

**STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION**

**Otter Tail Power Company  
Minn-Kota Ag Products Inc. - Richland County  
Public Convenience & Necessity**

**Case No. PU-17-96**

**Dakota Valley Electric Cooperative, Inc.'s  
PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER**

**APPEARANCES**

Commissioners Brian Kroshus, Randy Christmann, and Julie Fedorchak.

Cary Stephenson, Associate General Counsel, Otter Tail Power Company, 215 S. Cascade Street, Fergus Falls, MN 56538-0496, appearing on behalf of Otter Tail Power Company.

Kimberly J. Radermacher, Radermacher Law Firm, P.C., 27 Center Ave., P.O. Box 597, LaMoure, ND 58458-0597, appearing on behalf of Dakota Valley Electric Cooperative, Inc.

Zachary Pelham, Legal Counsel, North Dakota Public Service Commission, State Capitol, Bismarck, ND 58505, appearing on behalf of the Public Service Commission.

Patrick Ward, Office of Administrative Hearings, 2911 North 14<sup>th</sup> Street, Suite 303, Bismarck, ND 58503, appearing as Administrative Law Judge.

**PRELIMINARY STATEMENT**

[1] This matter came before the North Dakota Public Service Commission ("Commission") on application of Otter Tail Power Company ("Otter Tail") to serve a commercial electric load located in the NE¼ of Sec. 10, Twp. 132N., Rge. 50W., Richland County, North Dakota ("Minn-Kota site"). This electric load is sought to be provided to an elevator site being built by Minn-Kota Ag. Products Inc. ("Minn-Kota"). The application for permanent authority was filed with the Commission on February 27, 2017.

[2] On February 27, 2017, the Commission issued a Notice of Opportunity for Hearing. On March 31, 2017, Dakota Valley Electric Cooperative, Inc., ("Dakota Valley") filed a protest to Otter Tail's application for permanent authority to serve the Minn-Kota site and requested a hearing on the matter.

[3] On July 26, 2017, the Commission issued a Notice of Hearing scheduling a public hearing to be held on Monday, October 23, 2017. The notice identified the following issues to be considered:

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1. From whom does the customer prefer electric service?
2. What electric suppliers are operating in the general area?
3. What electric supply lines exist within at least a two-mile radius of the location to be served, and when were they constructed?
4. What customers are served by electric suppliers within at least a two-mile radius of the location to be served?
5. What are the differences, if any, between the electric suppliers available to serve the area with respect to reliability of service?
6. Which of the available electric suppliers will be able to serve the location in question more economically and still earn an adequate return on its investment?
7. Which supplier's extended electric service would best serve orderly and economic development of electric service in the general area?
8. Would approval of the applications result in wasteful duplication of investment or service?
9. Is it probable that the location in question will be included within the corporate limits of a municipality within the foreseeable future?
10. Will service by either of the electric supplier in the area unreasonably interfere with the service or system of the other?

[4] On October 23, 2017, a public hearing (“hearing”) on the application in Case No. PU-17-096 was held as scheduled. Following the hearing, Otter Tail submitted late filed exhibits OTP-LF1 and LF5 and Dakota Valley submitted late filed exhibits DVEC-LF2, DVEC-LF3, DVEC-LF4 and DVEC-LF5, as directed by the Administrative Law Judge.

[5] On November 7, 2017, Otter Tail and Dakota Valley filed closing arguments and briefs.

[6] On November 14, 2017, Otter Tail and Dakota Valley filed reply briefs.

[7] Having heard and considered these matters, the Commission makes its:

#### **FINDINGS OF FACT**

[8] Otter Tail is an investor owned electric utility providing electric service to customers in

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North Dakota under the regulatory jurisdiction of the Commission.

[9] Dakota Valley is a rural electric cooperative providing electric service to its members in North Dakota.

***From whom does the customer prefer electric service?***

[10] Otter Tail's application included an appearance form signed by the customer, Minn-Kota, indicating it desires electric service from Otter Tail at the Minn-Kota site.

[11] George Schuler IV ("Schuler"), on behalf of Minn-Kota, also testified at the hearing indicating that Minn-Kota would prefer electric service from Otter Tail. The primary reason for Minn-Kota's preference relates to the difference between Otter Tail's and Dakota Valley's demand rates and the estimated overall annual cost of electric service.

[12] While customer preference is not a controlling factor, the Commission finds that the customer does prefer electric service from Otter Tail.

***What electric suppliers are operating in the general area?***

[13] Dakota Valley and Otter Tail are the only electric suppliers operating in the general area of the Minn-Kota site. Dakota Valley provides single-phase and three-phase service to rural customers adjacent to the site. Otter Tail primarily provides single-phase service to the communities of Barney and Mooreton, which are both located approximately three miles from the site.

***What electric supply lines exist within at least a two-mile radius of the location to be served, and when were they constructed?***

[14] Otter Tail has a 41.6 kV overhead transmission line that runs east and west along Highway 13, in close proximity to the Minn-Kota site. However, without some modification and considerable investment, this line by itself cannot service the proposed site. The 41.6 kV line also feeds the Central Power Electric Cooperative ("CPEC")/Dakota Valley substation, known as the Mooreton substation, which is the substation that would be utilized by Dakota Valley in extending service to the site. Otter Tail's 41.6 kV line went into service approximately 50 years ago. Other than this line, Otter Tail has little to no other electric supply lines within a two-mile radius of the location. To extend service to the site, Otter Tail would have to construct a new on-site substation on a 40 x 60 footprint, with a partially depreciated 2500 kVA step-down transformer fed by Otter Tail's adjacent 41.6 kV transmission line. There will be approximately 1,000 feet of three-phase 4/0 jacketed cable installed for distribution to the site.

[15] Dakota Valley has both single phase and three-phase electric supply lines located

throughout the two-mile radius. Dakota Valley serves approximately 20 members within the two-mile radius, while Otter Tail serves two. Dakota Valley has an existing three-phase cabinet and three-phase service within approximately 3,960 feet of the proposed site. The 3-phase line comes off the Mooreton substation, which was built in 1977 and just underwent a routine overhaul in 2017. The three-phase line is 4/0 jacketed cable that was installed in approximately 2012. Dakota Valley intends to extend three-phase service from the existing three-phase cabinet located just north of Highway 13 and directly east of the proposed site. This extension would consist of approximately 3,960 feet of three-phase 4/0 jacketed cable, an additional three-phase cabinet, and up to two new 1500 kVA transformers.

[16] The Commission finds that Dakota Valley has substantially more supply lines within a two-mile radius of the Minn-Kota site than does Otter Tail.

***What customers are served by electric suppliers within at least a two-mile radius of the location to be served?***

[17] Otter Tail serves two customers within a two-mile radius of the Minn-Kota site, one of which is a railroad service and the other is located right on the line. Both Otter Tail services are single-phase services.

[18] Dakota Valley serves approximately 20 customers within a two-mile radius of the Minn-Kota site. Of those 20 members, one is three-phase service and the remainder are single-phase service.

[19] The Commission finds that Dakota Valley serves more customers within at least a two-mile radius of the Minn-Kota site than does Otter Tail.

***What are the differences, if any, between the electric suppliers available to serve the area with respect to reliability of service?***

[20] At the hearing, SAIDI and CAIDI statistics, which is one way of looking at reliability, were provided for both electric suppliers. In comparing SAIDI numbers, it appears that both electric suppliers are very similar. In 2016, Otter Tail's SAIDI was 110.5, while Dakota Valley's was 130.9. In 2015, Otter Tail's was 100.6, while Dakota Valley's was 88. In 2014, Otter Tail was 74.2 and Dakota Valley was 75.5. In 2013, Otter Tail was 99.7 and Dakota Valley was 91.8. And in 2012, Otter Tail was 84.1, while Dakota Valley was 87.8. SAIDI is based on system wide numbers, while CAIDI looks at consumer average. Because of this and the difference in the size of the two electric suppliers, CAIDI is not determinative as to the issue of reliability in this specific case.

[21] Dakota Valley provided outage data specific to the Minn-Kota site for both Dakota Valley and Otter Tail. Otter Tail intends to use their Wahpeton substation to serve this load. According to Exhibit DVEC-14, between May 13, 2014, and November 18, 2016, the Wahpeton substation had

sustained approximately 15 outages. These outages ranged in duration from less than one minute to close to two hours. According to Richie Wolf of Otter Tail, this outage report does not include scheduled maintenance. It also does not include any data for the year 2017 or any time prior to May 19, 2014. The reason provided for the missing data prior to 2014 was that Otter Tail had undergone metering changes during that time, which caused the specifics as to this substation to be lost.

[22] Dakota Valley intends to use its Mooreton substation and a feeder from the substation to supply power to the Minn-Kota site. According to Exhibit DVEC-11, between 2007 and 2017, the Mooreton substation had a total of four outages. Seth Syverson of Dakota Valley testified that the outage on July 17, 2011, that was over four hours in length, was as a result of downed poles on Otter Tail's 41.6 kV line that powers the Mooreton substation. There is another outage on May 3, 2012, that also may relate to issues with Otter Tail's line. However, given the general description of Power Supplier, Syverson was unable to say for certain if that was an Otter Tail or CPEC issue. On Exhibit DVEC-12, Syverson pointed out that there were two outages total in seven years that would relate to the feeder that would directly serve the Minn-Kota site and those date back to 2010, prior to the new three-phase wire being installed.

[23] Syverson also testified that the miles of transmission line that would serve this area could play into reliability. Both Syverson and Wolf testified that Otter Tail would be utilizing the 41.6 kV transmission line that has at least 40 miles of exposure to serve the Minn-Kota site. Syverson testified that Dakota Valley Mooreton substation is served by a 41.6 kV transmission line with approximately 10 miles of exposure. Wolf indicated that Otter Tail's transmission line was approximately 50 years old and is serviced at least annually. Syverson testified that portions of Otter Tail's 41.6 kV line do not have a static wire, which can lead to increased lightning strikes and decreased reliability. As to Dakota Valley's existing electrical services near the site, Syverson testified that the underground 4/0 already existing within .70 miles of this site was installed in approximately 2012 and has at least a 50-60 year life span. The Mooreton substation was built in 1977 by CPEC and undergoes annual maintenance. It also undergoes a major overhaul on a seven year cycle and this just occurred in 2017. Syverson also indicated that CPEC/Dakota Valley has other substations in this area that could be used in the event there are issues with the Mooreton substation. Those substations include the Dwight, South Wyndmere, North Wyndmere, and Hankinson subs; although the South Wyndmere would be the substation most likely used given its closer proximity to the Minn-Kota site.

[24] The extensions of service proposed by Otter Tail and Dakota Valley also play into the issue of reliability. Otter Tail proposes to tap its 41.6 kV transmission line and put a substation and 2500 kVA transformer onsite connected by approximately 1,000 feet of underground 4/0 cable. Richie testified that Otter Tail "probably" was going to utilize a 2500 kVA transformer that it had in its fleet. This transformer is approximately 26 years old, added to Otter Tail's fleet in 1991. Richie could not give specifics as to why the transformer was removed from service and how long it had been out of service. Richie could also not testify as to the maintenance of this specific transformer,

although he gave a generalized idea of how maintenance on such facilities are typically handled within Otter Tail. Dakota Valley proposes using all new cable, elbows, transformers and other incidentals to extend service to the Minn-Kota site. The proposal by Dakota Valley included two 1500 kVA transformers in the event that Minn-Kota wanted to split up loads and/or improve reliability. Syverson indicated that even one 1500 kVA transformer would be sufficient to serve the load, but that depending on Minn-Kota's wishes, a 2000 kVA transformer could be utilized. Syverson testified that the average life of a transformer is approximately 40-50 years. Because Otter Tail intends to utilize a used transformer there are some concerns regarding reliability going forward.

[25] Another issue that was touched on briefly at the hearing and goes to the issue of reliability is the issue of voltage drop. Syverson testified that any voltage drop experienced by Dakota Valley would fall within industry standards. Wolf also indicated that the same would be true for Otter Tail; however, he did indicate that there would be a more significant voltage drop if the load would have to be served outside of its normal source.

[26] The Commission finds that either supplier would be able to serve the Minn-Kota site with sufficient reliability. However, the Commission finds the site-specific outage information to be compelling and this reflects that Dakota Valley has had significantly less outages in the area than Otter Tail has.

***Which of the available electric suppliers will be able to serve the location in question more economically and still earn an adequate return on its investment?***

[27] Both Dakota Valley and Otter Tail would need to make some improvements and financial investment to their systems to bring electric service to the Minn-Kota site. Dakota Valley provided a detailed list of what it would cost for Dakota Valley to extend service to the Minn-Kota site. The proposed extension would be a logical extension of Dakota Valley's existing three-phase service in the area. The extension would include bringing in approximately 3,960 feet of 4/0 underground cable, adding a three-phase cabinet and placing up to two 1500 kVA transformers on site. The total cost of the Dakota Valley's proposed extension would be \$93,640.73. As Syverson had testified to at the hearing, this is Dakota Valley's "worst case scenario." Syverson indicated that based on historical data for similar facilities to the Minn-Kota's site, one 1500 kVA transformer would be sufficient to service the load. However, Syverson added a second 1500 kVA transformer in the event that Minn-Kota wanted to divide up the load and/or improve reliability. Syverson indicated that if Minn-Kota wanted only one transformer, it would reduce the overall cost by \$26,450.00, and if they wanted a 2000 kVA transformer, it would add approximately \$5,000.00 to the original cost of one transformer. This would then place the overall cost of investment by Dakota Valley between \$67,190.73 and \$72,190.73.

[28] Otter Tail projects a total investment for extension of \$235,869.00, which utilizes exempt material, including a 1991 2500 kVA transformer. Wolf had indicated that Otter Tail would

“probably” utilize this specific transformer for the Minn-Kota site, but could not guarantee its availability at the time of construction. If this transformer is not used, it could increase Otter Tail’s estimated costs of extension significantly.

[29] When it comes to rates, the Commission has to determine what the potential load factor for the Minn-Kota site will be in order to make an adequate comparison. Based on the information provided by Otter Tail and Dakota Valley, the Commission believes the Minn-Kota site is closest in its proposed configuration to Dakota Valley’s Elevator 3, which has a load factor of 33%. Schuler indicated that the Minn-Kota Barney facility will operate year-round and that it consists of two parts – inbound receiving and outbound shipping via 120 car BNSF trains. The facility will have 3 dump pits, with the ability to unload 20,000 bushels per hour at each dump pit, for a total of 60,000 bushels per hour. The facility will also be able to load out approximately 80,000 bushels per hour. Total capacity at this site will be just under 3 million bushels and total investment will be in the ballpark of \$20 million. Schuler indicated that this not a “small town elevator,” is “state of the art,” and will be one of the “nicest elevator facilities in the State of North Dakota.”

[30] Utilizing a 33% load factor, Otter Tail’s total annual energy cost relative to the Minn-Kota site would be \$271,981.05. Taking into account Otter Tail’s numbers for Total Energy Cost projected for Dakota Valley, less the Power Factor cost and On-Site Facilities charge that was taken into account, Dakota Valley’s total annual energy cost during the first nine years of operation would be approximately \$290,942.01. This would result in a total difference between the two of \$18,960.92 annually for the first nine years. However, in utilizing Dakota Valley’s updated year ten number for total energy cost set forth on page 7 of Exhibit DVEC-9 of \$306,035.75 less what Otter Tail projects is an 8% blended discount for the first nine years (which amounts to \$24,408.94 annually), Dakota Valley’s total projected annual energy cost for those nine years would be approximately \$281,626.81. This would result in a total difference between the two of \$9,645.76 annually for the first nine years. During year 10 and thereafter, there would be an annual difference of approximately \$34,054.66. These numbers are presupposing that there will be no change in rates for either entity, which is highly unlikely.

[31] Dakota Valley also testified regarding the potential for capital credits and stated that this should be taken into consideration when considering this factor. Dakota Valley’s Exhibit LF-4 sets forth the historical date on allocations and retirements made by Dakota Valley as to the entire membership. Based upon projected first year revenue for Minn-Kota of \$275,524.58, and using the actual allocation for 2016, Minn-Kota’s potential for capital credits in year one could be approximately \$42,429.14. As the economic development incentive drops off, this would increase the total revenue realized by Dakota Valley on the Minn-Kota load, which would in turn increase the dollar amount of capital credits to be received by Minn-Kota. While the amount of capital credits Minn-Kota will earn and ultimately be allocated is subject to fluctuation, it is still a factor the Commission needs to consider.

[32] Based on Dakota Valley’s late filed exhibits and the information provided by Otter Tail at

the time of the hearing, the Commission finds that both Dakota Valley and Otter Tail would earn an adequate rate of return on this load. Otter Tail is required to recoup its investment within a 3-year period, whereas Dakota Valley is not under those constraints. Dakota Valley has historically earned a rate of return on its investments of 3-4 percent, whereas Otter Tail's rate of return is 8.62 percent.

[33] The Commission finds that while Otter Tail's rates will likely result in a savings to the customer over time, rates can be highly variable. What is known is that the overall cost of investment by Otter Tail to extend service to the Minn-Kota site will be three to four times more than that projected by Dakota Valley. This ends up leveling out the difference between rates over a ten-year period. Even though the exact amount of capital credits Minn-Kota could receive is variable, the fact that Minn-Kota will earn capital credits is an advantage that Dakota Valley has that Otter Tail does not. Taking this into consideration, the Commission finds that Dakota Valley will be able to serve the Minn-Kota site more economically and still earn an adequate return on its investment.

***Which supplier's extended electric service would best serve orderly and economic development of electric service in the general area?***

[34] Both Otter Tail and Dakota Valley have been providing electric service to the general area near the Minn-Kota site for decades. Otter Tail serves the towns of Barney and Mooreton, which are approximately three miles away from the Minn-Kota site. Dakota Valley provides electric service to a majority of the rural customers in the area. Dakota Valley has almost ten times more customers within both a two-mile and one-mile radius of the Minn-Kota site than does Otter Tail.

[35] Service by Dakota Valley to the Minn-Kota site is a logical and economical extension and continuation of the existing electric service that Dakota Valley has provided to rural customers in the area since at least the 1940's. An extension of three-phase service by Dakota Valley to the Minn-Kota site would bring Dakota Valley's service further west along the Highway 13 corridor, which would benefit Dakota Valley's system and future expansion in the area. While Otter Tail's 41.6 kV transmission line runs directly in front of the Minn-Kota site, it cannot serve the site without substantial investment being made by Otter Tail. Otter Tail's proposed extension of service would serve only the Minn-Kota site and currently would not benefit any other Otter Tail customers in the area. Otter Tail indicated that it had no plans to extend service from the Minn-Kota site to anyone else in the area in the foreseeable future. To do so, Otter Tail would have to apply for a Certificate of Public Convenience and Necessity from the Commission.

[36] The Commission also considers whether a supplier's cost to provide service to the customer exceeds the cost to provide service to that same customer from a second supplier. Otter Tail's costs of providing electric service to the Minn-Kota site is currently projected to be less than Dakota Valley's costs. However, Minn-Kota will eventually recoup the annual difference by allocation of its capital credits earned with Dakota Valley.

[37] The Commission finds that the extension of service by Dakota Valley best serves the orderly and economic development of electric service in the general area.

***Would approval of the applications result in wasteful duplication of investment or service?***

[38] Both electric suppliers will need to construct extensions or upgrades to existing facilities to serve the Minn-Kota site. Such extensions will not result in the crossing of either electric supplier's facilities by the other.

[39] However, Otter Tail's proposed extension would serve only the Minn-Kota site and will not improve Otter Tail's electric service to the general area. This extension will come at a cost of approximately \$235,000.00. Dakota Valley has three-phase service within 3/4ths of a mile of the Minn-Kota site and an extension of that service is more logical and would improve Dakota Valley's electric service to the general area, not just to Minn-Kota.

[40] The Commission finds that approval of the application would result in wasteful duplication of investment or service.

***Is it probable that the location in question will be included within the corporate limits of a municipality within the foreseeable future?***

[41] The Minn-Kota site is located on Highway 13 in Richland County. The cities closest in proximity to the site are Barney, which is located approximately 2.5 to 3 miles to the northwest, and Mooreton, which is located approximately 3 miles to the northeast. The population of Barney is approximately 51 people and Mooreton is approximately 194 people. Given the distance from the site and the relatively small populations of both cities, the Commission finds that is unlikely that the location in question will be included within the corporate limits of a municipality within the foreseeable future.

***Will service by either of the electric supplier in the area unreasonably interfere with the service or system of the other?***

[42] The Commission finds that extension of service by either supplier would not interfere physically or operationally with the service or system of the other supplier.

[43] The Commission finds that the public convenience and necessity reasonably requires that the Commission deny Otter Tail's application because:

- While the customer prefers electric service from Otter Tail, customer preference is not controlling.
- Dakota Valley has served customers in the area since at least the 1940's and has more customers and electric supply lines within a one-mile and two-mile radius of

the location.

- While both electric suppliers would be able to serve the Minn-Kota site with sufficient reliability, Dakota Valley has sustained fewer outages in the general area and therefore, would be able to serve the Minn-Kota site more reliably.
- Dakota Valley will serve the Minn-Kota site more economically when considering the cost to extend service, the annual costs to the customer as reflected in rates for service, and the accrual and allocation of capital credits to Minn-Kota.
- Dakota Valley's extension of service would best serve the orderly and economic development of the area.
- Approval of Otter Tail's application would result in wasteful duplication of investment or service.

From the foregoing Findings of Fact, the Commission makes its:

### **CONCLUSIONS OF LAW**

[44] The Commission has jurisdiction over the parties and the subject matter of this proceeding.

[45] Public convenience and necessity do not require the granting of a Certificate of Public Convenience and Necessity to the applicant in this proceeding.

From the foregoing Findings of Fact and Conclusion of Law, the Commission its:

### **ORDER**

The Commission Orders:

[46] Otter Tail's application for a Certificate of Public Convenience and Necessity is denied. Therefore, Dakota Valley shall be permitted to provide electric service to the Minn-Kota site.

PUBLIC SERVICE COMMISSION

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Brian Kroshus  
Commissioner

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Randy Christmann  
Chairman

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Julie Fedorchak  
Commissioner