

Section 1 Project Description

1.0 PROJECT DESCRIPTION

Maine GenLead, LLC (Maine GenLead) proposes to construct an approximately 59-mile 115-kilovolt (kV) generator lead transmission line extending from Bangor Hydro-Electric Company's existing Keene Road substation in Chester to a new substation servicing the Oakfield Wind Project in Oakfield. The original Oakfield Wind Project, DEP #L-24572-A-N and L-24572-TF-B-N (January 21, 2010) is being amended through a separate application to expand its generating capacity from 51 megawatts (MW) to 150 MW. Together, the summit and Maine GenLead amendments constitute the *Revised Oakfield Wind Project*.

The purpose of the proposed 115-kV transmission line is to provide a direct interconnect between the energy generation in Oakfield and the Bangor Hydro-Electric and ISO New England transmission system to accommodate the increased energy output of the Oakfield Wind Project. The substation and 69-kV transmission line designed and permitted at the north end of the original Oakfield Wind project to connect to the Maine Public Service system would not be constructed.

The 115-kV design will be primarily single pole structures, with double and triple poles and associated guying, as necessary, to support the integrity of the line. The amount of new clearing associated with the corridor would vary from 35 to 130 feet, depending on adjacency to existing infrastructure.

The 115-kV line would extend through 12 towns and townships---Chester, Woodville, Mattawamkeag, Molunkus Township, Macwahoc Plantation, North Yarmouth Academy Grant, Reed Plantation, Glenwood Plantation, T3R3 WELS, T4R3 WELS, Linneus, and Oakfield (Figure 1). The proposed transmission line would begin at the Keene Road Substation in Chester, where it would anchor to the existing power grid. Through Chester and Woodville, the new transmission line would be adjacent to the existing Line 56 transmission line corridor for approximately 7 miles to an intersection with the existing 345-kV Maine Electric Power Company (MEPCO) corridor in Woodville. It then follows, with minor deviations, the MEPCO corridor northeast for approximately 33.8 miles to the Glenwood Plantation/Haynesville town line. From this point, the line runs north primarily along the westerly side of town boundaries for approximately 17.1 miles, to the town of Oakfield, then approximately 0.6 mile to a proposed substation located at the easterly string of wind turbines for the amended Oakfield Wind Project. In total, the proposed transmission line is adjacent to existing transmission corridors for 35.2 miles, 60 percent of its total length. Engineering and access plans are included as Exhibits 1 and 2 of this application.

The proposed corridor has been sited to minimize wetland and stream crossings where practicable. Dominant palustrine community types are palustrine forested (PFO), palustrine emergent (PEM), palustrine scrub-shrub (PSS), and unconsolidated bottom (PUB). A detailed wetland report and wetland maps are included in Appendix 7-1. See Table 1-1 for a summary of wetland impacts resulting from the proposed transmission corridor.

Table 1-1. Wetland and Stream Impact Summary

Wetland Impacts	Permanent fill (ac.)	Temporary fill (mats, ac.)	Vegetation clearing (ac.)	Stream impact---culvert (lin. ft.)
Access roads	1.6	n/a	n/a	72
Transmission Line	0.1	23.7	133.4	n/a
TOTAL	1.7 ac.	23.7 ac.	133.4 ac.	72 lin. ft.

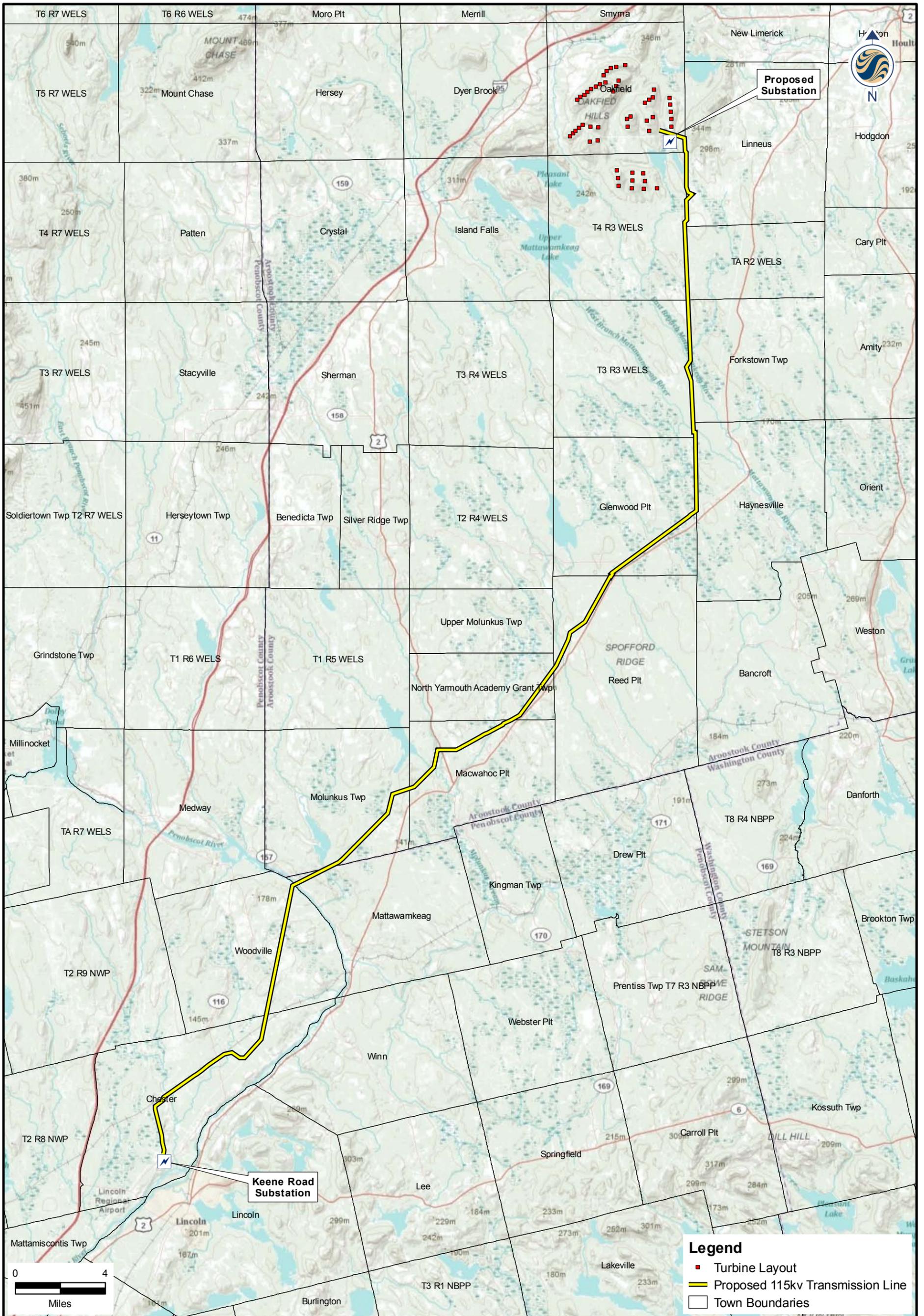
Impacts associated with Deer Wintering Areas, Inland Water Fowl and Wading Bird Habitat, and vernal pools are discussed in Section 7 of the application.

2.0 CONSTRUCTION PLAN

Construction is anticipated in 2011 and 2012. The construction of the 115-kV transmission line will generally follow a sequence of activities, each dependent on the previous. These are outlined as follows.

1. **Right-of-Way Centerline and Boundary Flagging** – surveyors follow the right-of-way and flag property lines, easements, pulling areas, 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 fences, 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 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.
7. **Grubbing of Stumps at Pole and Pulling Locations** - stumps are removed as needed around poles 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 the pole.
9. **Excavation for Each Pole** – contractor augers hole for pole or excavates small trench with excavator, depending on soil type; in ledge locations, borings or blasting may be used.
10. **Setting of Poles** – poles are lifted and set into the 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** – the line is connected to the wind project on one end and the Keene Road Substation on the other and energized to check work.
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 revegetation of all disturbed areas.

Figure 1



Prepared By:



Stantec

Project:

Revised Oakfield Wind Project
Penobscot and Aroostook Counties

Sheet Title:

Maine GenLead 115kV Generator
Lead Transmission Line Corridor

Date: May 2011

Scale: As Shown

Proj. No.: 195600518

Figure: 1