1.0 PROJECT DESCRIPTION

On January 21, 2010, the Maine Department of Environmental Protection approved the application of Evergreen Wind Power II, LLC (Evergreen II) to construct and operate the 51 megawatt (MW) Oakfield Wind Project in Oakfield (DEP#L-24572-24-A-N/L-24572-TF-B-N). The Oakfield Wind Project is being amended to change the turbine types from General Electric (GE) 1.5 MW turbines to Vestas V-112 3.0 MW turbines; increase the total number of turbines from 34 to 50 and the installed capacity from 51 MW to 150 MW; and add a new substation and point of electrical interconnection with the electrical grid, which in turn involves construction of a new generator lead transmission line (collectively the "Revised Oakfield Wind Project").

For administrative reasons, the changes to the Oakfield Wind Project are the subject of two separate amendment applications. This application by Evergreen II addresses the changes to the generating facilities (the "Project"), and a companion amendment application by Maine GenLead, LLC, addresses the new generator lead. The resource impacts associated with the Project and the new generator lead are being considered cumulatively.

This application by Evergreen II for the *Revised Oakfield Wind Project* amends the original Oakfield Wind Project as follows:

- change the approved turbines in the original project area from 34 GE 1.5-MW with a 77-meter rotor diameter and an 80-meter tower, to 25 Vestas V-112 3.0-MW turbines, with a 112-meter rotor diameter and an 84 meter tower;
- add temporary and permanent meteorological (met) tower locations;
- change turbine pad size, turbine locations, road widths, and some road locations;
- eliminate the northern substation;
- add 25 Vestas V-112 3.0-MW turbines in new project areas;
- add a new substation location; and
- change the point of electrical interconnection.

This amendment would increase the size of the Oakfield Wind Project to 50 turbines with a potential generating capacity of 150 MW. Figure 1 shows the complete project area with revised turbine locations and additional turbines. A comparison of the GE and Vestas turbine layout for the original Oakfield Wind Project is illustrated in Figure 2. The GE turbines would have been 389 feet tall, fully extended; the Vestas turbines will be 459 feet tall, fully extended. The Project would be located in the Town of Oakfield and T4R3 WELS.

The project will have up to 5 permanent 84-meter met towers. Eight potential locations for these towers are identified in this application (see Exhibit 1); selection among these eight locations and guy wire orientation will be determined during construction. In addition, up to 4 temporary 84-meter met towers will be erected at turbine pad locations for up to nine months. Nine potential locations for guyed or freestanding temporary met towers have been identified (see Figure 1, N09, S09, S10, S11, EO1, EO5, EO6, EO7, E10); selection among these nine locations and guy wire orientation will be determined during construction. None of the locations or guy wires for permanent or temporary met towers will impact regulated natural resources.

Electricity generated by the turbines would be collected from the turbines at 34.5 kilovolts (kV), and "stepped up" to 115 kV at the proposed substation on South Oakfield Road. The northern substation approved as part of the original project would not be constructed. From substation location on South Oakfield Road, electricity would be transmitted by the Maine GenLead transmission line to the Keene Road Substation in Chester where it would tie into the existing Bangor Hydro Electric system.

Environmental studies completed before filing include wetland delineations of the affected areas; an analysis of rare, threatened or endangered species; and vernal pool surveys. Additional reports and

surveys include an analysis of historic architecture, Euro-American and Pre-Contact archaeology, visual impact analysis, shadow flicker analysis, sound analysis, and soils evaluation.

The original Oakfield Wind Project permit authorized 2,440 square feet of permanent wetland fill; 715 square feet of temporary (mat) fill; 8,790 square feet of vegetation clearing; and 200 square feet of Significant Vernal Pool buffer impact. In addition, the project has a Permit by Rule for 66 feet of stream crossing.

The total resource impacts for the summit area, including the resource impacts previously permitted, are 10,932 square feet of permanent wetland fill; 25,928 square feet of temporary fill (mats); 4.01 acres of vegetation clearing; and 190 linear feet of stream channel that will be culverted. Appendix 1-1 includes detailed figures of impact locations. These new resource impacts are being assessed cumulatively with the resource impacts associated with the generator lead. There are no additional impacts to Significant Vernal Pools, Inland Waterfowl and Wading Bird Habitats, Deer Wintering Areas, or other Significant Wildlife Habitats associated with this amendment.

Table 1-1. Cumulative Wetland and Stream Impact Summary for Oakfield Wind Project Amendment

Wetland Impacts	Permanent fill (sq. ft.)	Temporary fill (mats, ac.)	Vegetation clearing (ac.)	Stream impact---culvert (lin. ft.)
Summit roads	10,572	0	0.42	383
Electrical Collection System	360	0.60	3.59	0
TOTAL	**10,932 sq. ft.**	**0.60 ac.**	**4.01 ac.**	**383 lin. ft.**

Compensation for these impacts, in combination with the compensation provided for the Maine GenLead Project, is proposed through preservation of a 2100 acre parcel in Drews Plantation. This parcel is directly adjacent on the eastern-most side to the existing Mattawamkeag River Wildlife Management Area (WMA), managed by the Maine Department of Inland Fisheries and Wildlife.

2.0 CONSTRUCTION PLAN

Construction is expected to take eight months from the commencement of construction, with the project fully operational in 2012. Construction of the summit portion of the project will generally follow the sequence of events detailed below.

1. Mobilization and preliminary layout and staking of new road segments, turbine clearings, laydown areas, Operations and Maintenance (O&M) building, and substation sites.
   Week 1 – Week 4
2. Commence clearing operations for roads, laydown areas, transmission lines, O&M building, and substation. Installation of erosion control measures in areas specified or required.
   Week 3 – Week 8
3. Installation of erosion control measures in areas specified or required.
   Week 4 – Week 15
4. Stumping, grubbing, and initial rough grading for roads and turbine laydown areas.
   Week 5 – Week 16
5. Blasting as necessary and on-site stockpiling of reusable blasted bedrock/ledge.
   Week 6 – Week 18

6. Stockpiling of imported road aggregate from local borrow pits (if required).
   Week 7 – Week 19
7. Final grading for roads and turbine areas.
   Week 7 – Week 20
8. Construction of turbine foundations and substation transformer pad.
   Week 11 – Week 24
9. Installation of overhead/underground 34.5-kV on-site electrical collector system, including pad-mount transformers.
   Week 13 – Week 30
10. Delivery of turbines components to individual turbine sites.
    Week 16 – Week 26
11. Erection of base/mid tower sections, assembly of rotors, erection of top tower section and nacelle, erection of assembled rotor. Tower wiring, final cleaning, and final quality checks of wind turbine.
    Week 18 – Week 30
12. Substation and O&M building construction.
    Week 16 – Week 31
13. Energization of substation and collector system with quality checks, "backfeed" power available from 115-kV transmission line.
    Week 32
14. Commissioning and testing of wind turbine generators and electrical interconnections.
    Week 32-Week 40
15. Start of commercial operations.
    Week 40
16. Reseeding of temporary cleared areas.
    Week 30 – Week 42

The construction of the 34.5-kV collector line between the parts of the project and connecting to the substation will follow a similar schedule, detailed below.

1. *Right-of-Way Centerline and Boundary Flagging* – Surveyors follow the right-of-way and flag property lines, clearing limits, easements, laydown areas, and the centerline of the transmission line.
2. *Wetland and Resource Flagging* – Wetland scientists follow the right-of-way and flag the wetland boundaries, buffer setbacks, and other sensitive areas.
3. *Tree and Brush Clearing* – Harvesting crews cut and remove trees and brush from right-of-way areas and laydown areas.
4. *Installation of Erosion Control* – Contractor installs various silt fence, hay bales, erosion control berms, and other best management practices along right-of-way and laydown areas.
5. *Stump Grubbing at Laydown Areas* – Stumps are removed at laydown areas, and where required, along access corridor, and areas for storage of equipment and materials are created.
6. *Temporary Access Ways and Timber Matting at Wetlands* – Minor earthwork activities are performed as needed to allow access along right-of-way and installation of timber matting at wetland areas where they are required to prevent excessive rutting.
7. *Grubbing of Stumps at Pole and Pulling Locations* – Stumps are removed as needed around pole locations and pulling areas to provide safe work area.

8. *Framing of Hardware on Poles* – Contractor installs davet arms, insulators, and other necessary hardware on each pole, usually prior to installation of pole.
9. *Excavation for Each Pole* – Contractor augers, excavates, or blasts (depending on subsurface conditions) hole for pole and any other subsurface requirements (guy anchors) per the design documents.
10. *Setting of Poles* – Poles are lifted and set into previously excavated hole.
11. *Setting of Anchors and Guy Wires* – Anchors at dead-end and corner poles are installed in the ground; guy wires are attached to pole and anchors.
12. *Pulling and Stringing of Wire* – Wire is pulled from spools and connected to poles in segments approximately three miles in length.
13. *Sagging and Clipping of Wire* – Previously strung wire is adjusted for equal sag and strain on the poles and then clipped to the insulators with the proper tension in the wire.
14. *Energizing of Line* – Line is energized at the switch and checked. This provides "backfeed" power to the substation, which can then be subsequently energized.
15. *Removal of Matting* – Matting is removed from wetland areas.
16. *Cleanup and Restoration* – Temporary earthwork and topsoil disturbances are restored and areas are seeded and mulched. Temporary erosion control measures are removed upon permanent stabilization and reseeding of disturbed areas.