

STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION

Allete, Inc.  
210 MW Bison 4 Wind Farm- Mercer, Morton, Oliver Cty  
Siting Application

Case No. PU-13-127

AFFIDAVIT OF SERVICE BY CERTIFIED MAIL

STATE OF NORTH DAKOTA  
COUNTY OF BURLEIGH

Jen Lein deposes and says that:

she is over the age of 18 years and not a party to this action and, on the 27<sup>th</sup> day of **September, 2013**, she deposited in the United States Mail, at Bismarck, North Dakota, **one** envelope with certified postage, return receipt requested, fully prepaid, securely sealed and containing a photocopy of:

**Order**

And Original Of:  
**Certificate of Site Compatibility #34**

The envelope was addressed as follows:

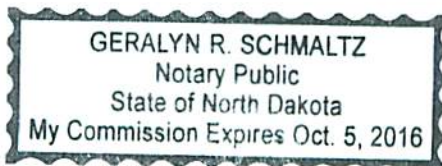
David Moeller  
Minnesota Power  
30 West Superior Street  
Duluth, MN 55802-2093

**Cert. No. 7013 0600 0001 7154 5185**

The address shown is the respective addressee's last reasonably ascertainable post office address.

Subscribed and sworn to before me  
this 27<sup>th</sup> day of **September, 2013**.

SEAL



*Jen Lein*  
\_\_\_\_\_  
*Geraldine R. Schmalz*  
\_\_\_\_\_  
Notary Public

**STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION**

**ALLETE, Inc.  
210 MW Bison 4 Wind Project – Oliver County  
Siting Application**

**Case No. PU-13-127**

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

**September 25, 2013**

**Appearances**

Commissioners Brian P. Kalk, Randy Christmann, and Julie Fedorchak

David R. Moeller, Senior Attorney, Minnesota Power, 30 West Superior Street,  
Duluth, MN 55802, on behalf of the Applicant.

Mitchell D. Armstrong, Special Assistant Attorney General on behalf of the North  
Dakota Public Service Commission.

Patrick Ward, Administrative Law Judge pursuant to temporary appointment by  
the Office of Administrative Hearings, 1701 North Ninth Street, Bismarck, North Dakota  
58501-1882, as Procedural Hearing Officer.

**Preliminary Statement**

On March 15, 2013, Minnesota Power, an operating division of ALLETE, Inc. (Minnesota Power) submitted a Letter of Intent (LOI) to submit an application for a Certificate of Site Compatibility for an up to 210 MW wind energy conversion facility in Mercer, Morton and Oliver counties of North Dakota. Minnesota Power requested in its LOI that the Commission shorten the one-year waiting period required between filing the LOI and the filing of an application.

On March 27, 2013, the North Dakota Public Service Commission (Commission) shortened the one-year waiting period to one month, and assessed a filing fee of \$100,000 due upon filing of an application.

On May 3, 2013, Minnesota Power filed an Application for a Certificate of Site Compatibility (Application) authorizing construction of the up to 210 MW Bison 4 Wind Project (Bison 4) consisting of up to 70 wind turbine generators and associated facilities in Morton and Oliver counties, North Dakota (Hearing Exhibit 1).

On July 10, 2013, the Commission deemed the Application complete conditioned on the filing of final wind turbine locations on or before August 14, 2013, and issued a Notice of Filing and Notice of Hearing, scheduling a public hearing for August 21, 2013, at 1:30 p.m. CDT, at the Oliver County Courthouse, 11 West Main, Center, North Dakota 58530. The Notice identified the following issues to be considered:

1. Will the location, construction and operation of the proposed facilities produce minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota?
2. Are the proposed facilities compatible with the environmental preservation and the efficient use of resources?
3. Will the proposed facility locations minimize adverse human and environmental impacts while ensuring continued system reliability and integrity, and ensuring that energy needs are met and fulfilled in an orderly and timely fashion?

On August 7, 2013, Minnesota Power submitted a map detailing the proposed final locations for turbines. Minnesota Power also supplemented its Application with additional information on wetland delineation, cultural resources surveys, agency consultation, and voluntary landowner notifications (Hearing Exhibit 2). The proposed final project area and turbine locations are all within Oliver County.

On August 13, 2013, Minnesota Power filed an executed Certification Relating to Order Provisions – Wind Energy Conversion Facility Siting (Hearing Exhibit 3).

On August 21, 2013, the Commission issued a Notice of Rescheduled Hearing, rescheduling the public hearing until September 13, 2013 at 9:00 a.m. CDT at the Oliver County Courthouse, 11 West Main, Center, North Dakota 58530. The Notice did not modify the issues to be considered.

On September 13, 2013, the public hearing was held as rescheduled. Having allowed all interested persons an opportunity to be heard, and having heard, reviewed and considered all testimony and evidence presented, the Commission makes the following:

### **Findings of Fact**

1. Minnesota Power, an operating division of ALLETE, Inc., is a Minnesota public utility as defined under Minn. Stat. §216B.02, subd. 4.

2. ALLETE, Inc., a Minnesota Corporation, is registered to conduct business in the State of North Dakota, as evidenced by a Certificate of Good Standing issued by the North Dakota Secretary of State on March 6, 2013 filed in Case No. PU-09-696.

3. Minnesota Power proposes to construct and own a wind energy facility (the Bison 4 Wind Project) to be located in Oliver County, North Dakota, approximately 10 to 12 miles north and northwest of the city of New Salem, North Dakota. The project area consists of approximately 22,629 acres. The wind turbines will be placed throughout the project site.

4. Associated facilities to be constructed within the project area include access roads, underground electrical collection and feeder lines, additions to an existing electrical substation, meteorological towers, and operations and maintenance buildings.

5. North Dakota Century Code § 49-22-16 provides that no energy conversion facility site shall be designated if it violates any county or city land use, zoning, building rules, regulations or ordinances. Oliver County requires zoning permits for construction, which Minnesota Power has obtained.

#### Project Design

6. The project will have a nameplate (gross) generating capacity of 204.8 MW, consisting of 64 3.2 MW wind turbines and associated facilities. Projected average annual energy output is estimated at 835,000 MWh per year.

7. Minnesota Power plans to use Siemens 3.2 MW turbines. These are utility-grade wind turbines with a nominal nameplate rating of 3,200 kW. Each turbine will have a 92.5-meter (303.5 feet) hub height and a 113 meter (370.7 feet) rotor diameter.

8. Each turbine begins operating at wind speeds of 6.7 miles per hour (mph), and reaches its rated capacity (3.2 MW) at a wind speed of 29 mph. Each turbine is designed to operate at wind speeds of up to 56 mph and can withstand wind speeds of 95 mph.

9. Each tower will be secured by a concrete foundation that can vary in design depending on the soil conditions. A typical foundation extends nine to eleven feet below grade where it spreads to a final diameter of 60 to 65 feet at the base. Turbine lighting will be limited to warning lights required by the Federal Aviation Administration. A control panel inside the base of each turbine tower houses communication and electronic circuitry. Each turbine is equipped with a wind speed and direction sensor that communicates to the turbine control system to signal when sufficient winds are present for operation. The turbine features variable-speed control and independent blade pitch to assure aerodynamic efficiency. Electricity generated by each turbine is brought to a pad-mounted transformer where the voltage is stepped up to a power collection line voltage of 34.5 kV. This electricity is collected by sets of underground power collection lines.

10. Bison 4 will interconnect with substations that have already been permitted by the Commission. The substations used will be the Tri-County Substation (Case No. PU-11-620) and an expansion of Minnesota Power's existing Bison Substation.

11. The 34.5 kV collector system transmits power to the project collector substations. At the project substations, the power will be transformed to 230 kV and transmitted via an overhead 230 kV transmission line, interconnecting with the transmission grid at the existing Square Butte Substation. Electrical energy is converted from AC to DC via a DC converter station within the Square Butte Substation. Electrical energy from the Bison 4 Wind Project will be transmitted to customers via the existing Minnesota Power DC Line which extends from the Square Butte Substation to Minnesota Power's Arrowhead Substation located near Duluth, Minnesota and on the existing AC system as available.

12. Wind data was collected from three meteorological towers constructed in the project site area. Minnesota Power expects the project will have annual average wind speeds of 8 mps (equivalent to 17.8 mph) or higher, comparable to National Renewable Energy Laboratory wind power class ratings of 5 and 6, indicating an excellent to outstanding wind resource.

13. Construction of the Bison 4 Wind Project is expected to take approximately 16 months, at a total estimated construction cost of \$345 million including associated substation and transmission facilities.

14. Minnesota Power states it has secured all wind options from landowners necessary for the construction and operations of the Bison 4 Wind Project.

15. Minnesota Power anticipates commencing construction in fall 2013, and commercial operation to begin in early 2015.

16. Safety factors will be incorporated into the wind turbines. Each turbine will be equipped with a Supervisory Control and Data Acquisitions (SCADA) communication technology to control and monitor the turbine. In addition, each turbine is equipped with a lightning protection system and is grounded and shielded to protect against lightning.

17. Construction and operation of the Bison 4 Wind Project will conform to requirements of the National Electric Safety Code.

#### Siting Criteria

18. North Dakota Administrative Code Chapter 69-06-08 sets forth certain criteria to guide the Commission in evaluating the suitability of granting an application for the certificate of site compatibility. The criteria set forth in North Dakota Administrative Code Section 69-06-08-01 are classified as Exclusion Areas, Avoidance Areas, Selection Criteria, and Policy Criteria. With the exception of prime and unique farm

land, an energy conversion facility must not be sited within an Exclusion Area. The exception for prime and unique farm land is if the Commission finds that the prime farm and unique farm land that will be removed from use for the life of the facility is of such small acreage as to be of negligible impact on agricultural production, then such exclusion shall not apply. An energy conversion facility must not be sited within an Avoidance Area unless the applicant shows that under the circumstances there is no reasonable alternative. In determining whether an Avoidance Area should be designated for a facility, the Commission may consider, among other things, the proposed management of adverse impacts; the orderly siting of facilities; system reliability and integrity; the efficient use of resources, and alternate sites. In accordance with the Commission's Selection Criteria, an energy conversion facility shall be approved only if it is demonstrated that no significant adverse impacts will result from the location, construction, and operation of the facility. In accordance with the Commission's Policy Criteria, preference may be given to an applicant demonstrating certain benefits of the energy conversion facility.

19. With the exception of prime farmland and possible cultural resource sites, no exclusion areas have been identified within the project area. Exhibit 6 of the Application (Hearing Exhibit 1) labeled Prime Farmland Soil Distribution Map shows that approximately 8.6 percent of the site is prime farmland soils, most of it located in the southeast and northeast portions of the site. The final layout will site only a limited number of turbines and facilities in prime farmlands. Unique and prime farmland to be disturbed by this energy conversion facility is of such small acreage as to be of negligible impact on agricultural production.

20. Up to 133 acres of agricultural production will be impacted due to turbine placement, access roads, the operations and maintenance facility and project substation, which constitutes less than 0.5 percent of the Project area. Wind turbine configuration will not result in significant impacts to agricultural production. No impacts on the agricultural quality of the crop land are anticipated. If compaction of soils occurs during construction, Minnesota Power will work with landowners to alleviate the compaction.

21. Minnesota Power submitted evidence to demonstrate that the proposed energy conversion facility would not have significant impact on the Selection Criteria set forth in North Dakota Administrative Code section 69-06-08-01(3).

22. Minnesota Power submitted evidence to demonstrate its commitment to maximize the benefits of the proposed energy conversion facility as far as is possible so as to meet the Policy Criteria set forth in North Dakota Administrative Code Section 69-06-08-01(4).

23. No significant adverse impact is foreseen on the ability of the affected area to provide community services, such as housing, health care, schools, police and fire protection, water and sewer, solid waste management, transportation, or public safety. The proposed project is expected to be of economic benefit to the affected area.

24. The only Avoidance Areas identified within the project area are cultural resource sites, woodlands and wetlands. No turbines will be placed within these areas.

25. According to North Dakota Geological Survey data, no viable economic lignite coal reserves have been identified within the project area.

#### Cultural Resources

26. The Bison 4 Wind Project will avoid all known archaeological sites.

27. On July 23, 2013 the North Dakota State Historic Preservation Office issued a letter concurring with the conclusion of the Class III Cultural Resource Inventory for the Bison 4 Wind Project by Beaver Creek Archaeology, regarding the "No Significant Sites Affected" and "No Historic Properties Affected" determinations (Hearing Exhibit 2).

#### Wetlands and Wildlife

28. Minnesota Power has consulted with numerous local, state, and federal agencies, which are identified in Appendix C of the Application (Hearing Exhibit 1), and Appendix B of the August 7, 2013 Supplement (Hearing Exhibit 2). Among the agencies providing input were the North Dakota Game and Fish Department, which has not objected to construction of the project.

29. The North Dakota Game and Fish Department indicated its primary concern is with disturbance of native prairie and wetlands. Minnesota Power plans to mitigate any impacts. The disturbance of native prairie and wetlands will be minimal.

30. Minnesota Power met with the United States Fish and Wildlife Service (USFWS) in April 2013. As noted in Section 10.11.29 of the Application, the USFWS stated in a phone conversation that there were no USFWS easements within the project footprint and that USFWS would not be sending any formal comments in response to the project notification.

31. On previous Bison wind projects concerns of the USFWS have focused on migratory birds, wetlands, native grasslands, and threatened and endangered species. Minnesota Power will implement measures to avoid and minimize effects to wildlife at the proposed site by locating facilities away from habitat and wetlands when possible.

32. Minnesota Power is developing an Avian and Bat Protection Plan (ABPP) that will be implemented during construction and for post-construction monitoring. The ABPP will include protocols for field technicians to report and document avian mortalities during routine maintenance operations.

33. A wetland delineation was conducted for the Bison 4 Wind Project and the results were submitted to the Commission (Hearing Exhibit 2). Wetlands will be avoided to the extent practicable during the construction phase of the project. If impacts to Clean Water Act jurisdictional waters are unavoidable and less than one-half acre, Minnesota Power will seek project authorization under a Section 404 U.S. Army Corps of Engineers (USACE) Nationwide Permit (NWP) application. Any permanent impacts to jurisdictional waters will be mitigated according to USACE requirements.

#### Further Mitigative Measures

34. Minnesota Power proposed setbacks of at least 538 feet (1.1 x turbine height) from existing transmission lines, publicly improved and maintained road right-of-ways, railroads and non-participant property boundaries in accordance with the Commission's setback requirements. The closest turbine to the right-of-way of a publicly maintained road is approximately 617 feet.

35. No turbines will be placed within 1,400 feet of an occupied residence. The closest turbine to a participating occupied residence is approximately 1402 feet. The closest turbine to a non-participating residence is approximately 5972 feet.

36. Minnesota Power conducted noise and shadow flicker analyses, using both "worst case" and "realistic" scenarios. These studies indicated that the Project will not cause adverse effects due to either noise or shadow flicker. As shown in Hearing Exhibit 2, the highest expected cumulative noise level at any participating residence is about 46 decibels (dBa). The highest expected level at any non-participating residence is 37 dBa. As shown in Hearing Exhibit 2, shadow flicker models show that the participating residence with the greatest potential cumulative exposure will experience about 29 hours annually. Those same models predict that the highest level of exposure at a non-participating residence would be about 5 hours annually.

37. Minnesota Power will maintain ground water protection and soil conservation practices to protect topsoil and adjacent resources, and to minimize soil erosion during construction and operation of the project. Best management practices (BMPs) for erosion and sediment control will be used to minimize wind and water erosion in the project area during and after construction. Only land needed for the facility will be impacted. Temporarily disturbed areas will be restored.

38. Minnesota Power has a legal obligation to decommission the wind energy facilities.

39. Minnesota Power made other representations and agreements as contained in the Certification Relating to Order Provisions – Wind Energy Conversion Facility Siting executed by Minnesota Power and filed with the Commission on August 13, 2013 (Hearing Exhibit 3), which is incorporated in these Findings of Fact. The Commission accepts Minnesota Power's proposed modification to Paragraph 16 that it shall bury all underground collection and feeder lines to a depth of at least 42 inches to the top of the

lines due to Minnesota Power's representation at the September 13, 2013 hearing about increased costs and that safety will not be compromised. The Commission accepts the following modifications proposed to the Tree and Shrub Mitigation Specifications attached to the certification:

- a. Paragraph 2: In windbreaks, shelterbelts and other planted areas trees that are one inch diameter or greater at breast height or shrubs anticipated to be cleared must be inventoried for replacement.
- b. Paragraph 3: In native growth areas trees anticipated to be cleared that are 3 inch diameter at breast height or greater must be inventoried for replacement.

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

### **Conclusions of Law**

1. The Commission has jurisdiction over this proceeding under North Dakota Century Code Chapter 49-22.
2. The energy conversion facility proposed by Minnesota Power is an energy conversion facility site as defined in North Dakota Century Code section 49-22-03(11).
3. The Application submitted by Minnesota Power meets the site evaluation criteria required by North Dakota Century Code chapter 49-22.
4. The location, construction, and operation of the proposed energy conversion facility will produce only minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota.
5. The proposed energy conversion facility is compatible with environmental preservation and the efficient use of resources.
6. The proposed energy conversion facility will minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion.
7. The Commission has jurisdiction to ensure compliance with National Electric Safety Code standards in the construction and operation of the proposed energy conversion facility.
8. The proposed project is of such design, location and purpose that it will produce minimal adverse effects.

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

## Order

The Commission orders:

1. Certificate of Site Compatibility for an Energy Conversion Facility No. 34 is issued to Minnesota Power for the construction, operation, and maintenance of a wind energy facility known as Bison 4 Wind Project in accordance with this Order.
2. The site, as proposed in the Application, is located in Oliver county approximately 12 miles north and northwest of New Salem, North Dakota, and is designated as the site for construction of the energy conversion facility.
3. Minnesota Power is authorized to construct up to 64 wind turbines totaling approximately 204.8 MW of total generating capacity in proposed and alternate locations, along with electric collection and communication lines, a project substation, operations and maintenance buildings, meteorological towers, access roads and other associated facilities identified in the application and at the September 13, 2013 public hearing.
4. The August 13, 2013, Certification Relating to Order Provisions – Wind Energy Conversion Facility Siting (Exhibit 3), except as modified in accordance with Findings of Fact paragraph 39 above, is incorporated by reference and attached to this Order.

### PUBLIC SERVICE COMMISSION

  
Randy Christmann  
Commissioner

  
Brian P. Kalk  
Chairman

  
Julie Fedorchak  
Commissioner

**PUBLIC SERVICE COMMISSION**

**STATE OF NORTH DAKOTA**

**Certificate of Site Compatibility for Energy Conversion Facility**

**Certificate Number 34**

*This is to certify that the Commission has designated an energy conversion facility site for Minnesota Power, an operating division of Allete, Inc., for its Bison 4 Wind Project consisting of up to 64 3.2 MW wind turbines and associated facilities in Oliver County, North Dakota.*


*The facility may be sited in this designated location in compliance with the energy conversion facility siting criteria. This certificate is issued in accordance with the Finding of Fact, Conclusion of Law and Order of the Commission in Case No. PU-13-127 dated September 25, 2013 and is subject to the conditions and limitations noted in the order.*

*Bismarck, North Dakota, September 25, 2013.*

**ATTEST:**

**PUBLIC SERVICE COMMISSION**

  
**Executive Secretary**

  
**Commissioner**

**STATE OF NORTH DAKOTA**  
**PUBLIC SERVICE COMMISSION**

**ALLETE, Inc.**  
**Bison 4 Wind Project – Mercer Morton Oliver Cty**  
**Siting Application**

**Case No. PU-13-127**

**CERTIFICATION RELATING TO ORDER PROVISIONS - ENERGY CONVERSION  
FACILITY SITING**

I am Bradley W. Oachs, a representative of Allete, Inc. ("Company") with authority to bind Company to requirements to be set forth by the Commission in its Order and I certify the following:

1. Company understands and agrees that the Certificate of Site Compatibility will be issued by the Commission subject to the conditions and criteria set forth in Chapter 49-22 of the North Dakota Century Code and Chapter 69-06-08 of the North Dakota Administrative Code, and that Company shall be responsible for compliance with this order and conditions and criteria set forth in the applicable laws and rules.
2. Company agrees to hold a preconstruction conference prior to commencement of any construction, which must include a Company representative, its construction supervisor, and a representative of Commission Staff, to ensure that Company fully understands the conditions set forth in the Commission's order.
3. Company agrees to comply with the rules and regulations of all other agencies having jurisdiction over any phase of the proposed energy conversion facility including all city, township, and county zoning regulations.
4. Company understands and agrees that it shall obtain all other necessary licenses and permits, and shall provide copies of all licenses and permits to the Commission prior to construction activity associated with the energy conversion facility that requires said license or permit.
5. Company agrees to inform the Commission and the Commission's third-party construction inspector of its intent to start construction on the energy conversion facility prior to the commencement of construction. Once construction has started, Company shall keep the Commission and the Commission's third-party construction inspector updated of construction activities on a weekly basis.
6. Company understands and agrees that the Certificate of Site Compatibility is subject to suspension or revocation and may, in an appropriate and proper case, be suspended or revoked for failure to comply with the Commission's order, the conditions and criteria of the certificate or subsequent modification, or failure to



comply with the applicable statutes, rules, regulations, standards, and permits of other state or federal agencies.

7. Company agrees to maintain records that will demonstrate that it has complied with the requirements of the Commission's order and the Certificate of Site Compatibility, and that it will preserve these records for Commission inspection at any reasonable time upon reasonable notice.
8. Company agrees to construct and operate the energy conversion facility in accordance with all applicable safety requirements.
9. Company agrees to construct and operate the energy conversion facility in the manner described in Company's application, in any late filed exhibits, and supplemental materials, (Application). To the extent there are any conflicts or inconsistencies between Company's Application and the provisions in this Certification Relating to Order Provisions, the Certification provisions control.
10. Company agrees to report promptly to the Commission the presence in or near the approved site of any critical habitat of threatened species, endangered species, bald eagles, or golden eagles that Company becomes aware of and which were not previously reported to the Commission.
11. Company understands and agrees that all cultural resource mitigation plans must be submitted to the North Dakota State Historic Preservation Office and approved prior to the start of any fieldwork and construction activity in the affected area.
12. Company understands and agrees that if any cultural resource, paleontological site, archeological site, historical site, or grave site is discovered during construction, it must be marked, preserved and protected from further disturbances until a professional examination can be made by the State Historical Society, a report of such examination is filed with the Commission, and clearance to proceed is given by the Commission.
13. Company understands and agrees that all buried facility crossings of graded roads shall be bored unless the responsible governing agency specifically permits Company to open cut the road.
14. Company understands and agrees that all pre-existing township and county roads and lanes used during construction must be repaired or restored to a condition that is equal to or better than the condition prior to the construction of the energy conversion facility and that will accommodate their previous use, and that areas used as temporary roads or working areas during construction must be restored to their original condition.

15. Company understands and agrees that construction must be suspended when weather conditions are such that construction activities will cause irreparable damage to roads or land, unless adequate protection measures approved by the Commission are taken.
16. Company understands and agrees that where available, at least 12 inches of topsoil over and along trench areas, roadways, tower locations, and locations of associated facilities shall be stripped and shall be segregated from the subsoil and be replaced only after the subsoil is replaced. Any area on which excavated subsoil will be placed must first be stripped of topsoil. After backfilling with subsoil is completed, any excess subsoil must be placed over the excavation area, blending the grade into existing topography.
17. Company understands and agrees that it shall bury all underground collection and feeder lines to a depth of at least 48 inches to the top of the lines.
18. Company understands and agrees that reclamation, fertilization, and reseeding is to be done according to the Natural Resources Conservation Service recommendations, unless otherwise specified by the landowner and approved by the Commission.
19. Company understands and agrees that its obligation for reclamation and maintenance of the approved site will continue throughout the life of the energy conversion facility.
20. Company is aware that North Dakota law requires that all companies that own or operate electric generation of any size for the primary purpose of resale must comply with the standards of the National Electrical Safety Code in effect at the time of construction of the generation facility, and agrees to comply with that requirement.
21. Company agrees to comply with the Tree and Shrub Mitigation Specifications, attached.
22. Company understands and agrees that it shall repair or replace all fences and gates removed or damaged during all phases of construction and operation of the proposed energy conversion facility.
23. Company understands and agrees that it shall repair or replace all drainage tile broken or damaged as a result of construction and operation of the proposed energy conversion facility.

24. Company understands and agrees that it shall work with landowners and residents to mitigate any increase in television and residential radio interference that results from the construction of the energy conversion facility.
25. Company understands and agrees that staging areas or equipment shall not be located on land owned by a person other than Company unless otherwise negotiated with landowners.
26. Company understands and agrees that it shall remove all waste that is a product of construction and operation, restoration, and maintenance of the site, and properly dispose of it on a regular basis.
27. Company agrees that it shall, as soon as practicable upon the completion of the construction of each wind turbine, restore the area affected by the activities to as near as is practicable to the condition as it existed prior to the beginning of construction.
28. Company agrees that it shall provide, if requested, educational material for landowners within the site boundaries about the proposed energy conversion facility and any restriction or danger concerning the proposed energy conversion facility.
29. Company understands and agrees that it shall provide any necessary safety measures for traffic control or to restrict public access to the energy conversion facility.
30. Company understands and agrees that it shall advise the Commission of any extraordinary events which take place at the site of the energy conversion facility, including injuries to any person, the death of any threatened or endangered species, a tower collapse, or a catastrophic turbine failure, within five business days of such event.
31. Company understands and agrees that it shall advise the Commission of the discovery of a large number of dead birds or bats on the site within five business days of such event.
32. Company understands and agrees that it shall implement a procedure for how complaints concerning the proposed energy conversion facility will be handled by Company
33. Company agrees to provide the Commission with engineering design drawings showing surveyed structure and collection substation locations prior to construction.

34. Company understands and agrees that it shall inform the Commission in writing of any plans to modify the energy conversion facility, or of any plans to modify the site plan for the energy conversion facility. Company understands and agrees to obtain written approval from the Commission prior to any modifications to the site plan or the energy conversion facility, associated facilities, and roadway locations. Approval may be granted after notice and opportunity for hearing.
35. Company agrees to provide the Commission with both an electronic and a paper copy of the site approved by the Commission and the facility design specifications for the construction of the energy conversion facility showing the location of the energy conversion facility as built, and will provide this information within 3 months of the completion of the construction. Company also agrees to provide an electronic version of the site approved by the Commission and the facility design specifications for the construction of the energy conversion facility showing the location of the energy conversion facility as built that can be imported into ESRI GIS mapping software within 3 months of the completion of the construction. This electronic map data must be referenced to the North Dakota coordinate system of 1983, North and/or South zones US Survey feet (NAD 83) UTM Zone 13N or 14N feet (NAD 83), or geographic coordinate system (WGS 84) feet. The vertical data must be in the appropriate vertical datum for the coordinate system used. All submissions must specify the datum in which the data was developed.
36. Company is aware that under North Dakota Century Code section 49-02-27 the Commission has rules for decommissioning of wind energy conversion facilities. Company agrees to comply with all decommissioning rules adopted by the Commission.
37. Company understands and agrees that the authorizations granted by the Certificate of Site Compatibility for the energy conversion facility are subject to modification by order of the Commission if deemed necessary to protect further the public or the environment.
38. Company understands and agrees that in the event Company desires to construct, within any site granted by a Certificate of Site Compatibility in this proceeding, an energy conversion facility that was not requested in Company's application in this proceeding, Company shall apply for a Certificate of Site Compatibility for the facility.
39. Company shall notify the Commission, as soon as reasonably possible, if any damage, as defined by North Dakota Century Code Chapter 49-23, occurs to underground facilities during construction conducted under the certificate or permit issued in this proceeding. In the event of any damage to underground facilities, Company shall suspend construction in the vicinity of the damage until compliance with One-Call Excavation Notice System requirements under North Dakota Century

Code Chapter 49-23 has been determined and clearance to proceed has been given by the Commission.

40. The certificate of site compatibility is subject to suspension or revocation and may, after hearing, be suspended or revoked for failure to comply with the Commission's order, requirements of the One-Call Excavation Notice System under North Dakota Century Code Chapter 49-23, the conditions and criteria of the certificate or permit or subsequent modification, or failure to comply with applicable statutes, or rules, regulations, standards, and permits of other state or federal agencies.

Dated this 8 day of August, 2013.

ALLETE, INC.

By Bradley W. Oachs  
Bradley W. Oachs

Its Chief Operating Officer

**STATE OF NORTH DAKOTA**  
**PUBLIC SERVICE COMMISSION**

**ALLETE, Inc.**  
**Bison 4 Wind Project – Mercer Morton Oliver Cty**  
**Siting Application**

**Case No. PU-13-127**

**Tree and Shrub Mitigation Specifications**

**Inventory**

1. Trees and shrubs anticipated to be cleared, including those that are considered invasive species or noxious weeds (e.g., *Caragana arborescens*, *Elaeagnus angustifolia*, *Rhamnus cathartica*, *Tamarix chinensis*, *T. parviflora*, *T. ramosissima*, *Ulmus pumila*), must be inventoried before cutting. The inventory must record the location, number, and species of trees and shrubs.
2. In windbreaks, shelterbelts and other planted areas, trees or shrubs anticipated to be cleared, regardless of size, must be inventoried for replacement.
3. In native growth areas, trees anticipated to be cleared that are 1 inch diameter at breast height (dbh) or greater must be inventoried for replacement.
4. In native growth areas, shrubs anticipated to be cleared in the permanent right-of-way must be inventoried for replacement.
5. In native growth areas outside the permanent right-of-way, shrubs must be cut flush with the surface of the ground, taking care to leave the naturally occurring seed bank and root stock intact. If soil disturbance is necessary, the native topsoil must be preserved and replaced after construction. Shrubs must be allowed to regenerate naturally where native topsoil is preserved and replaced. Where native topsoil is not preserved and replaced, shrubs anticipated to be cleared must be inventoried for replacement.
6. In native growth areas, trees and shrubs may be inventoried by actual count or by a sampling method that will properly represent the woody vegetation

population. A sampling plan developed by the company, filed with the North Dakota Public Service Commission (Commission) and approved prior to the start of construction must define the sampling method to be used for trees, for tall shrubs and for low shrubs. The data from the sample plots must be extrapolated to the total acreage of the wooded area to be cleared to determine the species and quantity of trees and shrubs to be replaced.

#### **Clearing for Construction**

7. Trees and shrubs must be selectively cleared, leaving mature trees and shrubs intact where practical.
8. The maximum width of clear cuts through windbreaks, shelterbelts and all other wooded areas is 50 feet, unless otherwise approved by the Commission.
9. If the area of trees or shrubs actually cleared differs from the area inventoried, the difference in number of trees and shrubs to be replaced must be noted on the inventory.

#### **Replacement**

10. Prior to tree and shrub replacement, documentation identifying the number and variety of trees and shrubs removed, as well as the mitigation plan for the proposed number, variety, type, location and date of replacement plantings, must be filed with the Commission for approval.
11. Two 2-year-old saplings must be planted for every one tree removed. Two shrubs (stem cuttings) must be planted for every one shrub removed.
12. Except in the case of invasive or noxious species, trees and shrubs must be replaced by the same species or similar species, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service. Invasive or noxious species must be replaced by similar non-invasive or non-

noxious species suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service.

13. Landowners must be given the option of having replacement trees and shrubs planted on the landowner's property, either on or off the right-of-way. The landowner must also be given the opportunity to waive those options in writing in order to have replacement trees and shrubs planted off the landowner's property.
14. At the conclusion of the project, documentation identifying the actual number, variety, type, location and date of the replacement plantings must be filed with the Commission.
15. Tree and shrub replacements must be inspected annually, in September, for three years. The first annual inspection must be at least one year from the anniversary date of the original plantings. A report of each annual inspection must be submitted to the Commission by October 1 of each year, documenting the condition of plantings and any woodlands work completed as of September of each year. If after the third annual report the survival rate is less than 75%, the Commission may order additional planting(s).