



PAUL RICHARD LEPAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF CONSERVATION
LAND USE REGULATION COMMISSION
45 RADAR ROAD
ASHLAND, MAINE
04732

WILLIAM K. BEARDSLEY
COMMISSIONER

PERMIT

AMENDMENT D TO DEVELOPMENT PERMIT DP 4772

The staff of the Maine Land Use Regulation Commission, after reviewing the application and supporting documents submitted by Number Nine Wind Farm, LLC for Amendment D to Development Permit DP 4772, finds the following facts:

1. Applicant: Number Nine Wind Farm, LLC
808 Travis St., Suite 700
Houston TX 77002
2. Landowner: R.A. Crawford & Son Land and Timber Inc.
PO Box 279
Lincoln, ME 04457
3. Agent: EDP Renewables North America LLC
Attn: Kellen Ingalls
52 James Street, 4th Floor
Albany, NY 12207
4. Date of Completed Application: August 4, 2014
5. Location of Proposal: T 8 R 3 WELS, Aroostook County
Taxation Plan 01, Lot 1
Existing Tower - Tower 2931 (Coordinates: 46°19'58.8"N; 68°8'27.6"W)
Existing Tower - Tower 2932 (Coordinates: 46°22'26.4"N; 68°4'51.6"W)
Existing Tower - Condon Mountain (Coordinates: 46.356883N; 68.044416W)
Proposed Tower - Tower 2924 (Coordinates: 46°19'54.12"N; 68°8'26.88"W)
6. Zoning: (M-GN) General Management Subdistrict
7. Lot Size: 21,800 acres (Easement)
8. Proposed Development: One (1) Temporary Meteorological Testing Equipment Tower

Background Information and Proposal

9. In August of 2007, Development Permit DP 4772 was issued to Aroostook Wind Energy, LLC authorizing them to erect one (1) temporary meteorological testing equipment tower on a two (2) acre leased parcel on Condon Mountain in T 8 R 3 WELS, Aroostook County. The tower was to be in place for two to five years, or less depending on the results of the data collected.

10. In August of 2008, Amendment A to Development Permit DP 4772 was issued to Aroostook Wind Energy, LLC authorizing them to erect two (2) additional temporary meteorological testing equipment towers on a lease, now consisting of the landowner's entire ownership in T 8 R 3 WELS, Aroostook County.
11. In October of 2010, Amendment B to Development Permit DP 4772 was issued to the applicant authorizing them to erect two (2) additional temporary meteorological testing equipment towers (2931 and 2932) on leased lands in T 8 R 3 WELS, Aroostook County. The towers were to be outfitted with wind resource analysis and potentially wildlife monitoring equipment.
12. In August of 2012, Amendment C to Development Permit DP 4772 was issued to the applicant authorizing the original temporary meteorological testing equipment tower (Condon Mountain) to remain on site for an additional 5 years. This tower is 8 inches in diameter, 197 feet (60 meters) in height, set on an 18 inch square base plate, and supported by twelve guy wires secured by four standard anchors.
13. The applicant now seeks amendment approval to construct a 95 meter-tall (312 foot) temporary meteorological testing equipment tower (Tower 2924) and approximately 500 foot long driveway at a site with a ground elevation of approximately 1050 feet above sea level. The base of the tower would be set back approximately 500 feet from the nearest land management road; 950 feet from the nearest wetland, 1,500 feet from E Branch Howe Brook, 10,600 feet from Carlisle Pond and 6,200 feet from the nearest property boundary line. The soils are mapped as Thorndike, a shaly silt loam, on 8 – 15% slopes, and well drained soil. Approximately 252,000 square feet of vegetation would need to be removed for the installation and operation of the tower. When completed, the clearing would extend approximately 280 feet from the base of the tower pole.
14. *Site access.* The site would be accessed utilizing existing privately owned forest management roads.
15. *Soils, Soil Disturbance and Erosion and Sedimentation Control Measures.* Soil map unit data were obtained and reviewed using the U.S. Department of Agriculture's (USDA) National Resource Conservation Service's (NRCS) Soils Survey Geographical database for Northeastern Aroostook County, Maine (See Finding #13). The applicant anticipates that anchoring of the tower would be achieved using rock or screw anchors; however, if site conditions warrant, localized blasting of ledge/bedrock with explosives and a buried concrete block would be utilized at each guy set to anchor the structure. New or expanded soil disturbance would be approximately 2,000 square feet; the filling and grading would be in the (M-GN) General Management Subdistrict. Erosion control best management practices would be implemented in accordance with the Commission's Land Use Districts and Standards and the Maine Department of Environmental Protection's, Maine Erosion and Sediment Control BMP's.
16. *Birds and bat strikes and ungulate entanglement.* The applicant states that the tower will be equipped with bird/bat diverters arranged on the guy wires at the manufacturer's suggested rate and spacing to prevent/reduce strikes. In addition, to prevent/reduce entanglement of mammalian wildlife, especially ungulates, double yellow-marker sleeves will be placed on all guy wires such that all guy wires within 12 feet of the ground will be covered. Furthermore, the applicant will secure loose ends of each guy wire above these yellow-marker sleeves.
17. *Lighting.* Due to its height, the proposed tower is required to have lighting by the Federal Aviation Administration (FAA). The applicant has submitted a *Determination of No Hazard to Air Navigation* issued by the FAA. Medium Intensity White Flashing Obstruction Lights or "white strobes lights" with a maximum "off" interval, and minimum intensity between flashes would be used.
18. *Period of use.* The applicant proposes to leave the proposed meteorological tower in place for no more than 2 (two) years, depending on the results of the research obtained. At the end of the data collection period, if no

other project is proposed and permitted, the tower and associated appurtenances will be dismantled and removed from the site.

19. *Title, right and interest and land division history.* On October 22, 2012, the applicant entered into a memorandum of wind energy lease and agreement with grant of easements that grants the applicant permission for, among other things, the installation of meteorological testing equipment towers on a parcel of land owned by R.A. Crawford & Son Land and Timber Inc. for the purpose of collecting wind resource data (Reference, Aroostook County Southern Registry of Deeds: Book 5148; Page 318). The applicant have previously submitted an outlined 20-year land division history and indicated that no non-exempt divisions have occurred on the applicable parcel(s) in the past 20 years.

Visual impact assessment. The applicant stated that the proposed, temporary tower is not anticipated to negatively impact the scenic character or natural resources of the area. The tower would be located in a regenerating forest landscape that has historically been utilized for timber harvesting. The area is mixed hardwood and softwood forests that exhibit evidence of past logging activities such as, land management roads, log landing yards, skidder trails, and clear cuts. The nearest improved public road from the site would be Route 11 in the T 8 R 5 WELS, approximately 10.5 miles east of the site. The site, including the vegetation clearing, is set back at least 6,000 feet from the nearest property boundary line.

The applicant further stated that there are no structures within at least 1 mile of the site. Given the rural setting, the surrounding forest management lands, the minimal amount of vegetation cutting, the setbacks from the nearest property boundary lines, and the setbacks from public roads, opportunities for clear views of either tower would be limited and it is anticipated that the towers would be minimally visible. In addition, the tower is only proposed to be up for a maximum of 2 years.

20. *Technical and financial capacity, and estimated development costs.* The financing for the project is being provided by the applicant's, parent company and agent, EDP Renewables North America LLC. EDP Renewables North America has over 12 years of wind energy experience. From 2001-2005 they were known as Zilkha Renewable Energy, from 2005-2010 they were known as Horizon Wind Energy, and in 2010, they officially changed their name to resemble their parent company, EDP. In that time, they have developed over 4,000 MW of wind energy and currently operate over 3,800 MW at 30 separate wind farms. The total cost for the proposed meteorological tower, including installation is estimated to be approximately \$179,600.

Agency Review Comments

21. The Maine Department of Inland Fisheries and Wildlife reviewed the application and consideration of the proposal's probable effect on the environment, and on the agencies programs and responsibilities, and provided the following comments:

- A. Wildlife Considerations. This project was reviewed by Region C wildlife biologist. The Biologist states that:

"Most meteorological towers are below the 200 foot threshold where lights are not required. This tower as proposed is a 312 foot high guy wire meteorological tower in the town of T8 R3 WELS, Aroostook County, Maine. **MDIFW recommends** that towers be kept under the 200 foot mark (61m) whenever possible since lighting is one of the main ingredients for bird mortality and also using construction techniques that do not require guy wires. Monopole designs are preferred over lattice-type towers.

When birds encounter lighted structures, like tall buildings and communication towers, their nocturnal "navigation system" can become disoriented. This can result in collision with the structure itself or its guy wires. Research on met towers has shown that bird mortality at individual sites may

be low but can reach extremely high proportions under certain environmental conditions, tower designs, and number of towers on the landscape. Specifically, on foggy nights during migration the effective area lit by a beacon atop a communications tower is far greater than on clear nights. This results from the reflections of light by water particles in the atmosphere. When birds encounter this “halo” of light, many will not leave its area of influence, continually encircling the tower and often fatally striking the structure.

Due to the fact this tower is proposed to be 312 feet high (95m) lights will be needed. **MDIFW recommends** white strobes with a maximum “off” interval, and minimum intensity between flashes. White strobe with maximum off interval is preferable to pulsating red beacons and has been shown to reduce bird mortality. Again, the "off" phase of the light seems critical, the longer that phase the less likely the attraction during foggy, misty, rainy, overcast, low-cloud-ceiling nights.

Since the proposed tower has guy wires, **MDIFW recommends** bird and bat diverters or similar products should be installed on the guy wires at the manufacturer’s spacing, and a plan should be implemented to ensure that the devices remain visible, functional and in place for the life of the tower. Also, **MDIFW recommends** that all excess cable, rope, construction materials be either cleaned up or stowed to prevent entanglement of wildlife. In addition, yellow marker sleeves or similar devices should cover the bottom 12 feet (vertical height) of the guy wire to prevent running animals from colliding or entangling with the wire.”

B. *Fisheries Considerations.* There are no inland fisheries concerns for this project.

Commission Review Criteria

22. Pursuant to Section 10.22,A,3,a,(6) of the Commission's Land Use Districts and Standards, surveying and other resource analysis shall be allowed without a permit from the Commission within an (M-GN) General Management Subdistrict.
23. Pursuant to Section 10.22,A,3,c,(26) of the Commission's Land Use Districts and Standards, other structure, uses, or services that are essential to the uses listed in Sections 10.22,A,3,a through c may be allowed within an (M-GN) General Management Subdistrict upon issuance of a permit from the Commission pursuant to 12 M.R.S.A. §685-B, and subject to the applicable requirements set forth in Sub-Chapter III.
24. Pursuant to Sub-Chapter III, Section 10.26,F of the Commission's Land Use Districts and Standards, for structure set back at least 500 feet from a great pond, the maximum structure height shall be 100 feet for commercial, industrial, and other non-residential uses involving one or more structures. Features of structures which contain no floor area such as chimneys, towers, ventilators and spires, and free standing towers and turbines may exceed the maximum height with the Commission's approval.
25. Pursuant to 12 M.R.S.A. §685-B,4,(C), the Commission may not approve an application, unless adequate provision has been made for fitting the proposal harmoniously into the existing natural environment in order to ensure there will be no undue adverse effect on existing uses, scenic character and natural and historic resources in the area likely to be affected by the proposal.

Based upon the above Findings, the staff concludes that:

1. In accordance with Sections 10.22,A,3,a,(6) and 10.22,A,3,c,(26) of the Commission’s Land Use Districts and Standards, the proposed temporary meteorological tower is an allowed uses in an (M-GN) General Management Subdistrict. The tower structure is necessary to support and elevate the wind resource collection and surveying equipment, and as such is a structure essential to an allowed use.

2. In accordance with Sub-Chapter III, Section 10.26,F of the Commission's Land Use Districts and Standards, the proposed temporary meteorological tower may exceed the Commission's maximum 100-foot height restriction for structures because the proposed tower does not contain floor area, is a free standing tower, and the 312-foot height is necessary for wind data collection.
3. In accordance with 12 M.R.S.A. §685-B,4,(C), the installation of the temporary meteorological tower, as proposed, is not expected to have an undue adverse effect on existing uses, scenic character and natural and historic resources in the area likely to be affected by the proposal. Specifically:
 - a. The parcel is currently actively utilized for commercial timber harvesting; this use would continue.
 - b. The potential undue adverse impacts to the scenic character have been minimized with: the rural setting; the vast surrounding forest management lands; the limited opportunity for clear tower views; the setbacks from the nearest property boundary lines; the setbacks from nearest public road. Due to its size, the FAA does require that the tower be lit. Therefore, at night, the lights will be visible to people in the area. While visibility is unavoidable, the metrological towers are temporary in nature and are expected to be perceived as subordinate elements of the larger landscape against a backdrop of trees, mountains, and forest areas that exhibit evidence of past logging activities such as, land management roads, log landing yards, skidder trails, and clear cuts.
 - c. The potential undue adverse impacts to natural resources have been minimized by limiting the amount of vegetation cutting to only that which is needed to complete the wind resource analysis, and by locating the towers so that no wetlands, rare or unique botanical features, inland wading bird and waterfowl habitat, deer wintering areas or inland fish habitat would be directly affected. Further, appropriate erosion control measures have been outlined and would be implemented to minimize the potential for undue adverse impacts to nearby streams and wetlands. Lastly, the proposal includes design elements that would help limit bird and bat strikes and ungulate entanglement.
4. If carried out in compliance with the Conditions below, the proposal will meet the applicable requirements set forth in Sub-Chapter III of the Commission's Land Use Districts and Standards and the Criteria for Approval, section 685-B(4) of the Commission's Statutes, 12 M.R.S.A.

Therefore, the staff approves the amendment request of Number Nine Wind Farm, LLC with the following Conditions:

1. The Standard Conditions for Development Permits, revised 04/2004, a copy of which is attached.
2. Notwithstanding Standard Conditions for Development Permits, Condition #3, **prior to 2 (two) years** from the date of issuance of this permit (the permit expiration), if the temporary meteorological testing equipment tower is proposed to remain on site and if no permanent meteorological reference tower associated with a commercial wind energy development has been proposed, the permittee shall submit a new permit application and obtain approval from the Commission to extend the time period to the expiration date of this permit.
3. Except as provided for in this permit, all activities shall be in conformance with the Standards for *Vegetation Clearing*, Section 10.27,B of the Commission's Land Use Districts and Standards, revised September 01, 2013, a copy of which is attached.

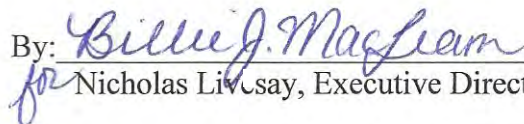
4. Except as provided for in this permit, all activities shall be in conformance with the Standards for *Filling and Grading*, Section 10.27,F of the Commission's Land Use Districts and Standards, revised September 01, 2013, a copy of which is attached.
5. Except as provided for in this permit, all activities shall be in conformance with the *Guidelines for Vegetative Stabilization*, Appendix B of the Commission's Land Use Districts and Standards, revised September 01, 2013, a copy of which is attached.
6. The temporary meteorological testing equipment tower must be placed at the identified location. The base of the tower must be set back at least one tower height from any public road, any private road open for public use, and any other property boundary line, 500 feet from all bodies of standing water 10 acres or greater in size, 150 feet from the nearest major flowing water, and 100 feet from the nearest minor flowing water and upland edge of wetlands designated as (P-WL1) wetland of special significance.
7. The total of new cleared area for the project must not exceed 6,000 acres. The cleared areas must not impact any area meeting the description of a (P-GP) Great Pond Protection Subdistrict, a (P-SL) Shoreland Protection Subdistrict or (P-WL) Wetland Protection Subdistrict. The cleared areas must be set back at least 75 feet from any public road and any private road open for public use, 150 feet from all bodies of standing water 10 acres or greater in size and the nearest major flowing water, 100 feet from the nearest minor flowing water and P-WL1 wetland of special significance, and 25 feet from the nearest property boundary line.
8. Access to the temporary meteorological testing equipment tower sites must be by existing logging roads and skidder trails, or overland; new access roads must be limited to the proposed 500 long foot driveway.
9. As recommended by the Maine Department of Inland Fisheries and Wildlife, bird and bat diverters or similar products must be installed on the guy wires at the manufacturer's spacing, and a plan should be implemented to ensure that the devices remain visible, functional and in place for the life of the tower. All excess cable, rope, construction materials be either cleaned up or stowed to prevent entanglement of wildlife. Yellow marker sleeves or similar devices must cover the bottom 12 feet (vertical height) of the guy wire to prevent running animals from colliding or entangling with the wire.
10. The permittee shall comply with the *Determination of No Hazard to Air Navigation* issued by the FAA on April 4, 2014, which requires the use of white flashing lights on the tower. These should be set with the maximum "off" interval allowed and the minimum intensity allowed between flashes.
11. The permittee shall secure and comply with all other applicable licenses, permits, and authorizations of all federal, state and local agencies.
12. All activities shall be in conformance with the standards for *Erosion and Sedimentation Control*, Section 10.25,M of the Commission's Land Use Districts and Standards, revised September 1, 2013, a copy of which is attached.
13. For areas where soil is to be disturbed, erosion and sedimentation control structures, including but not limited to silt fences, must be installed prior to commencement of construction, and measures to control erosion, including but not limited to hay mulch, re-seeding and water bars, must be employed

during and after construction. Once implemented or put in place, erosion control devices and measures must be maintained to insure proper functioning.

14. Installation of the temporary meteorological testing equipment tower and any improvement of the land management road must be avoided when the soil is saturated; or if unavoidable, slash, wood chips, or mats must be used to drive heavy equipment over where the soil is soft enough to rut. However, work that will disturb soils must not be conducted if conditions are such that significant erosion and sedimentation with the potential to damage a stream, vernal pool or wetland will occur. For the development proposed, no clearing or other disturbance may occur within any wetland areas, vernal pools, or streams.
15. Excluding areas actively use for forest management activities or existing access road or skidder trails, all areas of disturbed soil associated with the installation of the tower must be promptly reseeded and stabilized with mulch until 85% vegetative cover is achieved, and maintained in a vegetated state to prevent soil erosion. In areas where re-vegetation is not initially successful, additional measure to control erosion and sedimentation must be undertaken as often as necessary to be effective.
16. Should any erosion or sedimentation impacting a wetland or stream occur during construction, the permittee shall contact the Land Use Planning Commission staff immediately, or as soon as possible if the event occurs outside of regular business hours, notifying staff of the problem and describing all proposed corrective measures.
17. Once construction is complete, the permittee shall submit to LUPC staff photos of the site showing the completed work including: the wildlife protection techniques; the tower sites.
18. Upon completion of the data collection or upon the expiration date of this permit, if no extension of time is requested for this permit, or if no permanent meteorological reference tower associated with a commercial wind energy development is proposed, the permittee shall lower the temporary meteorological testing equipment tower and remove them and all other associated equipment from the site. Any waste materials must be disposed of in accordance with Maine Solid Waste Disposal Rules.
19. All conditions of Development Permit DP 4772 and subsequent Amendments shall remain in effect except as modified by this amendment.

This permit is approved upon the proposal as set forth in the application and supporting documents except as modified in the above stated conditions, and remains valid only if the permittee complies with all of these conditions. Any variation from the application or the conditions of approval is subject to prior Commission review and approval. Any variation undertaken without Commission approval constitutes a violation of Land Use Planning Commission law. In addition, any person aggrieved by this decision of the staff may, within 30 days, request that the Commission review the decision.

DONE AND DATED AT ASHLAND, MAINE, THIS 5TH DAY OF AUGUST, 2014.

By: 
for Nicholas Livsey, Executive Director