

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF SOUTH DAKOTA

In the Matter of the Complaint by Juhl  
Energy LLC against NorthWestern  
Corporation dba NorthWestern Energy for  
Establishing a Purchase Power Agreement

Docket EL16-021

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**Q. Please state your name.**

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**A. Autumn M. Mueller**

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**Q. Are you the same Autumn Mueller who submitted Prefiled Response  
Testimony in this docket?**

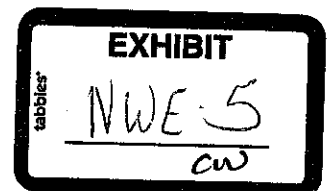
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**A. Yes.**

**PREFILED REBUTTAL TESTIMONY  
OF AUTUMN M. MUELLER  
ON BEHALF OF NORTHWESTERN ENERGY**

AMM-1



1 **Q. Have you reviewed Juhl Energy's responses to PUC Staff's Data Request**  
2 **3-2?**

3 **A. Yes.**

4 **Q. Do you agree with Juhl's response that NorthWestern's transmission**  
5 **department violated FERC Standards of Conduct by attempting to disclose**  
6 **non-public information about the Juhl projects in an attempt to influence**  
7 **the outcome of this case?**

8 **A. No.** NorthWestern's transmission department functions independently of  
9 NorthWestern's supply department. Juhl Energy made a vague statement that  
10 NorthWestern is attempting to disclose non-public information. I cannot fully  
11 address this statement without knowing what specifically Juhl Energy is referring  
12 to. However, NorthWestern's transmission department and supply department  
13 do not coordinate work or procedures. We each work with customers following  
14 our own procedures and business processes. Also, FERC's Administrative  
15 Rules prevent communication of nonpublic transmission information by  
16 transmission employees directly or through a conduit to marketing function  
17 employees. None of the employees involved in this docket are marketing  
18 function employees.

19 **Q. Can you provide explanation of the time it has taken to provide Small**  
20 **Generator Interconnection Agreements to Juhl Energy for their projects?**

21 **A. Juhl Energy has cited that it has been 416 days since Juhl attempted to**  
22 **interconnect with NorthWestern's system, leading Juhl to believe that there has**

1        been inappropriate coordination between NorthWestern's two groups. This is not  
2        correct. Juhl Energy was notified when it applied for interconnection that  
3        NorthWestern was in the process of joining SPP. Due to the transition to SPP,  
4        Juhl Energy was told that they would be subject to additional study and review  
5        required by SPP, as SPP is an Affected System to the interconnection requests.  
6        NorthWestern performed study work for the Juhl projects in accordance with its  
7        Small Generator Interconnection Procedures. NorthWestern met the study  
8        timelines for study work for all three projects throughout this process.

9        Upon completion of NorthWestern's interconnection studies for the Juhl Wind  
10       projects, a review by SPP was required for each project. I sent an email to Corey  
11       Juhl on April 20, 2016 explaining that NorthWestern had been in discussions with  
12       SPP to determine what SPP would require for these projects. On May 18, 2016,  
13       NorthWestern held a call with Juhl Energy and SPP to discuss the study  
14       requirements by SPP for Affected System interconnections. SPP explained that  
15       they would need to perform an Affected System Impact Study for each of the Juhl  
16       Energy projects. On May 20, 2016, SPP sent Affected System Impact Study  
17       Agreements to Juhl Energy for Aurora County Wind, Brule County Wind and  
18       Davison County Wind. These agreements had to be executed and returned to  
19       SPP, along with the required study deposits, in order for SPP to perform the  
20       Affected System Impact Studies. When I submitted my testimony on October  
21       2016, these projects were on hold, as Juhl Energy had not provided the required  
22       agreements and deposits to SPP. NorthWestern received notice on November  
23       1, 2016 that Juhl had provided the required agreement and deposit and that they

1 were able to proceed with the Affected System Impact Studies for these projects.  
2 This was a 5 month delay on the part of Juhl Energy for each of these  
3 interconnection projects.

4 SPP provided Affected System Impact Studies to Juhl Energy and NorthWestern  
5 on January 12, 2017. SPP notified NorthWestern and Juhl Energy on February  
6 7, 2017 that no additional study work or review will be required for these projects.  
7 NorthWestern provided notice to Juhl Energy of its intent to proceed forward into  
8 negotiations of Small Generator Interconnection Agreements on February 8,  
9 2017.

10 **Q. Have you reviewed Juhl Energy's responses to PUC Staff's Data Requests**  
11 **3-3, 3-5, and 3-7?**

12 **A. Yes.**

13 **Q. Do you agree that Juhl Energy has demonstrated site control of the land**  
14 **necessary for the three proposed projects?**

15 **A. No.** When Juhl Energy initially applied for interconnection, it submitted what  
16 appeared to be appropriate site control documents. It provided Options for  
17 Lease and Wind Easements for each project. I accepted them as demonstrating  
18 site control at that time. The Option Agreement for Aurora County Wind was  
19 effective July 14, 2015 with a one-year term. The Option Agreement for Brule  
20 County Wind had an effective date of June 1, 2015 with a one-year term. The  
21 Option Agreement for Davison County Wind had an effective date of June 2,  
22 2015 with a one-year term. All of these agreements have now expired. As I

1 detailed in my testimony, I subsequently learned that the respective Option  
2 Agreements did not encompass the whole site of any project. As of the date of  
3 this rebuttal testimony, Juhl Energy has not demonstrated site control for any of  
4 the three proposed projects.

5 **Q. Has Juhl Energy provided you with any evidence of site control other than**  
6 **the now expired options on small portions of the land required for each of**  
7 **the three sites?**

8 **A. No.**

9 **Q. Can Juhl Energy enter into a Generator Interconnection Agreement for any**  
10 **project without having and demonstrating site control for the entire land**  
11 **necessary for the project?**

12 **A. No.**

13 **Q. Have you read the Testimony of Kavita Maini on behalf of the Commission**  
14 **Staff that was filed in this docket?**

15 **A. Yes**

16 **Q. Ms. Maini stated, "In rebuttal testimony, NorthWestern should explain (a)**  
17 **how it currently handles facility specific upgrades for a customer that are**  
18 **later used by others ...". Please respond to Ms. Maini's request.**

19 **A. NorthWestern provided its business practice on Cost Allocation and Refund**  
20 **Methodology in NorthWestern's Response to Commission Staff's Seventh Set of**  
21 **Data Requests, question 7-1. This business process says, "To minimize the**

1 opportunity for a customer taking advantage of a previously installed network  
2 system upgrade (i.e., free-rider opportunity), a customer request that has a  
3 queue date within 5 years after the network system upgrade commercial  
4 operation date will be responsible for an allocated share of the network system  
5 upgrade cost if the customer's request requires use of the network system  
6 upgrade."

7 **Q. In addition, Ms. Maini stated, "In rebuttal testimony, NorthWestern should**  
8 **... (b) also provide justification for the specific capacity and related**  
9 **configurations of the three substations to address Juhl's interconnection**  
10 **requests for the three QF projects." Please respond to Ms. Maini's request.**

11 **A. Although NorthWestern sometimes uses the terms substation and switchyard**  
12 **interchangeably, the proposed interconnection facilities are switchyards. At each**  
13 **site, Juhl proposes to tap into an existing 34.5 KV or 69 KV line. A line tap**  
14 **requires equipment to protect the electrical system and to maintain existing**  
15 **reliability. At a high level, each tap switchyard contains metering equipment,**  
16 **three reclosing power circuit breakers, air break switches and disconnect**  
17 **switches, plus the required infrastructure to support this equipment and the tap.**  
18 **This is the minimum equipment that will support safe and reliable operation of the**  
19 **tap and maintenance on the equipment. To facilitate maintenance and**  
20 **operations, NorthWestern designates standard equipment of each voltage. The**  
21 **paragraphs below describe the details of each interconnection.**

1 The Brule and Aurora sites are on our 69 KV line between Chamberlain  
2 Substation and Mt. Vernon Substation. NorthWestern must ensure that all of the  
3 equipment is designed for 69 KV operation. Under normal operating  
4 circumstances, either the Mt. Vernon Substation or the Stickney Substation feeds  
5 this line section. Both wind sites are between Stickney Junction and  
6 Chamberlain. If a fault occurs between Stickney and Chamberlain, the required  
7 three breaker design allows for relayed sectionalizing, restoring power to other  
8 substations. Line sections between breakers on this line also make relaying  
9 difficult without the three breaker designs.

10  
11 The Davison site is located on a 34.5 KV line between Mitchell Northwest  
12 Substation, Letcher Substation, and the Huron/Woonsocket area. The multiple  
13 substations on this line section feed the line from more than one 34.5KV source.  
14 The three breaker design provides reliability for all customers on this line section,  
15 and allows service to continue in the event of a line fault feeding the new  
16 switchyard.

17 The new switchyards are not oversized. NorthWestern will install standard  
18 equipment that matches both the voltage and ampacity of the existing line  
19 segment. Because some standard equipment does not exactly match the existing  
20 conditions, some components may have latent capacity. However, if another  
21 customer requested to interconnect a project to any of these new switchyards,  
22 NorthWestern would implement a new design to accommodate such request.  
23 While some of the network upgrades for the Juhl Wind projects could possibly be

1 shared with these new projects, NorthWestern would not have this information  
2 until study work was done under the new request.

3 **Q. Does this conclude your rebuttal testimony?**

4 **A. Yes, it does.**