STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Petition of BNE Energy Inc. for a Declaratory Ruling for the Location, Construction and Operation of a 4.8 MW Wind Renewable Generating Project on Flagg Hill Road in Colebrook, Connecticut ("Wind Colebrook South")	Petition No. 983
	May 20, 2011

POST-HEARING BRIEF OF PETITIONER BNE ENERGY INC.

The petitioner, BNE Energy Inc. ("BNE"), submits this post-hearing brief in support of its Petition to construct the first commercial wind renewable generating project in Connecticut. If the Connecticut Siting Council ("Council") approves BNE's petition, it will allow Connecticut to take advantage of the growing market for renewable power, assist Connecticut in meeting its renewable portfolio standards and allow Connecticut to be less dependent of fossil fuels. In addition, approval of this petition will be consistent with the State's energy policies including State policies requiring compliance with renewable portfolio standards ("RPS"). BNE submits this brief after the completion of a pre-hearing conference, a site visit, two public comment sessions and four evidentiary hearings in this proceeding.

I. INTRODUCTION

This petition was filed on December 6, 2010. The Council conducted a field review of the proposed project site on March 22, 2011 and conducted public hearings in Colebrook on March 22 and 23, 2011. Evidentiary hearings were conducted on March 23 and April 14, 21 and 26, 2011. BNE received and responded to hundreds of interrogatories during the proceeding. As the Council is aware, the Council is subject to a statutory deadline of June 4, 2011 to render a decision on this petition.

II. BACKGROUND

The proposed project calls for the installation of three GE Energy ("GE") 1.6 megawatt ("MW") wind turbines and associated ground equipment, an ancillary building (which will provide storage, office space and an educational area), upgrading and installation of an access road and a 13.8 kilovolt ("kV") electrical interconnection (together, the "Project" or "Wind Colebrook South"). The Project does not propose the development of any paved roads or paved parking areas. *See* BNE Exhibit 1.

The proposed Project site is located at 29 Flagg Hill Road and 17 Flagg Hill Road in Colebrook, Connecticut (together, the "Property") on approximately 79.44 acres of undeveloped land. Currently, the Property is undeveloped with the exception of a meteorological ("Met") tower, and a residence located on the 17 Flagg Hill Road parcel which is owned by the principals of BNE. The Nature Conservancy owns wooded, undeveloped land adjacent to the Property to the west. The Northwestern Connecticut Sportsmen Association, Inc. ("Gun Club") owns a large tract of land to the north. Flagg Hill Road abuts the Property to the east. A private residence and additional undeveloped woodlands bound the Property to the south. Land use within the vicinity of the Property is comprised of sparse residential development and the well traveled Route 44 corridor. *See* BNE Exhibit 1.

The Project was initially presented to the Town of Colebrook in the fall of 2008 in order to obtain a zoning permit for the installation of the Met tower at the Property. Since that time, BNE has kept the Town and its elected local and state officials apprised of the Project's progress. In addition, while not legally required, in preparation of filing this petition, BNE and its representatives submitted preliminary information to the Town on October 8, 2010. At the request of the First Selectman of Colebrook, BNE and its representatives conducted a public

informational presentation for the residents of Colebrook on November 10, 2010. The informational meeting was well attended by members of the public. *See* BNE Exhibit 1.

Throughout these proceedings, BNE has gone beyond what is legally required of it in order to foster public participation and to provide the Council with as much information concerning the Project as possible. Simultaneous with the filing of this petition, again while not legally required, BNE sent a certified mailing to all abutting property owners notifying such owners of the filing of its petition and published a legal notice in the Litchfield County Times. In addition, while not legally required, BNE sent copies of its petition to local, state and federal officials that would be required to receive notice for a certificate filing pursuant to Connecticut General Statutes ("CGS") § 16-50l(b). *See* BNE Exhibit 1.

It cannot be disputed that the materials submitted in BNE's petition far exceed the Council's recommendations contained in its April 2010 application guideline for Petitions for Declaratory Rulings for Renewable Energy Facilities. That application guideline does not recommend the filing of engineered site plans, visibility analysis, wetlands impacts analysis, habitat analysis, bird and bat impact analyses, noise impact analyses or the like. Despite this, BNE submitted all of the referenced analyses in its petition and, during this proceeding, also submitted shadow flicker analysis and ice drop/ice throw analysis.

It is equally indisputable that the Council, like BNE, went well above and beyond its legal requirements in reviewing a petition for declaratory ruling. First, approximately one year prior to BNE's submission of this petition, the Council opened Petition 863 to examine its jurisdiction over renewable energy facilities, which resulted in the Council's revised application guidelines in April 2010. *See* Petition 863. Furthermore, in early 2010 and in anticipation of receiving BNE's petitions, the Council released a request for proposal to retain a consultant on

general renewable energy matters. On March 26, 2010, the Council formed a subcommittee to review and evaluate responses to the RFP. *See* March 26, 2010 Meeting Minutes. The Council subsequently retained Epsilon Associates in August 2010 to assist the Council in reviewing renewable energy projects such as this petition. *See, e.g.*, DEP Comments dated March 14, 2011. In addition, while not legally required, the Council not only voted to hold a public hearing but also took a rare step in hosting not one but two public comment sessions in the Town of Colebrook and conducted a total of four days of evidentiary hearings for this single petition. Numerous individuals, groups or entities sought and were granted legal standing in this proceeding including parties the Town of Colebrook, FairwindCT, Inc. ("Fairwind"), Robin L. Hirtle, Stella and Michael Somers, David R. Lawrence and Jeannie Lemelin, Kristin M. and Benjamin C. Mow, Walter M. Zima and Brandy Grant, Eva Villanova and Susan Wagner, and intervenor The Connecticut Light and Power Company (CL&P).

III. LEGAL STANDARD

Pursuant to Conn. Gen. Stat. § 16-50k(a) and Section 4-176(a) and 16-50j-38 *et seq*. of the Regulations of Connecticut State Agencies ("RCSA"), BNE requested that the Council issue a declaratory ruling for BNE's proposed location, construction, operation and maintenance of three GE 1.6 MW wind turbines, associated ground equipment, an access road, an ancillary building and a 13.8 kV electrical interconnection at the Property.

CGS § 16-50k(a) provides:

> Notwithstanding the provisions of this chapter or title 16a, the council shall, in the exercise of its jurisdiction over the siting of generating facilities, approve by declaratory ruling . . . (B) the construction or location of any . . . grid-side distributed resources project or facility with a capacity of not more than sixty-five megawatts, as long as such project meets air and water quality standards of the Department of Environmental Protection . . . .

The Project is a "grid-side distributed resources" facility, as defined in CGS § 16-1(a)(43), because the Project involves "the generation of electricity from a unit with a rating of not more than sixty-five megawatts that is connected to the transmission or distribution system . . . ." The record is clear that the Project complies with the air and water quality standards of the Connecticut Department of Environmental Protection ("DEP"). Thus, approval of the Project is warranted pursuant to CGS § 16-50k(a).

Compliance with DEP air and water quality standards is the appropriate and only standard of review for this petition. However, BNE recognizes that the Council has indicated that, pursuant to Conn. Gen. Stat. §§ 16-50k and 4-176 and RCSA § 16-50j-38, the Council has jurisdiction to approve a petition for declaratory ruling so long as the facility will not have a substantial environmental impact and therefore would not require a certificate of environmental compatibility and public need. Further, the Council has indicated that, in determining whether a facility has a substantial environmental impact, the Council must consider the criteria laid out in CGS § 16-50p, which includes the consideration of:

> [t]he nature of the probable environmental impact of the facility . . . including a specification of every significant adverse effect, including, but not limited to, electromagnetic fields that, whether along or cumulatively with other effects, on, and conflict with the policies of the state concerning the natural environment, ecological balance, public health and safety, scenic, historic and recreational values, forests and parks, air and water purity and fish, aquaculture and wildlife.

See CGS § 16-50p (3)(B). Even if this heightened standard of review is applied to this petition, which BNE argues is not the applicable standard, the record is clear that the Project will not have a substantial environmental impact and therefore the petition must be granted.

IV. ARGUMENT

A. The Project Complies with DEP Air and Water Quality Standards

The Project satisfies the requirements of CGS § 16-50k(a) because it is a grid-side distributed resources facility under 65 MW and complies with DEP air and water quality standards, as further demonstrated below.

1. The Project Complies with DEP Air Quality Standards

The record is clear that the Project complies with the applicable DEP air quality standards found at RCSA § 22a-69-1 *et seq*. In fact, it is unrefuted in the record that the Project will not only comply with DEP air quality standards but also will result in a net benefit to air quality in the State of Connecticut, as the production of 8,410 megawatt hours (MWh) per year of clean, renewable energy will reduce CO_2 emissions by approximately 6,332 tons per year. *See* BNE Exhibit 9g.

In fact, DEP itself acknowledged the same in its comments, dated April 6, 2011, that were submitted to the Council in this proceeding. DEP stated that:

> While it is entirely reasonable and justified to expect emissions reductions to result from the operation of these turbines as opposed to alternate sources of generation in their absence, experience has shown that it is very difficult to predict exactly which existing sources of generation would be displaced by any new source and, therefore, what the resultant emissions reductions would be. Nevertheless, a non-emitting source of electricity will result in emissions reductions over time as virtually every competing source of replacement power will yield emissions. . . .

See DEP correspondence dated April 6, 2011. The fact that the Project not only complies with DEP air quality standards but will in fact result in a *net benefit* to air quality in the State of Connecticut is unrefuted by any other party or intervenor to this proceeding. In addition, the production of 12,614 MWh per year of clean, renewable energy will also reduce particulate matter and ozone precursor emissions of volatile organic compounds and oxides of nitrogen as

compared to emissions from other fossil fuel sources. These emission reductions will result in public health benefits and improved visibility in Connecticut. *See* BNE Exhibit 9g.

2. The Project Complies with DEP Water Quality Standards

The record is equally clear that the Project will also comply with DEP Water Quality Standards, including both groundwater quality standards and surface water standards. The Project will not result in any negative impacts to ground water or surface water on the Property or in the vicinity of the Property. *See* BNE Exhibit 9c, 9f, 18; April 14, 2011 Tr. at 175-76.

a. Surface Water Quality Impacts

The Project will not have a negative impact on surface water quality on the Property or in the vicinity of the Property. The development of the Project will result in only 5.36-5.79 acres of permanent disturbance on the entire 79.44 acre parcel. This area will remain as compacted stone roads (3.59 acres), rip rap cover slopes (1.72 acres), and the location of the turbine towers (0.05 acres). Compacted earth (0.43 acres) will be reclaimed post-construction by adding topsoil and seeding. *See* BNE Exhibit 9f, 18.

An additional 8.51 acres will be temporarily disturbed during construction for a short period of two to four months and will be restored and planted with native grasses and allowed to return to its natural state through long-term succession. The development of this Project will result in far less impact than the development of the Property for residential purposes. *See* BNE Exhibit 9f, 18, 20; April 14, 2011 Tr. at 50-52.

The applicable Surface Water Quality Standards (WQS) include the following:

"1. It is the State's goal to restore or maintain the chemical, physical, and biological integrity of surface waters. Where attainable, the level of water quality that provides for the

protection and propagation of fish, shellfish, and wildlife and recreation in and on the water shall be achieved."

No direct impacts or discharges to surface waters are proposed. Stormwater discharged to uplands in proximity to the site's surface waters will be properly treated by utilizing best management practices in accordance with the CT DEP 2004 Connecticut Stormwater Quality Manual. Potential non-point source pollutants originating from erosion and sedimentation during construction primarily consist of suspended particulate soil media that will be minimized by incorporating best management practices detailed in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control Manual. Due to the unmanned nature of the Project and low traffic it generates, the proposed development would not be considered to be classified as a land use with potential for high pollutant loads (i.e., heavy metals, hydrocarbons, synthetic organic chemicals, trash, etc.). Additional measures have been implemented by BNE Energy to address the potential for secondary impacts to surface waters during construction, including third party erosion and sedimentation control inspections. Therefore, the Project will comply with the State's goal to maintain the chemical, physical, and biological integrity of surface waters.

"2. Existing and designated uses such as propagation of fish, shellfish and wildlife, recreation, public water supply, and agriculture, industrial use and navigation, and the water quality necessary for their protection is to be maintained and protected."

As noted *supra*, existing and designated uses will be protected by maintaining and protecting the quality of surface water both during and after construction of the Project.

"18. Best Management Practices for control of non-point source pollutants may be required by the Commissioner on a case-by-case basis."

As noted *supra*, potential non-point source pollutants originating from erosion and sedimentation during construction will be minimized by incorporating best management practices detailed in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control Manual. Additional measures will be put in place to address the potential for secondary impacts to surface waters during construction, including third party erosion and sedimentation control inspections and adoption of a Spill Prevention Plan. Also, the DEP reviewed and commented on the proposed Project and did not express any concerns in this area. *See* DEP correspondence dated April 6, 2011.

"19. The Commissioner shall require Best Management Practices, including imposition of discharge limitations or other reasonable controls on a case-by-case basis as necessary for point and nonpoint sources of phosphorus and nitrogen, including sources of atmospheric deposition, which have the potential to contribute to the impairment of any surface water, to ensure maintenance and attainment of existing and designated uses, restore impaired waters, and prevent excessive anthropogenic inputs of nutrients or impairment of downstream waters."

With the exception of a small septic system, which will be designed in accordance with the Connecticut Public Health Code and applicable local regulations, and will contribute negligible quantities of nitrogen and phosphorus to the site, the Project will not result in discharge of phosphorous and nitrogen that will impair surface water or groundwater quality. Disturbed areas of the site will be revegetated following construction with a variety of native herbaceous vegetation which will not require fertilization or maintenance with herbicides or pesticides. Therefore, the Project will not result in excessive anthropogenic inputs of nutrients or synthetic organic chemicals that might impair surface waters.

"32. These WQS shall apply to all surface waters. Evaluation of a discharge or discharge of dredged or fill material to a wetland shall include consideration of the manner in which such wetlands support existing and designated uses and protect downstream water quality."

The proposed crossing, which will be subject to discharge of fill materials, is located at the northernmost extent of a headwater wetland (Wetland 1) associated with an unnamed perennial watercourse. This crossing is proposed within an area characterized as a seasonally saturated forested wetland. This area drains to the south through a saturated forested wetland and into a large beaver pond. An unnamed perennial watercourse drains from the southern tip of the beaver pond (off-site).

The crossing location was carefully located at a drainage divide where areas to the north of the crossing drain to the north (off-site), and areas south drain to the south (through Wetland 1). A subsurface drainage structure known as a "French Mattress" will eliminate the need for culvert crossings, thereby reducing the necessary road height and as such, wetland filling. The French Mattress will also allow for conveyance of surface and subsurface hydraulic flow from either side of the wetland crossing resulting in minimal impact to the wetland's hydrology (e.g., no impediment of surface or subsurface flows or concentration of flows). With its location within a drainage divide at the northernmost extent of the wetland, minimal groundwater movement is anticipated through the crossing. Therefore, it is highly unlikely that the downstream wetland hydrology will be altered. *See* BNE Exhibit 9f; April 14, 2011 Tr. at 39-40.

An evaluation of Wetland 1 indicated that, while this wetland in its entirety provides numerous functions and values at a principal level, the area of the proposed crossing provides a different set of functions. It lacks many of the attributes that are present within the main body of

Wetland 1 to the south. Headwater wetland systems are considered particularly important in water quality management as they are the first step in treating water moving from uplands to stream systems. The location of the proposed crossing within a drainage divide at the northernmost extent of Wetland 1 and the method of crossing to be used (i.e., French Mattress) will not result in a likely adverse impact to the wetland functions and values of this system. Therefore, the proposed wetland impacts will not affect existing and designated uses or downstream water quality of surface waters of the State of Connecticut. *See* BNE Exhibit 1, 9c, 9f, 18.

Opponents of the Project have attempted to argue that the soil erosion and sedimentation controls, as proposed, are insufficient, do not comply with the DEP's 2002 soil, erosion and sedimentation control guidelines and 2004 water quality manual and will therefore result in impacts to surface waters. *See*, e.g. Fairwind Exhibits 2c, 2h, 7, 8. These baseless arguments are apparently founded on the fact that BNE did not submit 100 percent complete construction drawings with its petition. These arguments are unsupported by any legal precedent or by any facts in the record. Instead, these arguments are based on the opponents' fundamentally flawed misunderstanding of Council procedure and misinterpretation of DEP water quality standards in an apparent effort to defeat the Project. The flawed argument that BNE was somehow required to file 100 percent complete construction drawings has no basis in any Council guideline, regulation or statute. *See* April 14, 2011 Tr. at 173-76.

First, opponents of the Project have demonstrated a fundamental lack of understanding of the Council's procedure and instead have sought to impose their own arbitrary requirements regarding filing requirements and level of detail required in the Council's filing requirements. This is contrary to Council procedure and lacks any support in Council statutes, regulations or

application guidelines. In fact, in reviewing the Council's guidelines for renewable facilities under 65 MW, which the Project indisputably falls under, there is ***no*** requirement that any engineered plans be filed with a petition for declaratory ruling for such a facility. *See* Council's Petition for Declaratory Ruling Energy Facility guide, updated April 2010. Therefore, the claim that BNE should have filed 100 percent complete construction drawings is unsupported.

BNE submitted preliminary drawings for review during this locational approval portion of this proceeding. Assuming that three turbines are approved on the Property, BNE will then move into the development and management ("D&M") portion of this proceeding, during which it would submit preliminary construction drawings. Assuming those D&M preliminary drawings are approved, BNE would then be required to submit 100 percent complete construction drawings—incorporating any requested modifications to the preliminary construction drawings—prior to the commencement of construction. *See, e.g*. Docket 370, Decision and Order GSRP (with specific development and management plan requirements including development of a stormwater management system). This is consistent with Council's past practices in its review of renewable energy facility petitions for declaratory ruling. *See* Petition 784, Decision and Order and Petition 834 Decision and Order (with specific development and management plan requirements including development of stormwater management systems and "final" site plans).

Council Staff Attorney Bachman confirmed on the record that it is the Council's intention to require the same in this proceeding, stating that:

> Any questions pertaining to site plans at this point, these are preliminary site plans, we will not have a set of final site plans unless there is an approval of this project and the Council can change locations of turbines, the access road, depending on the decision that this Council makes then the Petitioner will have final site plans in the form of a development and management plan; that is the development and management plan phase . . . they get an approval, they file final

> site plans for the review of all of the parties and intervenors, they can make comments and the Council will approve, disapprove, potentially amend or change that development and management plan. But at this point all of these plans are preliminary. The Petitioner does not know whether or not their project is going to be approved, they don't know what changes the Council may make, that's part of our deliberations. If it gets approved, final site plans will be filed. But until then all these site plans, whether they're original site plan or a revised site plan, they're all preliminary.
>
> April 14, 2011 Tr. at 197-98.

Based on the foregoing, there is simply no basis for opponents of the Project to argue that BNE should have submitted 100% complete construction drawings with 100% complete stormwater management systems at this stage in this proceeding. Like every other project that has come before the Council and been approved, BNE has submitted preliminary plans and demonstrated that, to the extent possible at this stage of these proceedings, those plans comply with the DEP's 2002 soil, erosion and sedimentation control guidelines and 2004 water quality manual. *See* BNE Exhibits 1, 9c, 9f.

Furthermore, anti-wind organization Fairwind conveys a fundamental misunderstanding of DEP's guidelines in an apparent attempt to defeat the Project at any cost. Fairwind's purported position stretches the DEP guidelines into something they are not: requirements, regulations or directives. Instead, the DEP guidelines are exactly what they are titled—guidelines. The DEP is an administrative agency that is well-versed in the crafting of regulations. Should it have wanted its guidelines to be regulations, the DEP would have followed the Uniform Administrative Procedures Act, and crafted them as regulations.

Instead, the DEP's 2002 soil erosion and sedimentation guidelines specifically state that the purpose of the guidelines is "intended to provide information to government agencies and the public on soil erosion and sediment control." The Guidelines are a "useful reference for projects that require erosion and sediment control planning, design and implementation." *See* Council

Administrative Notice #9. Similarly, the 2004 Stormwater quality manual states that "[t]he information provided in this Manual are provided for guidance and are intended to augment, rather than replace, professional judgment." *See* Council Administrative Notice #40.

Despite this, opponents of the Project have continued to make the baseless argument that the DEP 2002 guidelines and 2004 manual are requirements, regulations or directives and have sought to impose their own tortured interpretation of those "narrative standards that identify goals and objectives" and cast them as regulation. These misguided interpretations of narrative guidelines are simply not relevant to this proceeding.

Finally, BNE notes that the Council has received detailed comments from DEP in this proceeding. Nowhere in the seven pages of its comments does DEP raise any issues or concerns regarding water quality or soil, erosion or sedimentation control. *See* DEP correspondence dated April 6, 2011. In fact, the DEP specifically commended BNE for its plan to remove erosion control barriers after upland meadow habitat is created, noting that "[t]oo often erosion control barriers are not removed from the site after the affected areas have been planted and stabilized" and that "[i]t is beneficial to get barrier materials, which can often include plastic sheeting, off the site as soon as practical." *Id.* Clearly, the largest stakeholder in ensuring compliance with DEP water quality standards is DEP itself. Opponents of the Project should be hard-pressed to argue that such standards are not being met when the agency with cognizance over the matter agrees with BNE's contention that the Project will comply with applicable standards.

b. Groundwater Impacts

The Project will satisfy DEP's groundwater standards and guidelines and will result in no impact to groundwater on the Property or the vicinity thereof. The proposed operations will include a well which will be drilled on-site and withdraw water from the on-site aquifer. The

well water will be used in a restroom that will be utilized by site personnel and potentially visitors. The restroom will discharge to a septic system that will also be located on-site. The well and septic system will be designed and constructed in accordance with local and state health codes and will be similar to, or have less of an impact, than a typical residential dwelling. *See* BNE Exhibit 9f, 9i.

No other use of groundwater or discharge to the ground or subsurface will be created. Operation of the turbine does not require bulk storage of fuel or other hazardous materials which could be accidentally released to the environment. Normal operations will not require any discharges, other than for sanitary purposes. The potential for impacts to groundwater resulting from a release of hazardous materials during construction will be minimized through the adoption of a US EPA Spill Prevention Controls and Countermeasures Plan. *See* BNE Exhibit 9f.

Further, BNE anticipates that blasting will be required for construction of the Project, BNE's proposed well survey and controlled blasting will ensure that construction of the Project will result in no impact to surrounding groundwater wells. *See* BNE Exhibit 9i. This fact is unrefuted in the record.

B. The Project Will Not Have a Substantial Adverse Environmental Effect

While BNE argues that the appropriate legal standard to review this petition is compliance with DEP air and water quality standards—which BNE has fulfilled—the Council has indicated that it may view its standard of review as extending to consideration of whether the Project will have a substantial adverse environmental effect. To the extent that the Council applies that standard of review, which is appropriate for a certificate proceeding, but not a petition, the record is clear that the Project will not conflict with state policies concerning the

natural environment, ecological balance, public health and safety, scenic, historic and recreational values, forests and parks, air and water purity and fish, aquaculture and wildlife, and that there is "not sufficient reason to deny the application." *See* CGS § 16-50p(a)(3)(B) and (C). As discussed *infra,* the record is clear that the Project will have minimal environmental impact and any such impact certainly does not rise to the level of substantial adverse environmental effect.

1. The Natural Environment

The Project complies with state policies concerning the natural environment. Connecticut has expressed a commitment to "develop and utilize renewable energy resources, such as solar and wind energy, to the maximum extent possible." *See* CGS § 16a-35k. To this end, the State has implemented renewable portfolio standards (RPS) that require 27 percent of electric generation within the State to be produced by renewable resources by 2020, with 20 percent of the required 27 percent being generated by Class I renewable energy sources, such as wind. The Project would be the first commercial wind generation facility to be approved and constructed in the State, and would represent a meaningful step toward achieving Connecticut's expressed commitment to renewable energy.

2. Ecological Balance

The Project will not have a substantial adverse environmental effect in terms of ecological balance.

Construction activities associated with the installation of the proposed Project are primarily expected to have a short-term impact on terrestrial wildlife. Long-term impacts on wildlife resulting from operation of the proposed Project are expected to be minimal. Disturbance activities associated with the proposed Project would primarily affect areas

characterized as second growth northern hardwood forest, which is an abundant forest type in proximity to the Property as well as throughout northwest Connecticut. The loss and/or conversion of this small amount of forested habitat is not significant on either a site or a landscape scale, as there are several large areas of similar forested habitat adjacent to and in the vicinity of the Property. Following development activities, disturbed areas (with the exception of the access road) will be planted using a native herbaceous seed mixture and maintained as meadow habitat. The addition of meadow habitat adjacent to the existing meadow is likely to be beneficial to a number of species, including but not limited to the smooth green snake. The Project is also protective of the "live zones" surrounding vernal pools, in which 95 percent of the species that breed in a vernal pool are found. *See* BNE Exhibit 1, 9j, 15; April 21, 2011 Tr. at 250-51, 256-58.

As is clear from the record, BNE has no intentions of developing the vast majority of the Property and has, in fact, agreed to protect the most environmentally sensitive areas of the Property. *See* April 26, 2011 Tr. at 189. The Property will largely retain its current vegetative characteristics and will effectively create an additional buffer around the Wolcott Preserve area by eliminating the potential for suburban development. The Project will also contribute to maintaining a healthy watershed. *See* BNE Exhibit 1, 9c.

In terms of wetlands, the proposed Project is largely successful in minimizing direct impact to wetland resources on the Property. Due to the need to locate turbines in a manner that effectively captures wind and maximizes electrical generation efficiency, direct wetland impacts associated with access road construction are required. These impacts will be limited to approximately 4,700 square feet of direct impact. Where wetland impacts are unavoidable, careful consideration has been give to the location of these impacts in order to minimize the

effect on wetland functions and values. The crossing of Wetland 1, required to access the location for Turbine 3, is situated in an area of the wetland that has been subject to historic disturbance associated with a logging road crossing. No watercourse feature is associated with this crossing. Several principal and secondary functions and values are associated with Wetland 1, including wildlife habitat, production export, flood-flow alteration, and groundwater recharge/discharge. However, the portion of Wetland 1 that would be impacted does not provide these functions and values. *See* BNE Exhibit 1.

Wetland areas temporarily disturbed by construction activities will be restored with a variety of native wetland plantings. Following establishment of these plantings and permanent stabilization of exposed soils, erosion control measures will be removed so as not to impede migration of wildlife utilizing the Property. *See* BNE Exhibit 1. The DEP specifically commended BNE for this feature of its proposed Project. *See* DEP correspondence dated April 6, 2011.

The Great St. John's-wort *(Hypericum ascyron),* a State Species of Special Concern, was identified from the Natural Diversity Data Base as occurring in the area of the Colebrook South project. *See* BNE Exhibit 1. As the DEP noted in its comments submitted in this proceeding, Great St. John's-wort will not be impacted by the Project. *See* DEP correspondence dated April 6, 2011.

Although the high elevation of the area precludes the occurrence of many amphibians and reptiles, two State-listed Special concern snakes were identified as potentially occurring in the area—the smooth green snake and the eastern ribbon snake. There will be no adverse impact to these species as a result of the Project. The clearing resulting from the Project will actually enhance habitat for both of these species, as they require unforested open habitats. The smooth

green snake, once widely distributed in Connecticut, has suffered from a lack of viable open habitat; the Project will result in a net benefit to this species by the creation of a significant new area of prime habitat. The Project is also protective of the "live zones" surrounding vernal pools, in which 95 percent of the species that breed in a vernal pool are found. *See* BNE Exhibit 15; April 21, 2011 Tr. at 250-51, 256-58.

3. Public Health and Safety

The Project represents a clean and renewable method of electricity generation in a manner consistent with State policies to protect public health and safety.

(a) Public Health

The Project will generate electricity in a cleaner and more environmentally acceptable manner compared to conventional generation, e.g. nuclear, natural gas, coal and oil. As noted in Section IV.A.1, *supra,* the Project will result in a net benefit to air quality in the State and will reduce particulate matter and ozone precursor emissions of volatile organic compounds and oxides of nitrogen as compared to emissions from other fossil fuel sources. These emission reductions will result in public health benefits and improved visibility in Connecticut. *See* BNE Exhibit 9g; April 14, 2011 Tr. at 37-38.

(b) General Safety Requirements

The Project will meet all applicable safety requirements for construction, operation and electrical interconnection. The technology selected is manufactured by GE, one of the world's leading wind turbine suppliers, with over 13,500 GE wind turbine installations operating safely worldwide providing clean, renewable energy. Variable speed control and independent blade pitch will be used for aerodynamic braking to reduce blade speed during high winds. The reinforced tower design will enable reliable and safe operation that meets product and regulatory

compliance expectations up to operational maximum extreme gusts for a three second period of 56 m/s (over 125 mph) and for ten minutes of 40 m/s (over 89 mph) according to IEC standards. The wind turbine machine can be controlled automatically or manually from either an interface located inside the nacelle or from a control box at the bottom of the tower. Control signals can also be sent from a remote computer via a SCADA. *See* BNE Exhibit 1, 9a.

BNE expects to enter into an operations and maintenance agreement with GE to remotely monitor and maintain the turbines. BNE operations and maintenance personnel will also be located on-site to supplement the services provided by GE. To override any machine operation, emergency stop buttons located in the tower base and in the nacelle can be activated to stop the turbine in the event of an emergency. The rotor blades are also equipped with lightning receptors mounted in the blade and the turbines are grounded and shielded to protect against lightning. The turbines are also specially built to handle seismic loads. *See* BNE Exhibit 1, 9a; April 14, 2011 Tr. at 55, 63, 68.

(c) Icing

The Project complies with GE recommended setback distances related to ice throws. *See* BNE Exhibit 9g. BNE's unrefuted ice throw study established that the chances of ice throw impacting surrounding residences or individuals is once in 512 years or less for the GE 1.6-100 turbine and once in 1,810 years or less for the GE 1.6-82.5 turbine. This is a worst case scenario that assumes no mitigation measures are implemented and that the turbines are operating during icing conditions. Despite the minimal risk of ice throw from the Project, BNE has committed to employing shut down procedures and a specific re-start procedure, completely eliminating any potential risk due to ice. *See* BNE Exhibit 9h; April 14, 2011 Tr. at 57, 97.

Remote and internal monitoring of the turbines can detect icing events, or other problems, through changes in turbine electrical output when compared to wind speed. Ice formation can affect the aerodynamics of the turbine, as accumulating ice would slow down the blades. Sensors will detect lower power outputs when compared to wind speed and will cause the turbine to automatically shut down. The shut down will protect the turbine from mechanical damage as well as act as a safety measure during an icing event. Internal monitoring will also detect icing events through an increase in rotor vibration caused by ice formation on the blades; the turbines will be shut down if this occurs. *See* BNE Exhibit 9h.

The turbine will be monitored continuously by GE during operation. During known or predicted icing events, BNE will dispatch personnel to the site to monitor the turbines for icing. If the turbines are shut down, BNE will have personnel on-site to assess ice accumulation and operating conditions. Those on-site personnel will inspect the turbines and ensure that ice has melted and fallen from the blades prior to re-start. *See* BNE Exhibit 9h.

Pierre Heraud, PhD., BNE's ice throw expert, confirmed on the record that these measures completely eliminate any potential risk due to ice, as follows:

> **Ms. Gianquinto:** I'll rephrase. Is the risk of injury to people and property from ice throw zero for this project?
>
> **Dr. Heraud:** For this project, considering that BNE did commit to implement the procedure for the icing events I would say yes to the question. I believe the risk is zero with these procedures in place and properly implemented.
>
> April 14, 2011 Tr. at 97.

(d) Noise

The Project complies with DEP noise control regulations. These regulations establish three types of land classifications based on the actual use of the parcel. The three categories are

Class A, generally residential; Class B, generally commercial; and Class C, generally industrial. *See* BNE Exhibit 1, 9d.

The Property is currently undeveloped with the exception of the Met tower. *See* BNE Exhibit 1. The construction of electric generating wind turbines would render the property a Class C land use. *See* Council Administrative Notice #42; BNE Exhibit 9d; April 14, 2011 Tr. at 80. The DEP noise criteria from a Zone C emitter to a Zone A use is 61 dBA during the daytime and 51 dBA during the nighttime. *See* Council Administrative Notice #42. The projected sound levels generated by the Project range from 31-49 dBA during both daytime and nighttime conditions, in compliance with DEP criteria. *See* BNE Exhibit 1, 9d. This is underscored by the fact that the Connecticut DEP has provided a comment letter regarding BNE's petition and did not mention any issue with noise. *See* DEP Comments dated April 6, 2011.

Opponents of the Project have raised several arguments against BNE's noise analysis, none of which have any merit. First, opponents claim that the wind turbines will result in a significant increase in sound levels of 20 dBA. This argument is meaningless because DEP does not have noise regulations for noise increases, only maximum noise levels. This argument is also false and misleading because the wind turbines will not be running or will be running at their lowest sound levels based upon the wind speeds that exist during their background sound levels. As a result, the actual sound level increases from the wind turbines, if they were to be running, will vary from 0 to 5 dBA. These increases are minor, as the opponents themselves have indicated, as a 3 dBA increase is just barely perceivable to the human ear. *See* April 26, 2011 Tr. at 36.

Second, the opponents have attempted to argue that the sound levels presented in the BNE noise report will be occur all the time, therefore resulting in the need for noise mitigation. As the noise report notes, the sound levels presented therein represent worst case sound levels compared to DEP noise impact criteria. *See* BNE Exhibit 1, 9d; April 14, 2011 Tr. at 84-87. The BNE noise report demonstrates that the worst case sound levels will only occur 11% of the time and that the majority of the worst case sound levels will occur during the wintertime. The remainder of the time (89%), the wind turbines will be generating lower sound levels, especially in the summertime, or will not be running at all. Therefore, while potential noise mitigation measures were discussed in response to questions, no noise mitigation measures are proposed because the sound levels will be so low that they will meet both the industrial (Class C) and residential (Class A) noise impact criteria. *See* BNE Exhibit 1, 9d.

Opponents of the Project further criticized BNE's noise analysis on the ground that it did not address impulsive sound, prominent discrete tones, infrasonic or ultrasonic noise. As the opponents themselves note, at least two types of these "missing" noise items are not likely to occur from wind turbines. *See* Fairwind Exhibit 2a. Fairwind's noise expert criticized BNE for not discussing infrasound, then admitted that he did not have infrasound measurements either. *See* April 26, 2011 Tr. at 39. It is clear from the record that types of noise which actually might be generated from wind turbines were addressed and will not exceed DEP noise criteria levels. *See* BNE Exhibit 14; April 14, 2011 Tr. at 77-79, 95-96. Specifically, BNE has provided unrefuted evidence that anticipated infrasonic sound levels will be well below the DEP criteria. *See* April 14, 2011 Tr. at 46. In fact, Fairwind's noise "expert" admitted that he never availed himself of the opportunity to visit the Council's offices to review the GE noise data on file in this

petition and therefore has no basis to claim the proposed turbines would create infrasound above DEP criteria levels. *See* April 26, 2011 Tr. at 43-44.

Opponents of the Project also attempted to argue that BNE should have conducted an analysis utilizing a residential (Class A) emitter for the proposed use. *See* Fairwind Exhibit 2a. They have argued this despite the fact that their own noise "expert" has admitted that wind turbines are an industrial use and despite the fact that the DEP noise regulations make it clear that class must be selected based on actual use, not zoning. *See* Council Administrative Notice #42 at 22a-69-2.1; April 26, 2011 Tr. at 55, 65.

Opponents of the Project also criticized the background noise levels collected by BNE. However, this argument is equally meritless since the DEP criteria make it clear that background noise levels are irrelevant to compliance. *See* Council Administrative Notice #42. In fact, Fairwind's own witness admitted this to be the case. *See* April 26, 2011 Tr. at 55-56.

Fairwind's critique of BNE's noise analysis is further undermined by the fact that Fairwind's noise expert severely underestimated the distance to property lines in order to justify his conclusion that the Project will exceed DEP noise criteria. For example, Fairwind's noise expert used 216 feet as the closest distance to a property line for turbine 1, 141 feet for turbine 2 and 406 feet for turbine 3. *See* Fairwind Exhibit 5. In reality, these distances are as follows: 740 feet for turbine 1, 435 feet for turbine 2, and 235 feet for turbine 3. *See* BNE Exhibit 4. There was no need for Fairwind's noise expert to create imaginary distances, as these numbers were provided to Fairwind by BNE in BNE's responses, dated March 15, 2011, to Fairwind's first set of interrogatories. *Id*. The unnecessary use of these incorrect distances skewed the results of Fairwind's analysis to make the Project appear to have a negative effect in terms of noise. Fairwind's purposeful use of erroneous data to justify a conclusion is misleading at best.

Finally, opponents have argued that despite the fact that the DEP employs noise criteria through regulation, the Council should instead adopt an amorphous standard of annoyance level or potential health impacts from noise. *See* Fairwind Exhibit 2b. If the opponents of the Project believe that the DEP regulations do not adequately protect public health and safety, then the appropriate avenue for redress is revision to these regulations, not *ad hoc* revision by another agency on a case by case basis, and certainly not to unilaterally adopt an entirely subjective and ambiguous "standard."

Overall, the Project will meet or exceed all health and safety requirements applicable for electric power generation and will not have a substantial adverse effect in terms of health and safety.

4. Scenic, Historic and Recreational Values

The Project is not anticipated to have a negative impact on scenic or recreational values in the area. Areas where at least one of the proposed turbine hubs could be visible above the tree canopy year-round (during both "leaf-on" and "leaf-off" conditions) comprise approximately 254 acres within a five mile "Study Area" emanating from the Property. This represents less than 0.05% of the 52,560-acre Study Area. At its apex, the blade(s) may be visible above the tree canopy from approximately 457 acres (less than 1 percent of the Study Area). The majority of potential year-round views of the turbine hub would occur on the Property and its immediate environs, including portions of the adjacent road and Gun Club to the north and the Nature Conservancy to the west. Views would be limited westward beyond the adjacent Nature Conservancy woodlands due to the presence of significant ridgelines; similar conditions exist to the east. No views are anticipated from the two state scenic roads that exist within the Study Area. Similarly, no views are anticipated from proximate trail systems, including those at

Dennis Hill State Park and Haystack Mountain State Park, although views may be achievable from elevated locations such as the observation tower lookout at Haystack Mountain and the elevated monument at Winsted Soldiers Memorial. *See* BNE Exhibit 1, 9b.

A limited number of residential properties are located near the Property. BNE's analysis conservatively included some properties as "residential" even if they were actually occupied by either commercial or recreational structures, agricultural land or forest. Even with this overestimation, only approximately 35 residential properties within one mile of the Property were identified as potentially having at least partial views of the Project's turbine(s) hub(s) during "leaf-on" conditions. Approximately 45 additional properties within one mile could have views of the blade(s) at its apex above the trees. *See* BNE Exhibit 1, 9b.

Approximately 1,327 acres (representing about 2.5% of the Study Area) have the potential to offer some views of the turbine hubs through the trees during "leaf-off" conditions. Most of the potential seasonal visibility (about 75%) occurs on and within approximately one mile of the Project site. Approximately 16 residential properties within one mile of the Project site could have at least partial views of the turbine(s) hub(s) through the intervening trees during "leaf-off" conditions. *See* BNE Exhibit 1, 9b.

The DEP noted that, "[a]s a densely populated state, there are no locations in Connecticut which are miles from neighboring land uses, including residences. Some level of impact upon neighboring properties cannot be avoided in the siting of facilities such as that proposed in this petition." *See* DEP correspondence dated April 6, 2011. Again, the area surrounding the Project site is only sparsely developed with residences.

Assessing the Project location from the "big picture," the Project is located along Route 44 on the stretch of road where businesses are located in Colebrook, not in the area of town

designated as a "Scenic Area." Additionally, contrary to Fairwind's initial claims that the historical appearance and character of Colebrook have remained unchanged for 300 years, in reality Colebrook has evolved with the times, just as every other small town in Connecticut has. Fairwind's expert eventually admitted this on the record and acknowledged this evolution. *See* April 21, 2011 Tr. at 164-65. Wind turbines would not undermine the visual appearance and character of Colebrook; rather they would represent an important positive step in Colebrook's continuing evolution.

Finally, despite Fairwind's protests to the contrary, the record is clear that shadow flicker is essentially a non-issue. Neither Fairwind, nor any other party or intervenor to this proceeding, has produced any credible evidence demonstrating a significant potential shadow flicker effect. Of 75 proximate receptor locations evaluated, a total of seven receptors are predicted to have some shadow flicker events. Of those seven receptors, the only one expected to experience more than 30 hours annually is the residence located on the Property at 17 Flagg Hill Road, which is owned by the principals of BNE. *See* BNE Exhibit 1, 9b; April 14, 2011 Tr. at 33.

In terms of historic impacts, VHB completed a review of the Project with the State Historic Preservation Office ("SHPO"). There has been no finding by the SHPO that the Project will have any adverse impact on historic and cultural resources in the State of Connecticut, including but not limited to the Rock Hall Luxe Lodging.

Rock Hall Luxe Lodging is well over a mile away from the closest turbine of the Project. Fairwind's expert admitted on the record that the approximately 1 acre of land surrounding the Old State House is sufficient to protect this premiere historic resource – "premiere" because it is a national historic landmark, which Rock Hall Luxe Lodging is not. *See* April 21, 2011 Tr. at

161-62. If one acre is sufficient to protect a premiere historic resource, certainly over a mile is sufficient to protect the recently renovated Rock Hall Luxe Lodging.

Fairwind's expert testified that the turbines proposed for the Project could physically damage Rock Hall Luxe Lodging. This, despite the fact that the very same expert admitted on the record that he did not know the distance from the nearest turbine proposed for the Project to Rock Hall Luxe Lodging. *See* April 21, 2011 Tr. at 160-61.

Given the distance from the Project to Rock Hall Luxe Lodging, no impact to the inn is anticipated. No other historic resources are in question as potentially impacted by the Project.

5. Forests and Parks

As discussed *supra* in Section III.B.4, the only potential impact to forests and parks of the State would be potential visibility of the turbines from those areas. The turbines would not be visible from hiking trails but elevated monuments and/or towers may provide some opportunity for visibility. In terms of distant views, the turbines will not constitute a significant feature along the horizon from distant forests and parks. *See* BNE Exhibit 9b. The DEP agreed that "the visibility of the turbines from a distance of over four miles does not change the overall richness of the view from [the] vantage point" at Haystack Mountain. *See* DEP correspondence dated April 6, 2011.

6. Air and Water Purity

As discussed *supra* in Section IV.A.1, the Project's impact to air purity is positive in that the green, renewable energy produced by the Project will actually result in a decrease in greenhouse gas emissions.

In terms of water purity, as discussed *supra* in Section IV.A.2, the record is clear that the Project will comply with DEP Water Quality Standards including both groundwater quality

standards and guidelines and surface water standards and guidelines. *See* BNE Exhibit 9f. The Project will not result in any negative impacts to ground water or surface water on the Property or in the vicinity of the Property. *Id.* The DEP submitted seven pages of comments regarding the proposed Project and did not mention any concern regarding impact to water. *See* DEP correspondence dated April 6, 2011.

7. Fish, Aquaculture and Wildlife

Fish and aquaculture are not associated with the Project site and the record is clear that there are no alleged or potential impacts to such species. In terms of wildlife, the Property does not contain high value or uncommon wildlife habitat. BNE has no intentions of developing the vast majority of the Property and has, in fact, agreed to permanently protect the most environmentally sensitive areas of the Property. Again, the limited habitat disturbance caused by the Project is mostly temporary. *See* BNE Exhibit 1.

The record is unrefuted that the Project will have no impact on any endangered, threatened or species of special concern. *See* BNE Exhibit 1, 9c, 9j, 16. The Great St. John's-wort *(Hypericum ascyron),* a State Species of Special Concern, was identified from the Natural Diversity Data Base as potentially occurring in the vicinity of the Property. *See* BNE Exhibit 1. As the DEP noted in its comments submitted in this proceeding, Great St. John's-wort is not envisioned to be impacted by the Project. *See* DEP correspondence dated April 6, 2011.

In terms of birds, the breeding birds identified at the Property are regionally common and no high value bird habitats are located within the development area of Wind Colebrook South. No state or federally listed threatened or endangered species were identified during the breeding bird survey. While wind projects can result in collision-induced mortality of birds, these impacts have not been shown to result in population-level effects. Furthermore, alternative uses of the

Property, for example for housing development, would result in far greater loss of forested habitats and increased fragmentation—and therefore greater impact to breeding birds—compared with the proposed Project. Overall, the Project will not have undue impacts to breeding bird populations in the Colebrook area. *See* BNE Exhibit 1, 9e.

The DEP agrees with the fact that the Project will not have undue impacts to breeding bird populations and has stated that it does not anticipate significant negative impacts to breeding birds by the proposed project. *See* DEP correspondence dated April 6, 2011. Despite its finding that the Project will not significantly impact breeding birds, the DEP indicated that the survey period of five minutes used in BNE's analysis was too short. However, BNE's bird and bat expert, David Tidhar, explained on the record in this proceeding that "[f]ive minute long duration point counts are a standard sampling period for breeding bird surveys conducted not only at wind facilities but for large scale breeding bird survey work, including the U.S. Geological survey nationwide breeding bird survey program, which utilizes five minute long duration point counts." *See* April 14, 2011 Tr. at 39, 136.

BNE has committed to conducting an additional migratory bird study on the Site from March to April 2011; this additional data will be provided to the DEP to better inform of bird activity on the Site. *See* BNE Exhibit 9e, 17; April 14, 2011 Tr. at 142-43.

In terms of bats, the record is clear that the Project will not have undue impact to bat populations. One of the key factors in minimizing impacts to bat populations is to avoid locating wind facilities near high-value bat habitat such as forested wetlands. This factor was specifically considered in determining the proposed locations of the three turbines on the Property. Not only does the siting of the proposed turbines avoid high value bat habitat, but additional design features of Wind Colebrook South help to further minimize potential impacts to bats,

including not siting the turbines near permanent standing water, and minimizing of clearance areas for roads, turbines and infrastructures. *See* BNE Exhibit 9e; April 14, 2011 Tr. at 68-69.

While wind projects can result in collision-induced mortality of bats, these impacts have not been shown to result in population-level effects. Bat fatality patterns observed at facilities within the region in similar forest-dominated landscapes have been low to moderate, based on regional study results. The vast majority of formal post-construction bat mortality studies completed in the Unites States have been completed at facilities with substantially larger numbers of turbines and megawatt capacity than what is proposed for Wind Colebrook South. For example, the 76 projects evaluated in BNE's bat acoustic report had an average of 53.8 turbines per site. Wind Colebrook South will likely have a much more limited impact in terms of bat fatalities compared to these facilities given the fact that only three turbines are proposed for the site. Overall, fatality rates for bats at the proposed Project site are anticipated to be low to moderate. *See* BNE Exhibit 9e.

Furthermore, the record is clear that BNE appropriately met with DEP in the spring of 2010 and went above and beyond the bat studies that DEP requested BNE to perform. *See* BNE Exhibit 17. DEP clearly concurs with that and concluded that, "[i]n general, the methods and process used for the acoustic bat surveys are appropriate, but a few modifications could have improved the results." *See* DEP correspondence dated April 6, 2011. Specifically, DEP staff expressed concern with the placement of the Anabat detectors, stating that placement at a higher elevation may have increased quality and detection rates of hoary bats in particular. *Id*. BNE elected to utilize ground-based Anabat detectors because placement of an elevated detector would have required lowering the meteorological tower to the ground which may have damaged meteorological instrumentation and resulted in study delay. *See* BNE Exhibit 11. Moreover,

ground-based Anabat sampling is a respected method of sampling and has been used during pre-construction acoustic bat monitoring at commercial wind energy projects for years. *Id;* April 14, 2011 Tr. at 38, 147.

DEP also expressed a concern with the timing of the acoustic bat survey. Unfortunately, this delay was a result of BNE awaiting response from the DEP as to the type of bat detector and scope of bat study requested. BNE waited as long as possible in an attempt to receive confirmation from the DEP as to these specifics but eventually was forced to begin its study rather than risk missing the maternity and migration seasons. Fairwind's criticism of the acoustic bat report regarding lack of spring data is unfounded given that the spring is not a critical time period during which to collect bat data. Notwithstanding this fact, BNE has agreed to collect data on bat acoustic activity during spring 2011, as well as during two springs during the operational phase of the Project. *See* BNE Exhibit 17.

Fairwind's other assorted criticisms of the bat acoustic study are similarly unfounded, as demonstrated in BNE Exhibit 17. For example, Fairwind criticized the lack of mobile acoustic surveys, but due to the size of the proposed Project and the equipment used to analyze bat activity, mobile surveys would not actually provide a greater amount of information. *See* BNE Exhibit 17.

BNE has volunteered to perform additional bat monitoring for the period of May to November 2011 and to conduct a two-year post-construction bat monitoring study; this data would be submitted to the DEP to better inform the DEP of bat activity on the Property and in the surrounding area. *See* BNE Exhibit 17.

Opponents of the Project attempted to criticize BNE's pre-construction monitoring time frames and methodology for the bird and bat studies, yet again seeking to hold BNE to

"standards" or "requirements" that simply do not exist. Fairwind makes the astonishing argument that BNE should comply with guidelines from the states of New York, Pennsylvania, New Jersey and even other countries. Fairwind ignores the fact that the Project is located in the State of Connecticut. Moreover, in comparison to state guidelines in New York, Maine and Pennsylvania, BNE will actually exceed the temporal scope of acoustic surveys by a year for the critical seasons when impacts to bats occur (summer and fall). BNE is completing a total of 1.7 study years of pre-construction acoustic bat surveys, compared with the recommendations included in these guidelines for one year of pre-construction surveys.

As noted *supra,* BNE has also committed to completing post-construction acoustic bat surveys coincident with fatality monitoring for two years, which meets these out-of-state guidelines. The use of a full spectrum bat detector to compile data on species composition of bats also exceeds the recommended study requests for bats in these guidelines. In terms of bird surveys, BNE is completing spring and fall migration surveys and breeding bird surveys for a single study year; again, this meets these state guidelines. The methods and metrics used in the Project study closely follow recommendations included in some of these out-of-state guidelines, but have been tailored to match the size and habitats of the Project. *See* BNE Exhibit 17; April 14, 2011 Tr. at 143-44.

Opponents of the Project have further argued that the bird and bat surveys do not fully comply with the United States Fish and Wildlife Service ("USFWS") interim draft guidelines. *See* Council Administrative Notice #36. They fail to point out that those draft guidelines were released in February 2011, *after* BNE's consultations with DEP and the completion of wildlife surveys in 2010. Thus, the wind opponents appear to make the argument that BNE should have complied with guidelines that were not yet released. In addition, as with many other issues

raised in this proceeding, opponents draw the illogical conclusion that draft interim guidelines are "requirements." In addition to not being requirements, the guidelines are draft only and have not yet been finalized. Nonetheless, and contrary to Fairwind's baseless claims to the contrary, BNE has demonstrated compliance with terms of Tiers 1 through 3 of the draft guidelines. Furthermore, despite the small project size, BNE has committed to completing a Scope of Work for biological surveys greater than the level of work completed at most other facilities of similar or larger size. *See* BNE Exhibit 17.

Additionally, the Project will not adversely impact reptiles and amphibians. In fact, the clearing resulting from the Project will actually enhance habitat for species such as the smooth green snake and the eastern ribbon snake, as they require unforested open habitats. The Project will result in a net benefit to these species by the creation of a significant new area of prime habitat. The Project is also protective of the "live zones" surrounding vernal pools, in which 95 percent of the species that breed in a vernal pool are found. *See* BNE Exhibit 15; April 21, 2011 Tr. at 250-51, 256-58.

Any adverse environmental effects from the Project will be minimized to the extent possible through the use of appropriate mitigation and control measures. BNE has expressed its willingness to provide several types of post-construction monitoring in order to further ensure that the Project has minimal environmental impacts. Furthermore, the vast majority of environmental effects will be temporary and will be limited to the anticipated four month construction phase of the Project. The Project complies with state policies concerning the natural environment, ecological balance, public health and safety, scenic, historic and recreational values, forests and parks, air and water purity and fish, aquaculture and wildlife, and

there is "not sufficient reason to deny the application," in compliance with CGS § 16-50p(a)(3)(B) and (C).

V. CONCLUSION

Wind Colebrook South will provide numerous and significant benefits to the Town of Colebrook, the State of Connecticut and its citizens, and will place Colebrook at the forefront of green energy development while producing significant environmental benefits with minimal environmental impact. Pursuant to CGS § 16-50k(a), the Council shall approve by declaratory ruling the construction or location of a grid-side distributed resources project or facility with a capacity of not more than 65 MW, as long as such project meets DEP air and water quality standards. As demonstrated herein, the Project meets these criteria.

Additionally, the Project will comply with CGS § 16-50p(a)(3)(B) in that it will not conflict with state policies concerning the natural environment, ecological balance, public health and safety, scenic, historic and recreational values, forests and parks, air and water purity and fish, aquaculture and wildlife.

Although visual appearance is not technically a component of the Council's review of this petition, the Council has demonstrated an interest in visibility of the turbines in this and other BNE petitions pending before the Council. BNE has proposed GE 1.6-MW turbines with 100 meter hub heights and because BNE's extensive consultation and study with GE and the variety of experts presented in this proceeding has indicated that this model and size of turbine maximize the usefulness of the turbines in terms of generation, while minimizing environmental and other impacts. The model and size of the turbines proposed by BNE in this petition meet the applicable criteria as demonstrated *supra*, and should therefore be approved. If, however, the Council determines that a wind turbine with a 100 meter hub height will present an undue visual

impact, BNE alternatively requests approval for the GE 1.6 MW turbine at an 80 meter hub height, which would reduce the overall tip height of the turbines to less than 400 feet.

Accordingly, BNE Energy respectfully requests that the Siting Council approve the location, construction and operation of the Project by declaratory ruling.

Respectfully Submitted,

BNE ENERGY INC.

By: /s/ Lee D. Hoffman

Lee D. Hoffman
Bonnie L. Heiple
Pullman & Comley, LLC
90 State House Square
Hartford, CT 06103-3702
Juris No. 409177
860-424-4300 (p)
860-424-4370 (f)
Its Attorneys

Certification

This is to certify that a copy of the foregoing has been mailed this date to all parties and intervenors of record.

Richard Roznoy
11 School Street
P.O. Box 850
East Granby, CT 06026

Nicholas J. Harding
Emily A. Gianquinto
Reid and Riege, P.C.
One Financial Plaza
Hartford, CT 06103

John R. Morissette (electronic format only)
Manager-Transmission Siting and Permitting
The Connecticut Light & Power Company
P.O. Box 270
Hartford, CT 06141-0270

Christopher R. Bernard (electronic format only)
Manager-Regulatory Policy (Transmission)
The Connecticut Light & Power Company
P.O. Box 270
Hartford, CT 06141-0270

Joaquina Borges King (electronic format only)
Senior Counsel
The Connecticut Light & Power Company
P.O. Box 270
Hartford, CT 06141-0270

Thomas D. McKeon
First Selectman
Town of Colebrook
P.O. Box 5
Colebrook, CT 06021

David R. Lawrence, MD
Jeannie Lemelin LPN
30 Flagg Hill Road
Colebrook, CT 06021

David M. Cusick
Howd, Lavieri & Finch, LLP
682 Main Street
Winsted, CT 06098

Walter M. Zima
Brandy Grant
12B Greenwood Turnpike
Winsted, CT 06098

Eva Villanova
134 Forest Avenue
Winsted, CT 06098

/s/ Lee D. Hoffman

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