

Rebuttal Testimony and Schedule
Randall L. Oye

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 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____(RLO-1)

Transmission

October 4, 2012

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1 **I. INTRODUCTION AND QUALIFICATIONS**
2

3 Q. PLEASE STATE YOUR NAME AND OCCUPATION.

4 A. My name is Randall L. Oye and I am a Transmission Analyst for Xcel Energy
5 Services Inc., the service company affiliate of Northern States Power
6 Company - Minnesota (the Company), the applicant in this proceeding.
7

8 Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS AND EXPERIENCE.

9 A. I was born and raised in Bismarck, North Dakota and graduated from North
10 Dakota State University in 1983 with a BS degree in electrical engineering.
11 Prior to joining Xcel Energy (then Northern States Power Company) in 1997,
12 I performed engineering and construction management functions for
13 geothermal, nuclear, coal and refuse derived fuel generating facilities.
14

15 Since joining the Company, I have performed engineering functions at one of
16 the Company's nuclear generating plants, served as an operations engineer in
17 the Company's Real Time Planning Department, and am presently a
18 transmission analyst in the Market Operations Department. During my
19 assignment to the Real Time Planning Department, I developed and managed
20 the operating procedures for the wind generation on the NSP transmission
21 system.
22

23 I am presently the chairman of the MISO Interconnection Process Task
24 Force, the stakeholder group that has developed the currently effective and
25 proposed generator interconnection procedures filed at the Federal Energy
26 Regulatory Commission (FERC) in the MISO Tariff. My resume is included
27 as Exhibit___(RLO-1), Schedule 1.

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

2 A. The purpose of my testimony is to rebut certain assertions made by Mr.
3 Richard Hahn in his Direct Testimony. I will address the following issues:

- 4 • Transmission issues related to the **[BEGIN TRADE SECRET**
5 **END TRADE SECRET]** project's bid in response to the
6 Company's 2010 Wind Generation Request for Proposal (RFP);
- 7 • Net Zero Interconnection Service (NZIS) and its impact on the Prairie Rose
8 Wind project (PRW), including policy considerations and energy
9 displacement issues; and
- 10 • Conversion of PRW from an NZI to a traditional generator interconnection.

11
12 **II. TRANSMISSION ISSUES FOR CERTAIN PROJECTS**

13
14 Q. MR. HAHN SUGGESTS THAT THE COMPANY SHOULD HAVE FURTHER PURSUED
15 THE **[BEGIN TRADE SECRET** **TRADE SECRET ENDS]**
16 PROJECT (THE PROJECT) AS IT HAD ATTRACTIVE PRICING. TO WHAT EXTENT
17 DID YOU REVIEW THE TRANSMISSION ISSUES OF THIS BID?

18 A. I evaluated the Project from a transmission perspective on multiple occasions.
19 In my initial review, I determined that the Project's bid did not meet the RFP
20 criteria and would therefore not have been able to meet the December 31,
21 2012 in-service date. As a result, I did not recommend the Project from a
22 transmission perspective.

23
24 Following a request from the Director of NSP Resource Planning that was
25 prompted by the Company's desire to identify a viable, attractively priced wind
26 project in North Dakota, I performed an additional analysis. In this review, I
27 confirmed that the Project did not meet the RFP requirements. I also

1 identified a significant number of transmission infrastructure issues that would
2 impact the Project’s ability to interconnect. I therefore continued to
3 recommend against selecting the Project from a transmission perspective.
4

5 Q. WHAT DID YOUR ANALYSES SHOW?

6 A. At the time of the bid, the Project did not meet the RFP Interconnection and
7 Transmission Requirements that required a project to: (i) have a generator
8 interconnection agreement (GIA) executed; (ii) be engaged in the Facility
9 Study phase in the MISO generator interconnection process; or (iii) have
10 proposed a “Net Zero” subordinated dispatch arrangement with a peaking
11 generation plant. The Project did not have a MISO GIA and was not
12 proposing a Net Zero Interconnection; therefore, it would have had to meet
13 the Facility Study requirement. Being engaged in the Facility Study phase of
14 the MISO generator interconnection process is important because at this
15 phase the required transmission upgrades are known. Knowing the required
16 transmission upgrades is vital for determining a project’s ability to meet the in-
17 service date requirements and to confirm the validity of a project’s bid.
18

19 I determined that the Project had requested 99 MW interconnection service
20 through the MISO generator interconnection process and was assigned MISO
21 project number [BEGIN TRADE SECRET END TRADE
22 SECRET]. The maximum the project would have been able to generate
23 under this interconnection request was 99 MW, which contradicted the bid of
24 101 MW in our RFP process.
25

26 Q. DID YOU LEARN ANYTHING ELSE ABOUT THE PROJECT IN YOUR ANALYSIS?

1 A. Yes. I also determined that the Project was assigned to the MISO Definitive
2 Planning Phase for North Dakota (DPP ND)¹ cycle 6 for study. MISO
3 performs such interconnections studies by grouping projects that are identified
4 as ready to interconnect, in the order that they entered the MISO generator
5 interconnection queue. The studies evaluate the generating facilities to
6 determine the needed transmission upgrades required for a particular group of
7 generating projects to interconnect.

8
9 At the time of our analysis of the 2010 Wind RFP bids, the DPP ND Cycle 6
10 system impact studies (which occur before the Facility Study phase of the
11 MISO process) were not expected to be completed for at least a year. As a
12 result, a December 31, 2012 in-service date was considered very unlikely.
13 Furthermore, the ND DPP Cycle 5 project² studies, which were ahead of the
14 Project in the MISO queue, had also not been completed at that time. This
15 made it more certain the Project could not be in service by December 31,
16 2012.

17
18 In addition, the knowledge obtained from studies performed for earlier
19 queued interconnection requests in North Dakota indicated the need for
20 substantial area transmission improvements. The ND DPP Cycle 5 projects
21 were expected to result in yet more transmission upgrades being identified.
22 The need for significant transmission upgrades, along with the long lead time
23 and costs for completing them, made it impossible in my judgment for the
24 Project to timely and economically interconnect by December 31, 2012, the

¹ North Dakota DPP Cycle 6 & 7 Definitive Planning Phase prepared for MISO Energy by Siemens PTI and dated September 12, 2011.

² Montana and North Dakota DPP Cycle 5 Definitive Planning Phase Executive Summary prepared for Midwest ISO by Siemens PTI and dated January 13, 2011.

1 expected expiration date for the federal Production Tax Credit (PTC), as
2 required by the RFP.

3

4 Q. HAVE THE DPP ND CYCLE 6 STUDIES NOW BEEN COMPLETED?

5 A. Yes. The DPP ND Cycle 6 study was published on September 12, 2011, fully
6 one year after RFP bids were due.

7

8 Q. DOES THAT MEAN THAT THE NORTH DAKOTA DPP CYCLE 5 HAS ALSO BEEN
9 COMPLETED?

10 A. Yes. The MT/ND DPP Cycle 5 study was published on January 13, 2011

11

12 Q DID THE DPP ND CYCLE 5 AND CYCLE 6 STUDIES SUPPORT YOUR ANALYSIS OF
13 THE PROJECT?

14 A. Yes. The ND DPP Cycle 5 group study included six wind generator projects
15 located in North Dakota and one located in Montana, which altogether totaled
16 937.3 MW. The final report for MT/ND DPP Cycle 5 identified between
17 \$593.32 million and \$702 million in transmission network upgrades that would
18 be required for the Cycle 5 projects to interconnect.

19

20 The ND Cycle 5 projects are ahead of the Project in the MISO generator
21 interconnection queue. Because of this, all generation projects in DPP ND
22 Cycle 6 are conditioned upon the upgrades in the ND DPP Cycle 5 studies
23 being placed in service.

24

25 The transmission projects identified in ND DPP Cycle 5 studies that are
26 needed to support the Project's generation interconnection include:

- 1 • Brookings County – Lyon County – Franklin – Helena – Lake Marion –
2 Hampton Corner 345 kV line, commonly known as the CapX2020
3 Brookings Project;
- 4 • The Bison – Alexandria – Quarry Monticello 345 kV line, commonly
5 known as the CapX2020 Fargo Project;
- 6 • The Hampton Corner – North Rochester – North La Crosse 345 kV
7 line, commonly known as the CapX2020 La Crosse Project;
- 8 • The Bemidji – Boswell 230 kV line, commonly known as the CapX2020
9 Bemidji Project;
- 10 • The Big Stone – Canby – Hazel Creek 345 kV line;
- 11 • The Big Stone – Brookings County 345 kV line;
- 12 • The Hazel Creek – Granite Falls 230 kV line.
- 13 • The Center – Grand Forks 345 kV line;
- 14 • The Ellendale – Big Stone 345 kV line,
- 15 • A second Tatanka – Ellendale 230 kV line; and
- 16 • Three 345/230 kV transformers at the Ellendale Substation.

17

18 Of these facilities, only the Bemidji project is fully in service, and that project
19 was only energized and placed in service on September 17, 2012. The other
20 CapX facilities, along with the Center – Grand Forks 345 kV line, will not be
21 fully in service for a number of years. The other transmission upgrades
22 described above are under various stages of development and their in-service
23 dates are unclear at this time. Based on the number, the costs, and the
24 uncertainty surrounding these contingent transmission facilities, I concluded
25 that it was (and still is) extremely unlikely for the Project identified by Mr.
26 Hahn to execute a Generator Interconnection Agreement with MSIO and

1 construct the generating plant and required transmission upgrades in time to
2 meet the December 31, 2012 in-service date required by the RFP.

3
4 **III. NET ZERO INTERCONNECTION**
5

6 Q. WHAT IS THE REGULATORY STATUS OF THE MISO NZI TARIFF?

7 A. As described in the Direct Testimony of Mr. Kurtis Hager, on November 1,
8 2011, MISO filed proposed revisions to its Tariff on file with the FERC, in
9 order to incorporate the concept of NZI into MISO's Generator
10 Interconnection Procedures (GIP) and *pro forma* Generator Interconnection
11 Agreement in FERC Docket No. ER12-309.
12

13 On March 30, 2012, the FERC approved the concept of NZI for inclusion in
14 the MISO Tariff but ordered that MISO submit a compliance filing containing
15 additional revisions to its Tariff to ensure that NZI is administered in a
16 transparent and non-discriminatory nature.³ This compliance filing was made
17 by MISO on September 26, 2012.
18

19 Q. WHAT IS THE REGULATORY STATUS OF THE PROCEEDINGS BEFORE FERC
20 REGARDING THE PRW GIA?

21 A. As also described in Mr. Hager's Direct Testimony, the GIA for the PRW
22 project was the subject of two additional proceedings before the FERC. In
23 Docket No. EL11-53, several affiliated entities filed a complaint against MISO
24 in July 2012 for the processing of the PRW GIA under the 2008 MISO NZI

³ Order Conditionally Accepting Tariff Revisions, FERC Docket No. ER-12-309 (March 30, 2012).

1 policy and claimed that they were unduly discriminated against in the awarding
2 of NZI. Additional parties filed interventions also alleging discrimination.

3
4 In Docket No. ER12-188, several of the same entities also protested the GIA
5 for the PRW project. On December 23, 2011, FERC conditionally accepted
6 the PRW GIA for filing, subject to a future order.⁴ In its March 30, 2012
7 Order in Docket Nos. ER12-188 and EL11-53,⁵ FERC again conditionally
8 accepted the PRW GIA subject to the outcome of MISO's proposed Tariff
9 revisions in Docket No. ER12-309, specifically MISO's September 26, 2012
10 Compliance Filing.

11
12 On August 27, 2012, all parties to these proceedings, including the
13 complainants and the Company, filed an Offer of Settlement with FERC
14 resolving their issues and explicitly stating that there was no undue
15 discrimination by MISO or the Company in awarding the NZI to PRW.

16
17 As part of the settlement in Docket No. EL11-53, in August 2012 these
18 parties withdrew from the proceedings in ER12-188 and ER12-309.
19 Consequently, all challenges to the use of NZI by PRW have now been
20 withdrawn.

21
22 On September 17, 2012, FERC trial staff filed comments supporting the Offer
23 of Settlement. Staff explained that the Settlement will allow the Net Zero

⁴ Order Conditionally Accepting and Suspending Generator Interconnection Agreement Subject to Refund and Further Commission Order re Midwest Independent Transmission System Operator, Inc., FERC Docket No. ER12-188 (Dec. 23, 2011).

1 Interconnection Service to proceed unimpeded, which is in the public interest
2 because the FERC has previously found that Net Zero Interconnection
3 Service is just and reasonable and “will promote more efficient utilization of
4 existing interconnection capacity.” The FERC has further found that the
5 service will promote a goal of Order No. 2003 to “increase energy supply and
6 lower wholesale prices for customers by increasing the number and variety of
7 new generation that will compete in the wholesale electricity market.”

8
9 Staff further noted that the Settlement resolves the issue whether the awarding
10 of Net Zero interconnections unduly discriminated against similarly situated
11 parties. In addition, all parties to the Settlement agreed that Prairie Rose is in
12 compliance with provisions of the MISO Tariff designed to protect against
13 undue discrimination. The Settlement also addresses how MISO will
14 implement NZIS under development in MISO's queue reform proceeding.
15 The Geronimo Parties, MISO, and Xcel agreed to comply with the filing
16 requirements developed in that proceeding. Finally, the Settlement recognizes
17 that the Net Zero Interconnection Service tariff issues are best addressed
18 generically in the queue reform proceeding.

19
20 On October 2, 2012, the Administrative Law Judge in the above proceedings
21 issued a Certification of Uncontested Settlement and concluded, “The
22 Settlement reasonably resolves the issues in this proceeding, and is just,
23 reasonable and in the public interest, as well as uncontested. I recommend that
24 it be approved.”

⁵ Order on Complaint and Establishing Hearing and Settlement Judge Procedures, Further Order on Interconnection Agreement, and Dismissing Rehearing re Shetek Wind Inc. et al v Midwest Independent Transmission System Operator, FERC Docket Nos. EL11-53 and ER12-188 (Mar. 30, 2012).

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Consequently, PRW has a valid and effective GIA for NZI service. Furthermore, the terms of the Power Purchase Agreement (PPA) between the Company and PRW ensure all interconnection cost risks related to the NZI arrangement are carried by PRW.

Q. CAN YOU BRIEFLY SUMMARIZE THE CONTENTS OF MISO’S SEPTEMBER 26, 2012 COMPLIANCE FILING?

A. The September 26, 2012 MISO compliance filing was developed by MISO and the MISO stakeholders through the Interconnection Process Task Force (IPTF), which I chair. The compliance filing resulted in a flexible, “workable” approach that was “informed by prior Commission efforts to promote open access and eliminate undue discrimination in other contexts.” The filing proposes the use of standard *pro forma* interconnection documents to ensure fair and consistent treatment, posting and reporting requirements to increase transparency and to facilitate monitoring, and procedures to enhance transparency and to protect against the potential for undue discrimination.

Some of the key details of the filing⁶ include:

- Clarification that NZI service is restricted Energy Resource Interconnection Service (ERIS) and is limited by the interconnection capacity of the existing generating facility at the point of interconnection.
- A requirement for a public posting on the MISO website that the existing generating facility is willing to enter into an arrangement for

1 NZI, which provides for a transparent process. The PRW GIA filed in
2 Docket No. ER12-188 and conditionally accepted by the Commission
3 subject to the outcome of this filing was specifically exempted from this
4 posting requirement

- 5 • A *pro forma* Energy Displacement Agreement (EDA) in the form of
6 Appendix 12 of MISO’s GIP, which becomes effective upon execution
7 of a GIA and which must remain in effect during the term of the GIA
8 if the Interconnection Customer is not the owner of the existing
9 generating facility.
- 10 • A *pro forma* Monitoring and Consent Agreement (MCA) in the form of
11 Appendix 11 of the GIP with the Transmission Owner, which becomes
12 effective upon execution of a GIA and must remain in effect during the
13 term of the GIA. As with the EDA, the MCA would be filed with the
14 FERC or reported in the Electronic Quarterly Reports (EQRs) to
15 FERC, and would provide fair, transparent and non-discriminatory
16 terms for NZI service.
- 17 • A requirement that termination of the EDA or MCA prior to the
18 execution of the GIA for NZI will result in the Interconnection
19 Request for NZI being deemed to have been withdrawn.
- 20 • Express conditions that MISO reserves the right to curtail and, if
21 necessary, disconnect the NZI Generating Facility if either (a) the
22 simultaneous output or (b) the emergency and/or economic maximum
23 offer limits from the existing generating facility and the NZI Generating
24 Facility exceeds the current Interconnection Service limit. This
25 requirement prevents the theoretical situation under MISO’s market

⁶ Compliance Filing of Midwest Independent Transmission System Operator, Inc. regarding Attachment X of its

1 algorithms where both the Generating Facility with NZIS and the
2 existing generating facility bid into the market and clear the market at a
3 sum that is above the approved interconnection limit.

- 4 • A requirement that the Interconnection Customer submit to MISO a
5 report by the seventh calendar day of each month showing the prior
6 month’s combined output of the existing and NZI generating facilities.

7
8 Q. MR. HAHN STATES THAT A SIGNIFICANT DISADVANTAGE OF NZI IS “A CHANCE
9 THAT THERE WILL BE PERIODS WHEN THE NZI PROJECT WILL BE UNABLE TO
10 DELIVER ENERGY TO THE GRID.” DO YOU AGREE THAT THIS IS A MATERIAL
11 DISADVANTAGE FOR THE PRW PROJECT?

12 A. While Mr. Hahn is correct that the nature of NZI service creates a possibility
13 that the NZI project will be unable to deliver energy to the grid at some times,
14 the amount of time and the number of MW hours in which this is expected to
15 occur for the PRW project is quite small.

16
17 The pairing of a natural gas peaking plant like Angus Anson and a wind
18 generator like PRW is the optimal use of NZI. This is because a natural gas
19 peaking plant is only run during peak demand periods, when wind is typically
20 at low levels. The NZI Generator uses the interconnection capacity in other
21 hours when its energy price is competitive in the MISO energy market.
22 Therefore, both generators are not usually running at the same time. If a
23 situation were to occur where the peaking plant must run – for example, for
24 transmission reliability reasons – the output of the wind generator would be
25 limited under the MCA. However, the interconnection capacity of the Angus

Tariff, FERC Docket No. ER12-309-000 (September 26, 2012).

1 Anson plant is 392 MW, and the output of the PRW wind farm is 200 MW.
2 The Angus Anson plant is a three unit plant, with Anson 4 (160 MW) the
3 most recently installed and most efficient natural gas peaking facility. Even if
4 the PRW wind farm were operating at its maximum level, the Angus Anson 4
5 unit could generate at its full 160 MW output to meet peak customer needs or
6 for reliability support and stay within the limits of the MCA.

7
8 Q. HAVE YOU CONDUCTED ANY ANALYSIS OF HOW THE ANGUS ANSON PLANT
9 AND PRW WIND FARM MIGHT OPERATE UNDER THE NZI CONSTRUCT?

10 A. Yes. To get a better idea of how often the Angus Anson plant and the Prairie
11 Rose Wind farm might operate together, we downloaded and analyzed hourly
12 historical generation data for the Angus Anson generation plant along with the
13 Fenton Wind farm that was recorded between January 1, 2010 and September
14 24, 2012. We used Fenton Wind as the proxy for Prairie Rose Wind because it
15 is located in the general vicinity of Prairie Rose Wind, utilizes similar General
16 Electric turbines, and is also a 200 MW plant. Our analysis added the hourly
17 output of the Angus Anson generating plant with the output of the Fenton
18 Wind farm and compared the results to the 392 MW allowable combined
19 output limit of Angus Anson and Prairie Rose defined in the EDA.⁷ Using
20 the historical data, we discovered that less than one-tenth of one percent
21 (0.09%) of the total annual megawatt hours (MWH) produced by the PRW
22 wind farm would have been impacted. This provides strong evidence that the
23 pairing of the Angus Anson plant and the Prairie Rose Wind project will not
24 materially impact Prairie Rose Wind's ability to generate. Exhibit ___(RLO-

⁷ The Angus Anson generating plant is composed of three units. Unit #2 and Unit #3 each have 116 MW of interconnection rights per the MAPP DRS. Unit #4 has 160 MW of interconnection rights as defined in the MISO Large Generator Interconnection Agreement for project G370. The combined interconnection rights of the three Angus Anson units is 392 MW.

1 1), Schedule 2, to my testimony shows the relationship between the Angus
2 Anson and Fenton wind farm historical operations.

3
4 Q. MR. HAHN BELIEVES THAT THE USE OF NZI “MAY RESULT IN UNEQUAL
5 ACCESS TO THE TRANSMISSION SYSTEM.” DO YOU AGREE WITH HIS REMARK?

6 A. It is my opinion that NZI does not result in unequal access to the
7 Transmission System. However, FERC is the ultimate authority. The
8 Settlement in Docket No. EL11-53 concludes that MISO and NSP did not
9 discriminate in granting an NZI interconnection to PRW at the Angus Anson
10 point of interconnection, and all other NZI interconnection will occur under
11 the new NZI tariff provisions filed by MSIO on September 26, 2012.

12
13 Fundamentally, all generators have open and non-discriminatory access to the
14 transmission system (including the Company’s transmission system) under the
15 requirements of FERC’s Order No. 2003,⁸ as incorporated into the MISO
16 Tariff. Consequently, any generator that wants to interconnect to the MISO
17 transmission system has the same ability to do so as any other generator.
18 There is nothing about NZI that changes this. The Settlement in FERC
19 Dockets EL11-53 and ER12-188, as supported by FERC Staff and the
20 Administrative Law Judge in the proceeding, further supports this conclusion.

21
22 Q. DOES MISO’S SEPTEMBER 26, 2012 COMPLIANCE FILING ADDRESS FERC’S
23 CONCERNS ABOUT NON-DISCRIMINATORY ACCESS FOR NZI?

⁸ FERC Order No. 2003, *Standardization of Generator Interconnection Agreements and Procedures*, 104 FERC ¶ 61,103 (July 24, 2003).

1 A. I believe it does. The keys to MISO’s proposal are transparency and the ability
2 for all interested parties to make a proposal to the existing generator to share
3 its interconnection capacity through an NZI. By requiring the existing
4 generator to post on OASIS that it will allow an NZI and is accepting
5 proposals for the NZI, all interested parties are on notice and have an
6 opportunity to propose a mutually beneficial arrangement to the existing
7 generator for the utilization of the existing interconnection capacity. Since all
8 existing generators are different and all existing generators may have different
9 reasons for offering their existing interconnection capacity to be paired with
10 an NZI-utilizing generator, this approach allows for a variety of ways to
11 achieve both the existing and new generators’ goals.

12
13 FERC has not yet ruled on MISO’s September 26 Filing, but its attention to
14 the matter in the March 30, 2012 order in Docket No. ER12-309 makes clear
15 that the issue Mr. Hahn raises is being addressed by FERC.

16
17 Q. HOW DID THE COMPANY MAKE IT KNOWN THAT IT WAS OFFERING THE
18 EXISTING ANGUS ANSON INTERCONNECTION CAPACITY FOR A POSSIBLE NZI?

19 A. As Mr. Hahn notes, the Company transparently advertised the availability of
20 NZI at any location in the 2010 RFP. Further, in a January 8, 2010 filing to
21 the Minnesota Public Utilities Commission, the Company provided notice that
22 we plan to accept proposals for wind projects that can interconnect at our
23 Anson site. I believe that this accomplishes much the same transparency goal
24 as a MISO website posting.

25
26 Importantly, while PRW was the winning bidder, the Company made NZI
27 available to all bidders in the 2010 RFP. The Company made the Angus

1 Anson existing interconnection capacity openly available to all who proposed
2 to use it on an NZI basis, in the same spirit that the MISO September 26
3 Compliance Filing is seeking to codify. The Company provided all paperwork
4 and approvals necessary for those who bid an NZI proposal to move the NZI
5 process forward with MISO.

6
7 Q. IS NON-DISCRIMINATORY ACCESS TO AN NZI RELEVANT TO THE
8 COMMISSION’S DETERMINATION OF PRUDENCE FOR THE PRW PROJECT?

9 A. No. I agree that the utilization of NZI for the PRW project is relevant to the
10 Commission’s determination of prudence. However, the fundamental fairness
11 of the availability of NZI is a FERC jurisdictional matter and will be addressed
12 by FERC in Docket No. ER12-309. The Company will comply with all of its
13 obligations as required. Likewise, all challenges to the fairness of the
14 Company providing NZI to PRW have been settled, including allegations that
15 the Company discriminated in favor of PRW. FERC will address the
16 settlement in Docket No. EL11-53 and resolve the matter fully and finally.

17
18 Q. DOES PRW’S UTILIZATION OF NZI AFFECT THE CURRENTLY EXISTING
19 INTERCONNECTION RIGHTS OF THE ANGUS ANSON PLANT?

20 A. No. Under the NZI construct, all rights of PRW to utilize the interconnection
21 capacity of the Angus Anson plant are subordinated to the rights of the Angus
22 Anson plant to utilize the existing interconnection capacity (392 MW).
23 Therefore, the interconnection rights of the Angus Anson plant remain
24 unaffected by the use of NZI. This means that the Company has not
25 diminished the value of the interconnection rights for the Angus Anson plant
26 by allowing PRW to utilize an NZI for its project.

27

1 **IV. TRADITIONAL INTERCONNECTION FOR PRW**

2
3 Q. CAN THE PRW PROJECT TRANSITION FROM AN NZI TO A TRADITIONAL
4 GENERATOR INTERCONNECTION AS SOME FUTURE TIME?

5 A. Yes. There is nothing preventing the PRW project from transitioning from an
6 NZI to a traditional interconnection. To do so, PRW would utilize MISO's
7 generator interconnection process to obtain a new, traditional interconnection.

8
9 Q. WOULD THERE BE COSTS ASSOCIATED WITH SUCH A TRANSITION?

10 A. Yes. If PRW transitioned the project from an NZI to a traditional generator
11 interconnection, PRW would be required to pay all deposits and milestone
12 payments required as part of the MISO generator interconnection process,
13 along with the funding its share of any network upgrades to the transmission
14 system identified in the MISO generator interconnection studies.

15
16 Q. HAVE THESE COSTS BEEN QUANTIFIED?

17 A. No. Actual quantification of interconnection costs is done through the MISO
18 interconnection process. As part of the necessary System Impact Studies and
19 Facilities Studies, MISO identifies any required transmission upgrades along
20 with an engineering estimate of the costs of additional facilities needed to
21 accommodate any particular interconnection. Until those studies are
22 performed, there is no way to calculate the costs of a traditional
23 interconnection with precision.

24
25 Q. CAN YOU PROVIDE A QUALITATIVE OPINION ON THE COSTS OF
26 TRANSITIONING THE PRW PROJECT FROM AN NZI TO A TRADITIONAL
27 INTERCONNECTION?

1 A. Given the location of the PRW project, along with the planned major
2 transmission system upgrades (such as Brookings – Hampton)⁹ that are
3 expected to be placed into service in between 2015 and 2018, it seems
4 reasonable to conclude that no significant transmission upgrades, beyond
5 those already planned, would be required. This could change depending on
6 the number and size of generating projects that move forward ahead of a
7 traditional PRW GIA, because those projects could use up the transmission
8 capacity created by the planned transmission upgrades. But based on the facts
9 known at this time, it is reasonable to assume that no significant additional
10 transmission upgrades will be necessary.

11
12 Q. ON WHAT DO YOU BASE YOUR OPINION?

13 A. The transmission grid in the North Dakota, Minnesota and Iowa region of the
14 MISO footprint is experiencing major infrastructure expansion, which will
15 dramatically improve the transmission capacity in the western MISO footprint.
16 Notable transmission lines that are under construction and scheduled to be in
17 service in the 2015 timeframe include the CapX202 Fargo 345 kV line along
18 with the CapX2020 Brookings 345 kV line. Both will have a major positive
19 impact on the transmission capacity in southwest Minnesota where PRW is
20 located and make it possible for generation located in that area to be delivered
21 to the Company's load centers. In addition, a number of other Multi-Value
22 Projects (MVPs) are being planned to go into service in the MISO region in
23 the 2017 to 2019 timeframe that will positively impact the transmission

⁹ In addition to transmission projects developed by the Company, MISO has identified and approved 215 new transmission infrastructure projects including 17 Multi-Value Projects (MVPs) to accommodate the planned and expected generation expansion in the entire MISO footprint. Reference MISO's Transmission Expansion Plan 2011 (MTEP11) was approved by the MISO Board of Directors on December 8, 2011.

1 capacity throughout the Western MISO footprint. The most notable lines are
2 listed in the following table.

3

MVP No.	Geographic Location by Transmission Owner Member System	Project Name
1	OTP, XEL	Big Stone South to Brookings, SD
2	XEL, GRE	Brookings, SD - SE Twin Cities 345 kV
3	MEC, ITCM	Lakefield Jct. - Winnebago - Winco - Kossuth County & Obrien County - Kossuth County - Webster 345 kV line
4	MEC, ITCM	Winco to Hazleton 345 kV line
5	ATC LLC, XEL, ITCM	N LaCrosse-N Madison-Cardinal - Dubuque area 345-kV
6	OTP, MDU	Ellendale to Big Stone South

4
5
6 **V. CONCLUSION**

7
8 Q. PLEASE SUMMARIZE YOUR TESTIMONY.

9 A. My analysis of the Project favored by Mr. Hahn indicated that the Project did
10 not comply with our 2010 Wind RFP, required transmission upgrades that
11 would have substantially increased its cost, and probably could not be in
12 service by December 31, 2012. With regard to NZIS and the PRW GIA,
13 FERC is actively managing this process, including addressing any fairness
14 concerns and processes to utilize NZIS where appropriate. Finally, I conclude
15 that PRW probably would not require significant transmission upgrades to
16 convert to a traditional interconnection in the future.

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

3 A. Yes, it does.

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Randall L. Oye

Education

1983 North Dakota State University Fargo, North Dakota
Bachelor Science Electrical Engineering

Professional experience

2007 – present Xcel Energy Minneapolis, MN
Transmission Access Analysis

- Advised Energy Supply, Resource Planning, and Regulatory Departments on transmission issues related to wind and gas RFP's, Certificate of Needs Filings, Interconnection Requests, Transmission Service Requests, and transmission modeling.
- Represented Xcel Energy interests on Transmission Provider task forces and committees. Present Chairman of the Midwest ISO Interconnection Task Force. Former chairman of MRO Wind Generation Modeling Task Force.
- Worked directly with transmission providers to resolve interconnection, transmission service and other transmission related issues related to Xcel Energy owned and contracted generation facilities.

1999 – 2006 Xcel Energy Minneapolis, MN
Senior Engineer Real Time Planning

- Responsible for operating strategy and associated operating guides for Xcel Energy contracted wind facilities in Minnesota.
- Responsible for analyzing and developing system intact and prior outage operating guides for Minnesota, North Dakota and Wisconsin transmission facilities.
- Advisory team member of Midwest ISO Model On Demand development team. Represented Xcel Energy on MAPP NMORWG, MRO MBS, and other committees.

1990 – 1999 Xcel Energy Monticello, MN
Senior Engineer, Monticello Nuclear Generating Station

- Contractor and direct Xcel Energy employee while at Monticello.
- Project engineer involved with plant electrical modifications and construction. Duties included electrical design, estimating, project coordination and project management.

1983 – 1990 Bechtel Power/Stone & Webster Monticello, MN
Electrical Engineer

- Performed electrical engineering functions on geothermal, nuclear, coal, refuse and other generating and industrial facilities both in home offices and on generating sites.

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