

**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**

**FINDINGS OF FACT, CONCLUSIONS OF LAW AND ORDER**

**March 29, 2018**

**Appearances**

Commissioners Randy Christmann, Julie Fedorchak, Brian Kroshus.

Zachary Pelham, Special Assistant Attorney General, 314 E. Thayer Ave., P.O. Box 400 Bismarck, ND 58502-0400, appearing on behalf of the Public Service Commission Advisory Staff.

Kim Radermacher, Attorney at Law, 27 Center Ave., P.O. Box 597, LaMoure, ND 58458, appearing on behalf of Dakota Valley Electric Cooperative.

Cary Stephenson, Associate General Counsel, Otter Tail Power Company, 215 S. Cascade Street, Fergus Falls, Minnesota 56537, appearing on behalf of Otter Tail Power Company.

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

**Preliminary Statement**

On February 27, 2017, Otter Tail Power Company (Otter Tail) Filed an application for a Certificate of Public Convenience and Necessity (of PC&N) to extend electric service to Minn-Kota Ag Products, Inc. (Minn-Kota) at a point located in NE ¼ of Section 10, T132N, R50W (Barney Township), Richland County, as shown in a map attached to the application. Also submitted with the application was a statement from the customer stating it desires Otter Tail to provide electric services at the requested location.

On March 15, 2017, the Commission issued a Notice of Opportunity for Hearing, which provided until April 11, 2017 for filing written objection based on the issue of public convenience and necessity.

On March 31, 2017, Dakota Valley Electric Cooperative (Dakota Valley) filed its Protest and Request for Hearing.

On July 26, 2017, the Commission issued a Notice of Hearing scheduling a public hearing to be held on October 23, 2017 in the Commission Hearing Room, 12<sup>th</sup> Floor, State Capitol, Bismarck, North Dakota 58505. The notice identified the following issues to be considered:

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?

On October 23, 2017, a public hearing was held as scheduled.

On February 1, 2018, Minn-Kota filed a Petition to Intervene and Request to Present Oral and Written Comments.

On February 2, 2018, Dakota Valley filed its Objection to Petition to Intervene and Request to Present Oral and Written Comments.

On February 12, 2018, Otter Tail filed its Response to Petition to Intervene and Request to Present Oral and Written Comments.

On February 19, 2018, the Administrative Law Judge denied Minn-Kota's. Petition to Intervene and Request to Present Oral and Written Comments.

On March 5, 2018, Minn-Kota filed a petition to reconsider, which was objected to by Dakota Valley on March 12, 2018.

The Administrative Law Judge denied Minn-Kota's Petition to Reconsider on March 13, 2018.

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

### **Findings of Fact**

1. The applicant, Otter Tail Power Company, is an investor owned electric utility providing retail electric service to customers in North Dakota under the regulatory jurisdiction of this Commission.
2. The protestant, Dakota Valley Electric Cooperative, Inc. is an electric distribution cooperative providing retail electric service to its members in North Dakota.
3. The customer, Minn-Kota Ag Products, Inc., is a corporation organized under the laws of North Dakota.

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

4. Otter Tail's application included an appearance form signed by the customer, Minn-Kota, requesting that Otter Tail provide service to Minn-Kota at the site identified in the application.
5. At the public hearing, Minn-Kota representative George Schuler IV testified that Minn-Kota is a family-owned, closely held corporation that is building a \$20 million commercial grain handling facility at the Minn-Kota site. The new Minn-Kota facility is designed to receive 20,000 bushels of grain per hour. The facility will have a storage capacity of approximately 3 million bushels and is specifically designed to load Burlington Northern & Santa Fe (BNSF) 120 car unit trains. Minn-Kota plans to start operating the new facility in June 2018.
6. Mr. Schuler testified Otter Tail's General Service rate structure is better suited to Minn-Kota's operational characteristics and size than Dakota Valley's rate structure, which features a higher demand charge. Schuler testified that based on his experience at Minn-Kota's smaller Wahpeton grain handling facility served by Dakota Valley, Minn-Kota is concerned that it may be forced to operate the new facility sub-optimally to minimize the impact of Dakota Valley's higher demand charge. This could include limiting drying operations to certain times, limiting the intensity of loading operations, and otherwise restricting operations that make sense commercially but for triggering high demand charges.

7. Mr. Schuler estimated that Otter Tail service will cost Minn-Kota approximately \$100,000 less in annual electric charges than Dakota Valley service. Schuler testified Otter Tail service would better enable Minn-Kota to grow and reinvest in the new facility and to provide local producers a competitive advantage when selling their crops.

8. Mr. Schuler testified that he believed Otter Tail's plan to extend service to Minn-Kota offered better reliability and outage restoration performance than Dakota Valley's plan because of the limited amount of distribution line exposure under Otter Tail's plan. Mr. Schuler explained the negative financial impacts faced by Minn-Kota, including demurrage charges from BNSF, for delays caused by outages and service interruptions, noting that any amount of risk reduction was worthwhile from a business perspective.

9. Mr. Schuler testified that Otter Tail's plan to extend service allowed Minn-Kota greater flexibility and potential cost savings concerning the number and size of electric motors that would require soft start devices. These devices limit the impact on the distribution system caused when large motors are started. Dakota Valley policy requires soft starts for motors with more than 30 horsepower. However, Dakota Valley testified that it did not see that policy as being a forced requirement on Minn-Kota given its distance from the substation.

10. Mr. Schuler testified that Minn-Kota prefers to receive its electric service from a provider whose rates and services are subject to regulatory oversight and approval by an independent agency with an opportunity for customer input.

11. The Commission finds the customer prefers electric service from Otter Tail.

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

12. Otter Tail and Dakota Valley are the only electric suppliers operating in the general area of the Minn-Kota site.

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

13. Otter Tail owns and operates a 41.6 kV transmission line adjacent to the Minn-Kota site, running parallel to and on the northside of North Dakota Highway 13. Otter Tail's 41.6 kV transmission line is fed from Otter Tail's Wahpeton transmission substation. The transmission line was put into service as a 41.6 kV transmission facility in approximately 1970.

14. Dakota Valley has distribution lines throughout the two-mile radius. Dakota Valley has three-phase service with an existing three-phase cabinet approximately 3,960 feet to the east of the Minn-Kota point of service. Dakota Valley's three phase distribution line extending from its Mooreton distribution substation to the existing three phase cabinet was put in service in approximately 2013.

15. Otter Tail would serve the Minn-Kota facility by tapping its 41.6 kV transmission line adjacent to the Minn-Kota site. This tap would feed a 40' x 60' distribution substation with a partially depreciated transformer to be constructed by Otter Tail on the Minn-Kota site on property leased from or purchased from Minn-Kota. Otter Tail would extend three phase 12.5 kV underground 4/0 jacketed distribution cable approximately 1,000 feet from the new distribution substation to the Minn-Kota point of service.

16. Dakota Valley would extend three-phase service from its existing three-phase cabinet that is served from its Mooreton distribution substation located approximately three miles south and east of the cabinet. This extension would consist of approximately 3,960 feet of new underground three-phase 4/0 jacketed cable, an additional three-phase cabinet, and up to two new 1500 kVA transformers.

***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. Dakota Valley serves approximately 18 customers within a two-mile radius of the Minn-Kota site.

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

18. Dakota Valley's Mooreton distribution substation is served by the same Otter Tail 41.6 kV transmission network as would serve Otter Tail's proposed distribution substation. Therefore, Otter Tail and Dakota Valley have similar transmission service risks and any meaningful differences in reliability between the electric suppliers are differences in each provider's proposed distribution service to Minn-Kota.

19. Otter Tail's plan to extend service to Minn-Kota results in shorter distribution line length and less distribution line exposure than Dakota Valley's plan. As measured from each provider's respective distribution substation and Minn-Kota's point of service, Otter Tail would serve Minn-Kota through approximately 1,000 feet of underground three phase distribution line. Dakota Valley would serve Minn-Kota through approximately four miles of underground three phase distribution line.

20. Engineering evidence presented at the hearing indicates that the risk of service voltage fluctuations, service interruptions, outages and the length of outages generally increases with the length of distribution line serving or connected to a customer. In this context, Otter Tail's plan to extend service has less risk of outages to Minn-Kota.

21. Dakota Valley's Mooreton distribution substation serves approximately 255 other Dakota Valley customers. The transformer feeder at the Mooreton substation from which Dakota Valley would serve Minn-Kota serves approximately 52 other Dakota Valley customers. Otter Tail's proposed distribution substation located on property, leased or purchased from Minn-Kota, would initially serve only Minn-Kota.

22. Engineering testimony presented at the hearing indicates that voltage fluctuations, interruptions and outages at service points fed from a transformer feeder can negatively affect electric service to other customers fed from that same feeder. In this context, Otter Tail's plan to extend service to Minn-Kota has less risk of voltage fluctuations, service interruptions, and outages than does Dakota Valley's plan.

23. The Customer Average Interruption Duration Index (CAIDI) measures the average length of time of service interruptions experienced by an electrical provider's customers. CAIDI is not weighted or measured by customer densities. Otter Tail presented evidence showing Dakota Valley's system five-year weather normalized CAIDI average is 114.18 minutes and Otter Tail's system five-year weather normalized CAIDI average is 64.6 minutes.

24. Otter Tail's proposal to serve Minn-Kota's large motor load on a dedicated circuit from a dedicated substation it will have to construct may offer a higher level of reliability. However, the Commission finds that both Otter Tail and Dakota Valley would provide reliable service to Minn-Kota.

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

25. Otter Tail's estimated aggregate cost to extend service to Minn-Kota is \$235,870. The primary expense reflected in this figure is the distribution substation Otter Tail intends to install.

26. Dakota Valley's estimated aggregate cost to extend service to Minn-Kota is \$93,640. The primary expense reflected in this figure is the cost of extending three phase underground distribution line to Minn-Kota's point of service.

27. Otter Tail intends to serve Minn-Kota under Otter Tail's General Service Rate for Secondary Service (rate code 401) and current rate riders, which are part of Otter Tail's Commission-approved tariff and available to all Otter Tail customers. Dakota Valley intends to serve Minn-Kota under its board-approved rate schedule for three-phase large commercial service and Dakota Valley's Commercial Incentive Rate Discount.

28. Otter Tail estimates the annual cost to Minn-Kota for service under Otter Tail's General Service rate and applicable riders is \$251,136. This figure assumes that Minn-Kota has a peak demand of 1,504 kW, annual energy consumption of 2,591,444 kWh, and a load factor of 23 percent.

29. Otter Tail projects that Minn-Kota will save \$108,743 annually with Otter Tail service vs. Dakota Valley service. This cost difference is based on a comparison between Otter Tail and Dakota Valley using Otter Tail's projected load factor, peak demand and energy consumption assumptions noted in the preceding paragraph. If Dakota Valley waives its power factor penalty the annual cost difference is projected to be \$66,607 annually.

30. Dakota Valley provided Minn-Kota a proposal in March 2017, which estimated annual electric service charges of \$316,160, less an annual discount which declines over nine years.

31. In arriving at estimated costs, Otter Tail and Dakota Valley used different assumptions about Minn-Kota's load factor and peak demand. Dakota Valley's estimated annual cost to the customer figure assumes a peak demand of 11,874 kW, annual energy of 2,846,400 kWh, and a load factor of 33 percent.

32. Dakota Valley has higher demand (KW) charges and lower energy (kWh) charges compared to Otter Tail. Therefore, higher peak demand would increase Dakota Valley's bills more than it would increase Otter Tail bills. Load factor is expressed as a ratio of actual kWh energy usage divided by maximum possible annual kWh energy usage. A higher load factor would increase bills for Otter Tail customers more than for Dakota Valley customers.

33. Otter Tail and Dakota Valley independently estimated Minn-Kota's load factor by reviewing the load factors of other facilities they respectively serve. Otter Tail also based its load factor estimate on discussions with Minn-Kota. Dakota Valley did not discuss load factor with Minn-Kota.

34. Otter Tail and Dakota Valley each estimated Minn-Kota's peak demand and energy usage based in part on a review of comparable facilities and Minn-Kota's operational characteristics. Otter Tail also discussed demand estimates with Minn-Kota to ensure that it accurately estimated demand based on the facility's performance characteristics. Dakota Valley did not discuss demand estimates with Minn-Kota.

35. Otter Tail estimates annual revenues from Minn-Kota of \$251,136. After adjusting Otter Tail's estimated annual revenue by \$28,116 for the annual return requirement of 8.62 percent on Otter Tail's incremental investment to serve the location; and down by \$64,786 for the annual cost of fuel and purchased power to serve the location, there is net contribution to Otter Tail's system costs of \$158,234.

36. Dakota Valley estimated annual revenues from Minn-Kota ranging from \$275,524 to \$306,035 over a nine-year discount period. Dakota Valley projected it would earn 3.19 percent on the capital deployed to extend service to Minn-Kota, and a net first-year contribution to common system costs of \$16,728.

37. The Commission finds that either supplier could earn a sufficient return on its investment to extend service to the customer. Dakota Valley would extend service more economically while Otter Tail's ongoing costs of providing service would be more economical.

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

38. 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.

39. Otter Tail provides distribution service to the communities of Mooreton and Barney approximately 2.3 and 3.1 miles respectively from the Minn-Kota site, but has no distribution facilities within the general area of the site.

40. Dakota Valley, and Central Power Electric Cooperative, have made investments in the Mooreton substation and associated distribution facilities to serve the general area. Dakota Valley's cost to extend service to the site is less than Otter Tail's because of these previous investments.

41. 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.

42. Dakota Valley's extension of service to Minn-Kota would best serve orderly and economic development of electric service in the general area.

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

43. Service by Otter Tail to the Minn-Kota facility would require construction of a new substation while the existing Mooreton substation is fully capable of serving the facility.

44. Dakota Valley, and Central Power Electric Cooperative, have made investments in the Mooreton substation and associated distribution facilities to serve the general area. Approval of Otter Tail's application to serve the Minn-Kota facility would result in wasteful duplication of service and investment.

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

45. The Minn-Kota site is approximately 2.3 miles west of the City of Mooreton, and 3.1 miles east of the City of Barney.

46. It is not probable that the municipal boundaries of Mooreton or Barney will be extended to include the Minn-Kota site in the foreseeable future.

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

47. Service by Otter Tail to Minn-Kota will not interfere with Dakota Valley service or operations. Service by Dakota Valley to Minn-Kota will not interfere with Otter Tail service or operations.

***Balance and Weight of Factors***

48. The Commission finds that the public convenience and necessity does not require the granting of a Certificate of Public Convenience and Necessity to Otter Tail because:

- a. While the customer prefers electric service from Otter Tail, customer preference is not controlling in the issue of public convenience and necessity.
- b. Dakota Valley has more customers and electric supply lines within a one-mile and two-mile radius of the location.
- c. The evidence indicates that either electric supplier would serve the Minn-Kota site with sufficient reliability.
- d. Existing cooperative distribution facilities allow Dakota Valley to extend service to the Minn-Kota site more economically, though Otter Tail's ongoing costs of service would be less depending on load characteristics and potential future capital credit distributions.
- e. Dakota Valley's extension of service would best serve the orderly and economic development of the area.
- f. Approval of Otter Tail's application would result in wasteful duplication of investment or service

**Conclusions of Law**

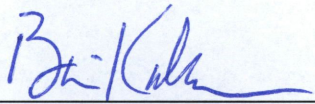
1. The Commission has jurisdiction over the parties and the subject matter of this proceeding.
2. Public convenience and necessity does not require the granting of a Certificate of Public Convenience and Necessity to the applicant in this proceeding.

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

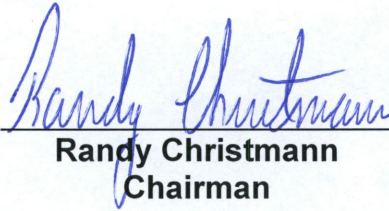
**Order**

The Commission Orders Otter Tail Power Company's application for a Certificate of Public Convenience and Necessity to extend service to Minn-Kota Ag Products, Inc. is denied.

**PUBLIC SERVICE COMMISSION**



**Brian Kroshus**  
Commissioner



**Randy Christmann**  
Chairman



**Julie Fedorchak**  
Commissioner