of the
5 proposed PPA.

6

7 Q. DOES THIS CONCLUDE YOUR PRE-FILED REBUTTAL TESTIMONY?

8 A. Yes.

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|--------------------------------------------------------------|----------------|------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Praire Rose Wind Generation | - | - | 725.8 | 725.8 | 725.8 | 727.6 | 725.8 | 725.8 | 725.8 | 727.6 | 725.8 | 725.8 | 725.8 | 727.6 | 725.8 | 725.8 |
| REC Sales Projection | | | 0 | 0 | 0 | 2,904.9 | 725.8 | 725.8 | 725.8 | 727.6 | 725.8 | 725.8 | 725.8 | 727.6 | 725.8 | 725.8 |
| REC Pricing | | | | | | | | | | | | | | | | |
| January 2011 Market Price esc 1.9% inflation | | | \$1.29 | \$1.54 | \$1.74 | \$2.05 | \$2.09 | \$2.13 | \$2.17 | \$2.21 | \$2.25 | \$2.30 | \$2.34 | \$2.38 | \$2.43 | \$2.47 |
| Lower Market esc \$0.25/REC beginning 2017 | Avg \$3.09/REC | | \$0.90 | \$1.05 | \$1.20 | \$1.45 | \$1.70 | \$1.95 | \$2.20 | \$2.45 | \$2.70 | \$2.95 | \$3.20 | \$3.45 | \$3.70 | \$3.95 |
| January 2011 Market Price less \$0.75/REC esc 1.9% inflation | Avg \$1.51/REC | | \$0.54 | \$0.79 | \$0.99 | \$1.30 | \$1.34 | \$1.38 | \$1.42 | \$1.46 | \$1.50 | \$1.55 | \$1.59 | \$1.63 | \$1.68 | \$1.72 |
| Original \$3/REC Estimate | | | \$3.00 | \$3.00 | \$3.00 | \$3.00 | \$3.00 | \$3.00 | \$3.00 | \$3.00 | \$3.00 | \$3.00 | \$3.00 | \$3.00 | \$3.00 | \$3.00 |
| Total REC Value | | | | | | | | | | | | | | | | |
| | PVRR | | | | | | | | | | | | | | | |
| January 2011 Market Price esc 1.9% inflation | | | \$0 | \$0 | \$0 | \$4,803 | \$1,516 | \$1,545 | \$1,574 | \$1,608 | \$1,635 | \$1,666 | \$1,697 | \$1,734 | \$1,762 | \$1,796 |
| Lower Market esc \$0.25/REC beginning 2017 | | | \$0 | \$0 | \$0 | \$3,341 | \$1,234 | \$1,415 | \$1,597 | \$1,783 | \$1,960 | \$2,141 | \$2,322 | \$2,510 | \$2,685 | \$2,867 |
| January 2011 Market Price less \$0.75/REC esc 1.9% inflation | | | \$0 | \$0 | \$0 | \$2,624 | \$972 | \$1,001 | \$1,030 | \$1,062 | \$1,090 | \$1,121 | \$1,153 | \$1,188 | \$1,218 | \$1,252 |
| Original \$3/REC Estimate | | | \$0 | \$0 | \$0 | \$8,715 | \$2,177 | \$2,177 | \$2,177 | \$2,183 | \$2,177 | \$2,177 | \$2,177 | \$2,183 | \$2,177 | \$2,177 |

* For the purposes of this workpaper REC sales are assumed to be delayed until 2016 to maximize revenues. Actual timing of sales have yet to be determined.