APPENDIX F

Vegetative Restoration Plan

Vegetation Restoration Plan

Ecogen Wind LLC

Towns of Prattsburgh and Italy, New York

Introduction

C&S Engineers, Inc. has been retained by Ecogen Wind LLC to provide engineering services for the proposed Prattsburgh/Italy Wind Farm Project. The proposed project will develop an alternative energy system to generate electricity from a clean and renewable source that offers utility companies a lower price that other non-hydropower renewable energy sources. The proposed project involves construction of 34 industrial wind turbines (IWT).

It involves construction of 34 industrial wind turbine generators (IWTs) across 287.11 acres in the Towns of Prattsburgh and Italy.

The proposed Project includes the construction of an electric collection system (ECS) that would interconnect the individual IWT and connect with the existing New York State Electric & Gas (NYSEG) power grid; construction of a substation and operation and maintenance building; two temporary 11 acre staging areas and one temporary concrete batch plant; and construction of required ancillary service roads. Power generated from the proposed Project will be conveyed directly to the NYSEG system.

Temporary and permanent impacts to vegetated areas will occur as the result of construction and maintenance activities associated with this project.

Descriptions of Impacts

Ecogen Wind LLC (Ecogen) has made efforts during the design phase of the project to avoid and minimize impacts to sensitive habitats, including wetlands and forested habitats. Avoidance measures have included moving turbine pad locations, and re-routing access roads and electrical

collection corridors, to the extent possible. Efforts have been made to locate the turbines, staging areas, access roads, maintenance building, and the electrical substation have, to the degree possible, in previously disturbed areas including active and feral agricultural lands. In addition, in specific regard to the electrical transmission lines, and in areas were practicable, directional boring and the use of overhead lines are being utilized. The access roads for construction and maintenance of the turbines, have taken advantage of existing log and farm roads, where available. The transmission line corridors have been co-located with proposed and existing roadways to the extent possible.

Permanent Impacts

Although avoidance and minimization of impacts to sensitive habitats, including upland forests and all wetland habitats, has taken place, permanent impacts to these habitats are still anticipated as a result of this project. Permanent impacts to wetlands will be appropriately mitigated through the appropriate regulatory authorities, including the United States Army Corps of Engineers (USACE) and the New York State Department of Environmental Conservation (NYSDEC). Some permanent impacts to forested areas are associated with the placement of the turbines, access roads, and transmission line corridors. A permanent impact to forested habitats as the result of the transmission line corridors involves changes to vegetation height and character. The transmission line corridors will need to be maintained, at a minimum, in a scrub/ shrub vegetative state to prevent damage to the lines and to allow for emergency repairs, if needed. The area immediately surrounding the turbines will also need to be maintained to low growing vegetation to allow for turbine rotation and maintenance. Permanent impacts to and loss of upland habitats can not be avoided as a result of turbine placements, and the construction of the access roads, maintenance building, and electrical substation. As previously stated, efforts have been made to avoid and minimize permanent impacts to upland environments, specifically upland forested habitats. Forested upland and wetland impacts related to initial vegetation and soil disturbance, and subsequent vegetation management, will be seeded with native herbaceous plant species. It is anticipated that these areas will convert to scrub/ shrub habitats through plant

re-growth, recruitment from the undisturbed adjacent areas, clonal propagation, and new growth from the existing seed bank. It should be noted that no vegetation restoration efforts will take place in locations that are inundated. It is presumed that these areas will naturally recolonize themselves through plant re-growth, recruitment from the undisturbed adjacent areas, clonal propagation, and new growth from the existing seed bank.

Temporary Impacts

Temporary impacts are anticipated to occur within upland and wetland habitats. Temporary impacts will result from damage or removal of existing vegetation, or soils disturbance in the staging areas, crane assembly areas, and along the transmission line corridors. Temporary impact areas where soil disturbance has occurred will be re-graded to pre-existing grades. In an effort re-establish vegetation and to provide soil stabilization and erosion control, impacted areas will be seeded with native plant species post construction. The seeding effort will be conducted via hydro-seeding methods and will include fertilization and mulch components to expedite plant growth and establishment. It is anticipated that existing scrub/ shrub upland and wetland habitats will revert to pre-existing conditions through plant regeneration, recruitment from the undisturbed adjacent areas, and re-growth from the existing seed bank. It should be noted that no vegetation restoration efforts will take place in locations that are inundated. It is presumed that these areas will naturally recolonize themselves through plant re-growth, recruitment from the undisturbed adjacent areas, clonal propagation, and new growth from the existing seed bank.

Seed Mixtures

In an effort to re-establish vegetation to the disturbed areas, the following seed mixtures will be used:

Upland Areas

Percent By Weight	Species	Pure Live Seed (PLS)
36	Tall Fescue (*Festuca arundinacea*)	100
36	'Ensylva' Creeping Red Fescue	

	(*Festuca rubra l. ensylva*)	100
18	Bird's-foot Trefoil (*Lotus corniculatus*)	100
10	Perennial Ryegrass (*Lolium perenne*)	100

Ditch Areas

Percent By Weight	Species	Pure Live Seed (PLS)
65	Tall Fescue (*Festuca arundinacea*)	100
25	Bird's-foot Trefoil (*Lotus corniculatus*)	100
10	Red Top (*Agrostis alba*)	100

Wetland Areas

Percent By Weight	Species	Pure Live Seed (PLS)
20	Virginia Wild Rye (*Elymus virginicus*)	100
20	Fox Sedge (*Carex vulpinoideaI*)	100
10	Lurid Sedge (*Carex lurida*)	100
10	Riverbank Wild Rye (*Elmyus riparius*)	100
10	Annual Ryegrass (*Lolium multiflorum*)	100
10	Fowl Bluegrass (*Poa palustris*)	100
10	Sensitive Fern (*Onoclea sensibilis*)	100
10	Rice Cutgrass (*Leersia oryzoides*)	100

The plant species listed above were chosen based on their versatility in habitat requirements, specifically soil type, sun exposure, and moisture regime, and their relative ease of establishment. Individual species may vary depending on supplier availability.

It should be noted that much of the project area is located on private lands. Individual land owners may have specific seeding requirements based on the current or future use of the property. Ecogen will coordinate with each individual private land owner to accommodate their specific requirements.

Summary

Ecogen has taken efforts to avoid and minimize permanent impacts to upland and wetland habitats. Particular care was taken to avoid and minimize impacts to forested upland and all wetland habitats. All permanent wetland impacts will be appropriately mitigated. Wetland mitigation efforts will be coordinated with the appropriate regulatory agencies. Areas of temporary disturbances will be re-graded to pre-existing grades and seeded. The forested and scrub/ shrub upland and wetland habitats were vegetation management must occur will be seeded allowed to convert to and will be maintained in a scrub/ shrub vegetative state. Monitoring of the seeded upland areas has been incorporated into the Stormwater Pollution Prevention Plan issued for the project in December 2008. Subsequent monitoring of the success of the seeding effort in wetland habitats will be incorporated into the wetland mitigation monitoring effort.