



STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION

enXco Development Corporation  
Merricourt Wind Power Project  
Siting Application

Case No. PU-08-932

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

June 8, 2011

**Appearances:**

Commissioners Tony Clark, Brian Kalk and Kevin Cramer.

Jeffrey L. Leclerc, Attorney-at-Law and Eric F. Swanson, Attorney-at-Law appearing Pro Hac Vice, Winthrop & Weinstine, P.A., 225 South Sixth Street, Suite 3500, Minneapolis, Minnesota 55402-4629; on behalf of the applicant, enXco Development Corporation.

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

Al Wahl, 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 December 23, 2008, enXco Development Corporation (enXco) filed with the North Dakota Public Service Commission (Commission) a revised Letter of Intent to File an Application for a Certificate of Site Compatibility and an application for a Waiver of Procedures and Time Schedules (LOI), for a proposed 150 MW wind farm project in Dickey and McIntosh Counties, North Dakota and including a request that the Commission shorten the one-year waiting period required between filing of the LOI and the filing of a siting application.

On December 31, 2008, the Commission acknowledged the LOI, shortened the one-year waiting period between the filing of an LOI and a siting application to one day, and assessed a filing fee of \$100,000.00.

On October 6, 2010, enXco filed its Application for a Certificate of Site Compatibility authorizing construction of the Merricourt Wind Power Project consisting of up to 100 1.5 MW wind turbine generators and associated facilities in Dickey and McIntosh Counties of North Dakota.

On November 12, 2010, the Commission deemed the Application complete and issued a Notice of Filing and Notice of Hearing, scheduling a public hearing for

December 21, 2010. Inclement weather forced postponement of the hearing and on December 30, 2010, the Commission issued a Notice of Rescheduled Hearing (Notice), rescheduling the hearing for February 10, 2011 at 10:00 AM held at Teddy's Grill, 1101 Industrial Park, Edgeley, North Dakota.

On December 14, 2010, enXco filed an Addendum to the Application, responding to comments or questions from Commission Staff and enclosing additional information including the final project layout map, designated piping plover critical habitat map, occupied residences map and a Biological Conditions and Effects Summary.

On February 10, 2011, a public hearing was held as scheduled in Edgeley, North Dakota.

On March 18, 2010, the Commission issued a Notice of Filing and Notice of Hearing, scheduling a public hearing for 10:00 A.M. on April 15, 2011 at the Dickey County Courthouse in Ellendale, North Dakota.

Inclement weather again forced postponement of the hearing and on April 15, 2011, the Commission issued a Notice of Filing and Notice of Hearing rescheduling the hearing for May 12, 2011 at 10:00 AM at the Dakota Family Restaurant in Ashley, North Dakota in McIntosh County in accordance with North Dakota Century Code section 49-22-13.

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 continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion?

On May 12, 2011, the public hearing was held as scheduled. 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. enXco Development Corporation (enXco), an EDF Energies Nouvelles Company, is an international full-service company that specializes in renewable energy development that has developed and constructed wind energy projects in over 15 states, Mexico and Canada.

2. enXco proposes to construct the Merricourt Wind Power Project (Merricourt or Project) consisting of up to 100 1.5 MW wind turbines and associated facilities in Dickey and McIntosh Counties, North Dakota.
3. Construction of Merricourt is expected to take approximately six months.
4. The project site is located between the communities of Merricourt, Kulm, Fredonia, Ellendale, Forbes and Ashley, in Dickey and McIntosh Counties. The final project site encompasses approximately 12,000 acres over several sections of German, Rosenthal, Antelope, Iowa and Beresina Townships. The wind turbines will be placed throughout the project site, as demonstrated in project maps submitted as Hearing Exhibit 5.
5. enXco states it has secured all easements from landowners necessary for the construction and operation of Merricourt.
6. Associated facilities to be constructed within the project area include access roads, underground collection and feeder lines, a self supporting meteorological tower, a collection substation, a temporary lay-down area and an operations and maintenance building.
7. North Dakota Century Code § 49-22-16(3) provides that no energy conversion facility site shall be designated that violates any county or city land use, zoning, building rules, regulations or ordinances. enXco states it has obtained or will obtain all required permits and will comply with all applicable county and city zoning, building rules, regulations and ordinances.
8. Construction of Merricourt is expected to employ 200 to 300 workers and enXco will hire a major engineering, construction and procurement contractor to complete the engineering designs and construction.
9. enXco estimates that Merricourt will require 10 to 12 full time employees for operations and maintenance of the Project.

#### Project Design

10. The Project will have a name plate (gross) generating capacity of up to approximately 150 MW, with a projected annual power output of between 576,000 and 596,000 MW hours.
11. Merricourt will use General Electric GE 1.5sle 1.5 MW wind turbines. The turbines will be placed on an 80 meter monopole, with a 77 meter rotor diameter hub and blade setup. The turbines have a rated wind speed of 31.3 mph and have a cut-in wind speed of 7.8 mph, with a cut-out wind speed of 55.9 mph.
12. Turbine lighting will be in conformance with FAA requirements and enXco has received 60 determinations of no hazard and 62 determinations of does not exceed from the FAA.

13. Each turbine is secured by a concrete foundation, whose final design and size will be determined upon completion of geotechnical analyses. Each turbine will also have an associated crane pad, providing a working surface for the crane during turbine erection and subsequent maintenance. Construction and service access will be facilitated by a compacted gravel road and use as many existing roadways and section lines as possible. The total disturbed surface area of the Project is estimated to be less than 3% of the total area within the Project Area.

14. Power from the wind turbines will be transmitted via underground cable to a collector substation. This collector substation will consist of approximately 5-6 acres, secured by chain link fence, with a graded pad of approximately 500 feet by 500 feet. The substation will condition the power and step it up to an interconnect voltage of 230 kV. The power will then be transferred to a new interconnect substation to be permitted and built by Montana-Dakota Utilities Co. The collector substation and the interconnect substation are being built adjacent to each other to minimize the need for any additional overhead lines between the facilities.

15. enXco has entered into a generation interconnect agreement with Montana-Dakota Utilities Co. and the Midwest ISO, allowing the power from Merricourt to interconnect to Montana-Dakota Utilities Co.'s existing transmission system through a proposed 230 kV transmission line that is being considered by the Commission in Case No. PU-10-164.

#### Siting Criteria

16. 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 a certificate of site compatibility. The criteria set forth in North Dakota Administrative Code § 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.

17. The Merricourt project will permanently impact approximately 31 acres of prime farmland and 15 acres of farmland of statewide importance by the proposed construction, or less than four-tenths of one percent of the final Project area. The Commission finds that the unique and prime farm land to be disturbed by this energy conversion facility is of such small acreage as to be of negligible impact on agricultural production.

18. enXco submitted evidence to demonstrate that the proposed energy conversion facility will not have a significant impact on the Selection Criteria set forth in North Dakota Administrative Code § 69-06-08-01(3).

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

20. 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.

21. Throughout the Application filing and permitting process, enXco conducted numerous studies on the potential impacts of the Project, as shown in Hearing Exhibits 1 – 6. enXco and its consultants engaged in lengthy and detailed consultations with various governmental entities including representatives of the Sisseton-Wahpeton, Standing Rock and Rosebud tribal communities, the USFWS, the State Historic Preservation Office and McIntosh and Dickey Counties.

#### Cultural Resources

22. The Merricourt project will avoid all known archaeological sites.

23. The North Dakota State Historic Preservation Office concurred with the conclusion of the Class III Cultural Resource Inventory for Merricourt, regarding the “No Significant Sites Affected” and “No Historic Properties Affected” determinations, as shown in Hearing Exhibit 1, Appendix G. The Class III inventory was conducted with tribal monitors from Sisseton-Wahpeton present in the field throughout the process.

#### Wetlands and Wildlife

24. Avian assessment, raptor nest and lek surveys were conducted during Spring 2009. In addition, enXco conducted significant research and study work regarding potential impacts to the endangered whooping crane and the threatened piping plover. enXco provided evidence in Hearing Exhibits 1, 4 and 5 indicating that this Project may affect, but is not likely to adversely effect, either species. enXco could not state there would be zero effect, and has worked with USFWS to identify additional measures by which any effects will be either avoided, minimized or mitigated. No whooping cranes or piping plovers were sighted during this work. The closest documented observation of a whooping crane has been approximately 6 miles north of the Project area in October

1992. There is currently no critical habitat for the piping plover and only minimal potential habitat for piping plovers that may occur in the Project area if biological conditions were perfect. The nearest area of critical habitat for piping plover is located approximately 1.2 miles southwest of the nearest turbine.

25. enXco is participating in the regional Habitat Conservation Plan process, as recommended by USFWS and has continued working with USFWS to identify additional measures which may be taken to minimize potential avian impacts as shown in Late Filed Hearing Exhibit 10.

26. Subsequent to the February 10, 2011 hearing enXco finalized an Addendum to the Biological Conditions and Effects Summary dated April 6, 2011 and submitted to the record as Exhibit 12. USFWS stated in correspondence dated April 8, 2011 that given the commitments made by enXco, "the impact of the Merricourt project is unlikely to rise to the level of "take" with respect to the whooping crane.

27. Regarding the piping plover, enXco agreed to conduct a site specific Habitat Conservation Plan and to apply for an Incidental Take Permit (ITP) for piping plover, as shown in Exhibit 12.

28. enXco completed a draft Avian and Bat Protection Plan, which is currently under review by USFWS.

29. It is not anticipated that Merricourt will impact wetlands protected by United States Fish and Wildlife Service (USFWS) wetland easements. enXco intends to bore under wetland easements and, if boring is impracticable, will obtain any necessary permits from USFWS.

30. The Army Corps of Engineers did not find impact to jurisdictional wetlands, as shown in Hearing Exhibit 7. Permanent structures will not be placed within jurisdictional wetlands.

#### Further Mitigative Measures

31. No residence is located less than 1,646 feet from the nearest turbine.

32. enXco will maintain minimum turbine setbacks of 500 feet from overhead transmission lines and unoccupied buildings and 1.1 times the turbine blade tip height from the edge of the right-of-way of any state, county or township jurisdictional road.

33. enXco conducted noise and shadow flicker analyses, utilizing both "worst case" and "realistic" scenarios. These studies indicated that the Project will not cause adverse effects due to either noise or shadow flicker and will be at the low end in terms of impacts when compared to other projects. The highest expected noise level at any residence is less than 45 dB.

34. While there are no established standards, the siting recommendation of the American Wind Energy Association for allowable shadow flicker is 30-40 hours per year. enXco's "worse case" analysis indicated two homes with anticipated shadow flicker approaching this level at 31.5 and 29.5 hrs per year. enXco's "realistic" scenario resulted in no home locations having more than 24 hours per year of shadow flicker anticipated.

35. enXco will decommission the project in accordance with North Dakota Century Code Chapter 69-09-09 and will file a decommissioning plan with the PSC prior to commencement of operation of the project.

36. enXco has made certain other representations and agreements as contained in the Certification Relating to Order Provisions - Wind Energy Conversion Facility Siting and Tree and Shrub Mitigation Specifications executed by enXco and submitted as Hearing Exhibit 9, which is hereby incorporated in these Findings of Fact as if fully set forth herein.

37. North Dakota Century Code Chapter 49-23, the One-Call Excavation Notice System, sets forth requirements for excavators as well as operators of underground facilities for the avoidance of damage to underground facilities including requirements that excavators contact the one-call notification center and provide an excavation or location notice at least 48 hours before beginning any excavation, and that the excavator notify the operator as soon as reasonably possible if any damage occurs to an underground facility or its protective covering. The Commission believes that enXco should notify the Commission, as soon as reasonably possible, of such damage to an underground facility during construction conducted under the certificate or permit issued in this proceeding. A certificate or permit granted under North Dakota Century Code Chapter ND 49-22 is subject to suspension, modification or revocation, after hearing, for failure to comply with the requirements of North Dakota Century Code Chapter 49-23.

From the foregoing Findings of Fact, the Commission 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 enXco is an energy conversion facility as defined in North Dakota Century Code, § 49-22-03(11).
3. The proposed project is of such design, location and purpose that it will produce minimal adverse effects.
4. The application submitted by enXco meets the site evaluation criteria required by North Dakota Century Code Chapter 49-22.

5. 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.

6. The proposed energy conversion facility is compatible with environmental preservation and the efficient use of resources.

7. The proposed energy conversion facility will minimize adverse human and environmental impact, while ensuring continued system reliability and integrity, and ensuring that energy needs are met and fulfilled in an orderly and timely fashion.

8. The Commission has jurisdiction to ensure compliance with National Electric Safety Code Standards in the construction and operation of the proposed energy conversion facility.

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

### **Order**

The Commission orders:

1. Certificate of Site Compatibility for an Energy Conversion Facility No. 23 is issued to enXco for the construction, operation and maintenance of a wind energy facility known as the Merricourt Wind Power Project.

2. The site as set forth on Hearing Exhibit 5 is located between the communities of Merricourt, Kulm, Fredonia, Ellendale, Forbes and Ashley, in Dickey and McIntosh Counties and is designated as the site for construction of the Energy Conversion Facility.

3. Within the permitted area, enXco is authorized to site and construct up to 100 wind turbines totaling approximately 150 MW of generating capacity in proposed and alternative locations, along with electric collection and communication lines, a project substation, a project operations and maintenance building, a meteorological tower, access roads, and other associated facilities as identified in the application and at the hearing.

4. The Certification Relating To Order Provisions – Wind Energy Conversion Facility Siting executed by enXco on December 20, 2010 and filed with the Commission on February 25, 2011 is incorporated by reference and attached to this order.

5. enXco 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, Sequoia shall suspend construction in the vicinity of the damage until compliance with

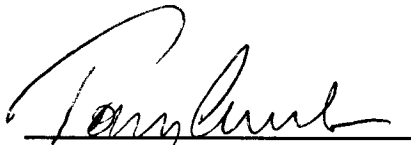
One-Call Excavation Notice System requirements under North Dakota Century Code Chapter 49-23 has been determined and clearance to proceed has been given by the Commission or Commission staff.

6. 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.

**PUBLIC SERVICE COMMISSION**



**Kevin Cramer  
Commissioner**



**Tony Clark  
Chairman**



**Brian P. Kalk  
Commissioner**

STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION

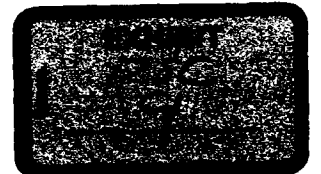
enXco Development Corporation  
Merricourt Wind Power Project  
Siting Application

Case No. PU-08-932

CERTIFICATION RELATING TO ORDER PROVISIONS - WIND ENERGY  
CONVERSION FACILITY SITING

I am Steve DeLuso, a representative of enXco Development Corporation (enXco) with authority to bind enXco to requirements to be set forth by the Commission in its Order and I certify the following:

1. enXco 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 enXco will be responsible for compliance with this order and conditions and criteria set forth in the applicable laws and rules.
2. enXco agrees to hold a preconstruction conference prior to commencement of any construction, which must include an enXco representative, its construction supervisor, and a representative of Commission Staff, to ensure that enXco fully understands the conditions set forth in the Commission's order.
3. enXco 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. enXco 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. enXco 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.



6. enXco 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.
7. enXco agrees to inform the Commission of its intent to start construction on the energy conversion facility prior to the commencement of construction. Once construction has started, enXco shall keep the Commission updated of construction activities on a weekly basis.
8. enXco agrees to construct and operate the energy conversion facility in the manner described in enXco's application, in any late filed exhibits and supplemental materials, and in accordance with all applicable safety requirements.
9. enXco agrees to report promptly to the Commission the presence in the permit area of any critical habitat of threatened species, endangered species, bald eagles, or golden eagles that enXco becomes aware of and which were not previously reported to the Commission.
10. enXco understands 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.
11. enXco 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.
12. enXco understands and agrees that all underground electric line crossings of graded roads shall be bored unless the responsible governing agency specifically permits enXco to open cut the road.
13. enXco 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.

14. enXco 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.
15. enXco 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. enXco 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.
17. enXco 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. enXco 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. enXco understands and agrees that its obligation for reclamation and maintenance of energy conversion facility tower locations, associated facilities, roadways and rights-of-way will continue throughout the life of the energy conversion facility.
20. Attached is a document titled Tree and Mitigation Specifications. enXco agrees to comply with these specifications if the Commission chooses to include all or a portion of the requirements and conditions contained in this attachment in its Order.
21. enXco 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.
22. enXco agrees that it shall repair or replace all broken or damaged drainage tile during all phases of construction and operation of the proposed energy conversion facility.
23. enXco agrees that staging areas or equipment shall not be located on cultivated land unless otherwise negotiated with landowners.

24. enXco 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.
25. enXco 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.
26. enXco 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.
27. enXco agrees that it shall provide any necessary safety measures for traffic control or to restrict public access to the energy conversion facility.
28. enXco agrees that it shall advise the Commission of any extraordinary events which take place at the site of the energy conversion facility, such as a tower collapse, catastrophic turbine failure, injured worker or private individual, the death of any threatened or endangered species, or the discovery of a large number of dead birds or bats on the site within five business days of such event.
29. enXco agrees that it shall implement a procedure for how complaints concerning the proposed energy conversion facility will be handled by enXco.
30. enXco 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.
31. enXco is aware that under North Dakota Century Code section 49-02-27 the Commission has rules for decommissioning of wind energy conversion facilities. enXco agrees to comply with all decommissioning rules adopted by the Commission.
32. enXco agrees to provide the Commission with engineering design drawings showing surveyed structure and collection substation locations prior to construction, and understands and agrees that it must obtain approval from the Commission or from Commission Staff prior to any changes in the energy conversion facility tower, associated facility, and roadway locations.

33. enXco agrees to provide the Commission with a copy of the 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 three months of the completion of the construction.
34. enXco 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.
35. enXco agrees to inform the Commission in writing of any plans to add additional turbines to the energy conversion facility or of any plans to modify the site plan for the energy conversion facility. Any additions or modifications to the site plan for the energy conversion facility must be approved in writing by the Commission or Commission staff. Approval may be granted after notice and opportunity for hearing.

Dated this 20 day of December, 2010.

enXco Development Corporation

By Steph Plues

Its Senior V.P. Organization

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

**enXco Development Corporation  
Merricourt Wind Power Project  
Siting Application**

**Case No. PU-08-932**

**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*), shall be inventoried before cutting. The inventory shall 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, shall 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 shall be inventoried for replacement.
4. In native growth areas, shrubs anticipated to be cleared in the permanent right-of-way shall be inventoried for replacement.
5. In native growth areas outside the permanent right-of-way, shrubs shall 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 shall be preserved and replaced after construction. Shrubs shall 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 shall be inventoried for replacement.
6. In native growth areas, trees and shrubs may be inventoried by actual count or by 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 shall define the sampling method to be used for trees, for tall shrubs and for low shrubs. The data from the sample plots shall 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 shall be selectively cleared, leaving mature trees and shrubs intact where practical.
8. The width of clear cuts through windbreaks, shelterbelts and all other wooded areas shall be limited to 50 feet or less 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 shall be noted on the inventory.

### **Replacement**

10. Prior to replacement, documentation identifying the number and variety of trees removed as well as the mitigation plan for the proposed number, variety, type, location and date of replacement plantings shall be filed with the Commission for approval.
11. Tree replacement shall be on a 2 to 1 basis with 2-year-old saplings. Shrub replacement shall be on a 2 to 1 basis with stem cuttings.
12. Trees and shrubs shall be replaced by the same species or similar species, except in the case of invasive species or noxious weeds, suitable for North Dakota growing conditions as recommended by the North Dakota Forest Service.
13. Landowners shall be given the option of having replacement trees or shrubs planted off the right-of-way on the landowner's property or waiving that requirement in writing and allowing those replacement trees or shrubs to be planted at alternative locations.
14. At the conclusion of the project, documentation identifying the actual number, variety, type, location, and date of the replacement plantings shall be filed with the Commission.
15. Tree and shrub replacements shall be inspected once a year for three years, on or about the anniversary of the plantings, and, on or shortly before October 1 of each year, a report shall be submitted to the Commission documenting the condition of replacement planting and any woodlands work completed. If after three years from the anniversary of the plantings the survival rate is less than 75%, the Commission may order additional planting(s).

**PUBLIC SERVICE COMMISSION**

**STATE OF NORTH DAKOTA**

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

**Certificate Number 23**

*This is to certify that the Commission has designated an energy conversion facility site for enXco Development Corporation's Merricourt Wind Energy Project consisting of approximately 150 MW of total wind turbine generating capacity and associated facilities in Dickey and McIntosh Counties of 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, Conclusions of Law and Order of the Commission in Case No. PU-08-932 dated June 8, 2011 and is subject to the conditions and limitations noted in the order.*

*Bismarck, North Dakota, June 8, 2011.*

**ATTEST:**

**PUBLIC SERVICE COMMISSION**

  
**Executive Secretary**

  
**Commissioner**