



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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November 22, 2011

Lee D. Hoffman, Esq.
Pullman & Comley, LLC
90 State House Square
Hartford, CT 06103-3702

RE: **PETITION NO. 983** - BNE Energy, Inc. petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the construction, maintenance, and operation of a 4.8 MW Wind Renewable Generating facility located on Flagg Hill Road, Colebrook, Connecticut.

Dear Attorney Hoffman:

At a public meeting of the Connecticut Siting Council held on November 17, 2011, the Connecticut Siting Council (Council) considered and approved the Development and Management (D&M) Plan submitted for this project on September 16, 2011, and modified on October 28, 2011, with the following conditions:

- BNE shall formalize the conservation plan in accordance with C.G.S. Chapter 822 Easements and Restrictions, within 90 days of the date of the D&M decision letter. A copy shall be provided to the Council and shall be reviewed and approved by staff. Any request for an extension shall be submitted to the Council in writing for approval. The formal conservation easement shall remove horseback riding, mountain biking, and timber harvesting as permitted uses;
- BNE shall conduct a pre-construction infrastructure survey with Town representatives within 30-days of the date of the D&M decision letter. Additionally, BNE shall provide details of the continuous monitoring of Town infrastructure and associated reporting during construction. No construction, other than clearing, may begin until the pre-construction survey is complete. BNE shall place \$10,000 in escrow for the Town;
- BNE shall allow Town officials access to the site for inspection of E&S controls with any resulting recommendations to be considered by the on-site contractor and BNE's Environmental Inspector;
- BNE shall submit a revised Stormwater Management Plan, as required by DEEP permitting requirements, if applicable;
- BNE shall submit a plan detailing the ice safety/mitigation fence delineation and locations and examples of warning signs, within 30-days of the date of the D&M decision letter;
- BNE shall submit the final foundation design plans prior to installation of the turbine foundations;

- BNE shall establish a second long-term noise monitoring location at the property boundary prior to facility installation, to be reviewed and approved by Council staff; and,
- BNE shall incorporate the proposed decommissioning specifications contained within the Town's Post Hearing Brief, dated May 20, 2011.

This approval applies only to the D&M Plan submitted on September 16, 2011, and modified on October 28, 2011. Any changes to the D&M Plan require advance Council notification and approval.

Please be advised that deviations from this plan are enforceable under the provisions of the Connecticut General Statutes § 16-50u. Enclosed is a copy of the staff report on this D&M Plan, dated November 17, 2011.

Thank you for your attention and cooperation.

Very truly yours,



Robert Stein
Chairman

RS/MP/cm

Enclosure: Staff Report, dated November 17, 2011

c: Parties and Intervenors

PETITION NO. 983 - BNE Energy, Inc. declaratory	}	Connecticut
ruling that no Certificate of Environmental Compatibility	}	Siting
and Public Need is required for the construction,	}	Council
maintenance, and operation of a 4.8 MW Wind Renewable	}	
Generating facility located on Flagg Hill Road, Colebrook,	}	
Connecticut.		November 17, 2011

STAFF REPORT

On June 2, 2011, the Connecticut Siting Council (Council) issued a Declaratory Ruling to BNE Energy, Inc. (BNE) that no Certificate of Environmental Compatibility and Public Need is required for the construction, maintenance, and operation of a 4.8 megawatt (MW) wind renewable generating facility located on Flagg Hill Road, Colebrook, Connecticut. As required in the Council's Decision and Order, BNE submitted a Development and Management Plan for this project on September 16, 2011. On October 28, 2011, the Council received a modification to the D&M Plan regarding the relocation of the temporary construction access road. The project entails the construction and installation of three GE 1.6 MW wind turbines on a 79.4 acre parcel located on Flagg Hill Road. The sections of the D&M Plan submitted correspond to conditions contained in Paragraph 2 of the Council's Decision and Order dated June 2, 2011.

- a. **A detailed site plan showing the placement and/or extent of vegetative clearing, grading, wetland buffers, access roads, turbine foundations, building specifications, equipment and material laydown and staging areas. The Southern Turbine shall have a location and/or rotor diameter that ensures rotating turbines blades would be confined to the host property.**

BNE included the following in its D&M Plan:

- a) Vegetative clearing – Drawing No. C-003
- b) Grading – Drawing Nos. C-300 through C-306
- c) Wetland buffers – Drawing Nos. C-200 through C-206
- d) Access roads – Drawing Nos. C-401 through C-406
- e) Turbine foundations – Drawing Nos. B-101 through B-103
- f) Building specifications – Drawing Nos. A-100 through A-107
- g) Equipment and material laydown and staging areas – Drawing Nos. C-101 through C-103

On October 28, 2011, BNE modified its driveway design for the project so that construction access is contained within the subject property. Current access to the property is from a driveway that crosses the northwest corner of the abutting Hirtle property. Prior to site clearing, BNE will construct a new 20-foot access driveway that bypasses the Hirtle property so that the entire existing drive is contained within the site property. The existing drive will serve as temporary access to the site. Once the permanent access road is constructed, the existing drive will remain in place as another means to access the site. The Erosion and Sedimentation Plan and Stormwater Management Plan calculations were updated to reflect the modification to the temporary access road.

The Southern Turbine rotor sweep area is within the boundaries of the host property.

- b. Provision for the establishment of open space and/or a conservation easement on the 29 Flagg Hill Road parcel that is protective of the site's natural resources and restricts development for the life of the project or in perpetuity.**

BNE included a Conservation Plan in its D&M Plan. Approximately 26.6 acres or one-third of the total area of the subject property will be protected property. No residential, commercial, industrial, or mining activities, or any building, structure, telecommunications facility, etc. will be permitted on the protected property. The boundaries are depicted on Sheet No. C-003.

BNE indicated permitted recreational activities on the host property include passive recreational activities and exclude motorized activities, such as all-terrain vehicles. BNE seeks to only conduct limited timber harvesting at the site. There will be no clear cutting of trees in the area of the conservation plan, but selected trees could be harvested.

BNE seeks to memorialize the conservation plan in a temporary easement that will last for the life of the project. BNE intends to have the Town of Colebrook be the grantee of the easement. If, however, an easement agreement cannot be reached with the Town, BNE will look to a third party non-profit as a signatory to the easement, such as the Nature Conservancy or similar group.

- c. Details for the modification and restoration of Town infrastructure affected by the project including a pre-construction survey, protections during construction, post construction survey, and restoration plan to render affected infrastructure to pre-project conditions or better.**

The physical condition of Flagg Hill Road is very good and no improvements are anticipated in order to accept transport vehicles. However, at the intersection of Flagg Hill Road and Route 44, some temporary widening will be required in order to accommodate the turning movements of the transport vehicles. This widening will occur on the southwest quadrant of the intersection on land owned by the Northwestern Connecticut Sportsman Association.

A pre-construction survey will be conducted with representatives from BNE and the Town of Colebrook to confirm the condition of the road prior to commencement of construction activities. A post-construction survey will be completed immediately following completion of construction activities with representatives of BNE and the Town to determine if there were any adverse impacts or damage to Town infrastructure resulting from the project construction. If any adverse impacts or damage to Town infrastructure is identified, BNE agrees to bring such affected infrastructure to pre-project conditions or better.

BNE proposes \$10,000 in escrow for the Town to address any new paving, repairs, etc. that occur as a result of BNE's modifications or damage to the Town's infrastructure.

- d. An erosion and sediment control plan, consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control (E&S Guidelines), as amended. The plan shall contain a narrative that specifies how the plan complies with the E&S Guidelines.**

BNE has included in its D&M Plan an Erosion and Sedimentation Control Plan (E&S Plan). All relevant principles and guidelines from the E&S Guidelines have been included in the D&M Plan. The general principles from the E&S Guidelines including but not limited to the following:

- a) Utilize existing topography.
- b) Align roads on contour wherever possible and use them to divert surface water thereby reducing slope lengths.
- c) Avoid steep slopes and soils with severe limitations for the intended uses.
- d) Avoid flood prone areas, wetlands, beaches, dunes, and other sensitive areas.
- e) Keep stockpiles, borrow areas, access roads and other land-disturbing activities away from critical areas (such as steep slopes and highly erodible soils) that drain directly into wetlands and water bodies.
- f) Avoid siting buildings in drainage ways, over watercourses and over storm drainage systems.
- g) Utilize the natural drainage system wherever possible.
- h) Limit areas of clearing by concentrating construction areas on the least critical and sensitive areas.
- i) Keep disturbed areas draining to a common point of discharge to less than five acres at any given time.
- j) Sequence operations so that storm drainage systems are operational as soon as possible. Ensure that all storm drainage outlets to a stable area.
- k) Using diversions, stone check dams, silt fence and similar measures to break flow lines and dissipate storm water energy.
- l) Design conveyance features to withstand the project water velocities without causing erosion.

Temporary E&S control blankets used at the site will not be removed. They are designed to remain in place and will degrade over time, in approximately 12 months.

The updated plans also include the dewatering basins for each of the proposed foundation excavation areas. The dewatering basins are sized and designed in accordance with the E&S Guidelines.

- e. Stormwater Management Plan, consistent with the 2004 DEP Stormwater Quality Manual.**

BNE has included in its D&M Plan a detailed, two volume stormwater management plan sealed by a licensed Professional Engineer.

f. Drainage Calculations for site development consistent with the Connecticut Department of Transportation Drainage Manual.

BNE has included in its D&M Plan a detailed, two volume stormwater management plan sealed by a licensed Connecticut Professional Engineer. The drainage calculations are consistent with methodologies provided in the Connecticut Department of Transportation Drainage Manual.

g. Provisions for crossing Wetland 1, including details that allow the stream portion of the wetland to maintain a natural substrate, and the utilization of vernal pool best management practices in accordance with the Metropolitan Conservation Alliance Technical Paper No. 5 (Calhoun and Klemens, 2002).

The portion of Wetland 1 affected by the access drive crossing does not include a watercourse or channelized water conveyance feature. A seepage envelope will be used at this location to facilitate natural groundwater movement through the crossing. This crossing method utilizes a porous road sub-base, which eliminates the need for culverts which have the potential to impound water and concentrate flows. Utilization of vernal pool best management practices have been addressed by Dr. Michael Klemens.

h. Wetland and Wildlife Restoration plan to include provisions for habitat restoration, invasive species control over a three-year period, and the maintenance of permanent meadow areas on the property in accordance with the Herpetological Assessment dated April 20, 2011 (Klemens);

An upland restoration plan has been included in the D&M Plan. The plan provides for the restoration of disturbed upland areas with a New England Conservation/Wildlife Mix, a native herbaceous seed mixture that will facilitate growth of a permanent, maintenance-free cover of grasses, forbs, wildflowers and legumes. This seed mixture will provide erosion control and wildlife habitat value. Portions of the restoration area will be maintained as a permanent meadow. Details regarding the maintenance schedule of the permanent meadow areas have been provided by Dr. Michael Klemens. Areas that will not be subject to regular maintenance will revert to forest through the natural process of succession. Wetland areas subject to disturbance as a result of construction activities will be permanently converted to upland.

i. Ice Safety Management Plan that includes provisions to mitigate the potential for ice throw and ice drop. The Petitioner shall submit an evaluation of the feasibility of installation of the optional Winter Ice Operation Mode.

BNE submitted its Ice Safety Management Plan. The turbines will be monitored by onsite personnel during regular business hours and icing events. The turbines will be shut down if power output is not within a certain range and/or vibration is detected from the blades due to ice. The turbines will not operate until the ice melts off the blades and personnel has thoroughly inspected the blades to ensure that there is no remaining ice.

- j. Establishment of a post-construction noise monitoring protocol describing locations, frequency and methods to be employed for a post-construction noise study. Upon review of the subsequent noise study, the Council, in consultation with the DEP, will evaluate and determine if any mitigation measures should be employed, including turbine operations management, to ensure the project complies with DEP noise regulations.**

Noise equipment will be installed prior to the start of commercial operations of the wind turbines to document background noise conditions. Noise monitoring will be conducted at the residential areas with the highest predicted sounds levels based on the Noise Report dated October 2010. Short term noise monitoring (i.e. at least seven days per month) will be performed at sites located on Flagg Hill Road, Greenwood's Turnpike, and Beckley Road. Long term noise monitoring (i.e. continuously for a year) will occur at a location along the southeast property boundary. BNE chose short-term and long-term monitoring locations with the highest predicted sound levels. This will provide the most conservative data for future review. Comments were requested from the Department of Energy and Environmental Protection (DEEP) regarding the noise monitoring plan. No comments have been received.

BNE will submit the results of the noise monitoring within two weeks after each month for the first three months and quarterly thereafter. A final report will be filed with the Council after a year of long term monitoring is complete.

- k. Project Decommissioning Plan.**

BNE has submitted its Decommissioning Plan detailing the proposed process for decommissioning the turbines should it become necessary. Taking into account the salvage values, the net cost of decommissioning would be \$150,000 total or \$50,000 per turbine in today's (2011) dollars. BNE would also take reasonable measures restore the site to original condition, including but not limited to re-seeding the area to restore vegetation.

D&M Plan Recommendations

Staff recommends the approval of the D&M Plan with the following conditions:

- BNE shall formalize the conservation plan in accordance with C.G.S. Chapter 822 Easements and Restrictions, within 90 days of the date of the D&M decision letter. A copy shall be provided to the Council and shall be reviewed and approved by staff. Any request for an extension shall be submitted to the Council in writing for approval. The formal conservation easement shall remove horseback riding, mountain biking, and timber harvesting as permitted uses;
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