



TETRA TECH EC, INC.

June 25, 2010

Darrell Nitschke  
North Dakota Public Service Commission  
600 E. Blvd. Dept. 408  
Bismarck, ND 58505-0480

RECEIVED

JUN 28 2010

PUBLIC SERVICE COMMISSION

**Subject: Tree Mitigation Plan for the Ashtabula II Wind Energy Center, Case No. PU-08-34 and PU-09-221**

Mr. Nitschke:

The Ashtabula II Wind Energy Center was completed in 2009 in Griggs and Steele counties, North Dakota. Construction required the removal of trees and shrubs within Project rights-of-way. The PSC requires approval of a Tree and Shrub Mitigation Plan/Replacement Plan before trees or shrubs are planted. Attached please find one original plus ten copies of the Tree and Shrub Mitigation Plan for the Ashtabula II Wind Energy Center. Please include this in the Project case file.

Please feel free to contact me at (512) 338-1667 or [Anne-Marie.Griger@tetrattech.com](mailto:Anne-Marie.Griger@tetrattech.com) if you have any questions.

Sincerely,

TETRA TECH EC, INCORPORATED

A handwritten signature in cursive script that reads "Anne-Marie Griger".

**Anne-Marie Griger, AICP**  
Deputy Project Manager/Environmental Planner

**Tree and Shrub Replacement Plan  
Ashtabula II Wind Project (South Field)  
NextEra Energy Resources**

**Introduction & Regulatory Background**

The Ashtabula II Wind Energy Center (Project) was completed in 2009 in Griggs and Steele counties, North Dakota, within portions of Township 144N, Range 58W and Township 144N, Range 57W. The south field of the Project is operated by Ashtabula Wind II, LLC, a subsidiary of NextEra Energy Resources, LLC (NextEra Energy). Ashtabula II (south field) comprises a 120-megawatt (MW) wind generation plant, which is under the jurisdiction of the North Dakota Public Service Commission (PSC). Construction required the removal of trees and shrubs within Project rights-of-way.

Projects under the jurisdiction of the PSC that require the removal of trees or shrubs in the course of Project construction must replace them, following PSC replacement requirements (**Appendix A, *Tree and Shrub Mitigation Specifications***, Case No. PU-08-34 and PU-09-221). The PSC requires approval of a Tree and Shrub Mitigation Plan/Replacement Plan before trees or shrubs are planted. Paragraphs 10 – 15 of the PSC *Tree and Shrub Mitigation Specifications* outline the specific requirements for tree and shrub replacement, which are listed below:

- 10) Prior to tree or shrub 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 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/shrubs planted off the right-of-way on the landowner's property or waiving that requirement in writing and allowing those replacement trees/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 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).

## Inventory of Trees and Shrubs within Project Area

NextEra Energy documented the number, type/species, and location of trees and shrubs removed during construction of the Project (**Table 1**). NextEra Energy surveyed windbreaks, shelterbelts, other planted areas, and native growth areas that were anticipated to be cleared. Counts were completed by direct stem count. NextEra Energy documented a total of four trees removed from within Project right-of-ways (**Table 1**). The total number of trees to be replaced based on this inventory is eight, assuming a 2:1 replacement ratio.

**Table 1. Location and Number of Trees Removed within Project Area**

Location			Location Description	Number of Trees Removed	Type of Tree	Landowner
Township	Range	Section				
144N	57W	16	T219	2	Green Ash	Scott or Mark Pedersen
144N	58W	24	T224	2	Chinese Elm	Ira Fuglestad

## Landowner Consultation

NextEra Energy retained TetraTech EC, Inc. (TetraTech) and Western Plains Consulting, Inc. (WPC) to assist in the preparation of a tree and shrub mitigation plan for the Project and to assist in contacting landowners to determine their tree replacement preferences.

Trees were removed from land owned by two private landowners. WPC contacted both landowners via telephone. Landowners were asked whether they preferred trees to be replaced on their property off the Project right-of-way or whether they preferred not to have trees replaced on their property and instead have them planted at an alternative location. If landowners wanted replacement on their property, they were asked what tree/shrub species they would prefer for replacement and the number of each if more than one species.

Scott and Mark Petersen preferred to waive tree replacement on their property (**Table 3**). A signed waiver is attached to this report (**Appendix B**). Ira Fuglestad requested only two trees for replacement, though he is allotted a total of four trees. In a conversation with him on June 7, 2010, he stated that he would like two apple trees to be planted in his yard (**Appendix B**).

**Table 3. Landowner Preferences for Tree Replacement**

Landowner	Number of Trees Removed (NextEra Count)	Number of Replacement Trees	Tree/Shrub Species Requested
Scott or Mark Pedersen	2	4	None
Ira Fuglestad	2	4	2 apple trees

## **Summer 2011 Replacement Plan**

NextEra Energy proposes to plant the two replacement trees for Ira Fuglestad in the spring of 2011 following consideration and approval of this proposal by the ND PSC. Trees will be planted in an area chosen by the landowner outside the project right-of-way. The Fuglestad property is in Griggs County. Landowners will be responsible for cultivating the area and preparing the soil for planting.

The Griggs County Soil Conservation District will plant replacement trees and install weed barrier fabric if desired by the landowner. Trees will be 2-year-old saplings and shrubs will be stem cuttings.

NextEra Energy proposes to include the six remaining replacement trees for the Project as part of the tree replacement for the Ashtabula I Tree and Shrub Mitigation Plan. Two landowners within the Ashtabula I Project Area have requested additional trees beyond the required replacement amounts on their land. Because the Ashtabula I and II Project areas are near each other, it would be reasonable to include these six replacement trees as part of those plantings, rather than utilize a separate state-wide tree planting program. NextEra would follow the planting details outlined in the *Ashtabula I Tree and Shrub Replacement Plan* for replacement plantings which would include the six Ashtabula II tree replacements, following consideration and approval of this proposal by the PSC.

## **Follow-up Documentation and Monitoring**

After the Project's tree plantings are installed in summer 2011, the number, species, location, and date of planting will be documented and filed with the PSC.

Replacement plantings will be inspected each year for three years in 2012, 2013, and 2014 near the anniversary planting date. The number and type of each surviving tree will be recorded. Notes on the condition of the saplings will be taken. Survival rates will be calculated and a report will be submitted to the PSC before October 1 of each fall documenting this information. If the survival rate after three years is less than 75 percent, additional plantings may be ordered based on consideration by the PSC.

# **Appendix A**

**North Dakota Public Service Commission  
Tree and Shrub Mitigation Specifications**

**Case No. PU-08-34 and PU-09-221**

**Ashtabula II Wind Project (South Field)  
NextEra Energy Resources**

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

**M-Power, LLC**  
**Electric Generation/Wind – Griggs/Steele County**  
**Siting Application**

**Case No. PU-08-34**

**M-Power, LLC / Ashtabula Wind II, LLC**  
**Transfer of Site Certificate**  
**Siting Application**

**Case No. PU-09-221**

**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 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/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 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).

# **Appendix B**

## **Landowner Tree Replacement Waiver Forms**

**Ashtabula II Wind Project (South Field)  
NextEra Energy Resources**

May 12, 2010

Mark Pedersen  
714 124<sup>th</sup> Ave SE  
Luverne, ND 58056-9017

RE: Ashtabula I and II Wind Farm Tree & Shrub Replacement

Dear Mr. Pedersen:

During the construction of the Ashtabula I and II Wind Project by NextEra Energy, trees and shrubs were removed from your land. NextEra Energy has a responsibility to replace any destroyed trees or shrubs at a ratio of two trees/shrubs for every one removed, if that is the landowner's preference.

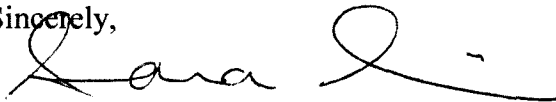
NextEra recorded that you lost two Green Ash trees from your land. NextEra would replace these trees with four trees of your choosing.

On May 12, 2010, you were contacted by Ms. Sara Simmers of Western Plains Consulting, Inc. on behalf of NextEra Energy, regarding whether you preferred trees/shrubs be replanted on your land.

You stated that you would prefer not to replace the trees/shrubs that were removed during construction on your property. Please sign below to acknowledge this and return this acknowledgement in the self-addressed stamped envelope. A second copy of this letter is included for you to sign and keep for your records.

Please contact me at any time with further questions at 701-221-3113 or by email at [ssimmers@wpcnd.com](mailto:ssimmers@wpcnd.com).

Sincerely,



Sara Simmers,  
Natural Resource Specialist

I acknowledge that I/we am declining trees/shrubs to be planted on our property for replacement after construction of the Ashtabula I and II wind farm.

Mark H Pedersen  
Landowner:

5/27/2010  
Date:

\_\_\_\_\_  
Landowner (Joint/Co-owner, if applicable):

\_\_\_\_\_  
Date:



[www.wpcnd.com](http://www.wpcnd.com)  
PO Box 1401  
Bismarck, ND 58502-1401  
701-221-3113  
Toll Free 888-821-3113  
Fax 701-221-2140

May 11, 2010

Ira Fuglestad  
11871 9<sup>th</sup> St SE  
Luverne, ND 58056-9210

RE: Ashtabula I and II Wind Farm Tree & Shrub Replacement

Dear Mr. Fuglestad:

During the construction of the Ashtabula I and II Wind Project by NextEra Energy, trees and shrubs were removed from your land. NextEra Energy has a responsibility to replace any destroyed trees or shrubs at a ratio of two trees/shrubs for every one removed, if that is the landowner's preference.


NextEra recorded that you lost two Chinese elm trees from your land. NextEra would replace these trees with four trees of your choosing.

On May 6, 2010, you were contacted by Ms. Sara Simmers of Western Plains Consulting, Inc. on behalf of NextEra Energy, regarding whether you preferred trees/shrubs be replanted on your land.

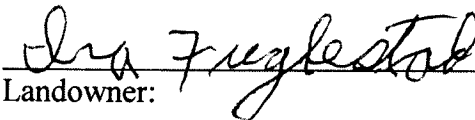
You stated that you would prefer not to replace the trees/shrubs that were removed during construction on your property. Please sign below to acknowledge this and return this acknowledgement in the self-addressed stamped envelope. A second copy of this letter is included for you to sign and keep for your records.

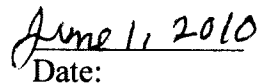
Please contact me at any time with further questions at 701-221-3113 or by email at [ssimmers@wpcnd.com](mailto:ssimmers@wpcnd.com).

Sincerely,

*If you could replace it with a Delicious apple tree in the yard if not then I don't need any trees*  
  
Sara Simmers,  
Natural Resource Specialist

I acknowledge that I/we am declining trees/shrubs to be planted on our property for replacement after construction of the Ashtabula I and II wind farm.

  
Landowner: \_\_\_\_\_

  
Date: \_\_\_\_\_

\_\_\_\_\_  
Landowner (Joint/Co-owner, if applicable):

\_\_\_\_\_  
Date:



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