

**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
Winsted-Norfolk Road in Colebrook,
Connecticut (“Wind Colebrook North”)**

Petition No. 984

May 27, 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 one of the first commercial wind renewable energy generating projects 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 on fossil fuels. In addition, approval of this petition is 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 three evidentiary hearings in this proceeding.

I. INTRODUCTION

This petition was filed on December 13, 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 April 26 and 28 and May 5, 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 11, 2011 to render a decision on this petition.

II. BACKGROUND

The proposed Project site is located on Winsted-Norfolk Road (Route 44) at the intersection of Rock Hall Road in Colebrook, Connecticut on approximately 124.9 acres of largely undeveloped land (“the “Property”). The developed portion of the Property is used for commercial purposes as a golf driving range. The Northwestern Connecticut Sportsman’s Association, Inc. (the “Gun Club”) land is located to the south of the Property and is in between the Property and the Wind Colebrook South property¹. Rock Hall Road abuts the Property to the west. 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 proposed project calls for the installation of three GE Energy (“GE”) 1.6 megawatt (“MW”) wind turbines and associated ground equipment, upgrading and installation of an access road and a 13.8 kilovolt (“kV”) electrical interconnection (together, the “Project” or “Wind Colebrook North”). The Project does not propose the development of any paved roads or paved parking areas. *See* BNE Exhibit 1.

As the Council is aware, as part of its continuous review of the Project and in response to comments and concerns raised by parties, intervenors, the general public, and the Council, BNE proposed to re-locate turbine 1. These changes further reduced any potential environmental impact associated with the Project, therefore BNE believes that the revised location of turbine 1 is preferable for the Council's approval. BNE recognizes, however, that the Council has jurisdiction over the entire Property and can relocate any of the three proposed turbines and/or the access road if it so chooses. *See* BNE Exhibit 11 (A2).

¹ As the Council is aware, petitioner BNE has submitted a separate petition for declaratory ruling for the development of three GE 1.6 MW wind turbines on 29 and 17 Flagg Hill Road in Colebrook, known as Wind Colebrook South and designated as Council Petition #983. As the Council is further aware, despite numerous attempts to consolidate this proceeding with the petition 983 proceeding, the two proceedings are not consolidated.

The Project was initially presented to the Town of Colebrook in the fall of 2008. 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 in 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, 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 who 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 Guide for Petition for Declaratory Ruling for Renewable Energy Facility. That Guide 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, ice drop/ice throw analysis and a herpetological assessment of the Property. In short, BNE has far exceeded the requirements for the submission of a petition for renewable energy

generation, demonstrating a willingness to communicate openly and honestly with the Council and members of the public.

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 renewable energy matters generally. 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 April 6, 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 three 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"), Stella and Michael Somers, David R. Lawrence and Jeannie Lemelin, Kristin M. and Benjamin C. Mow, Walter M. Zima and Brandy Grant, Jeffrey and Mary Stauffer, 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 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”). The language of section 16-50k is equally clear and unambiguous: so long as a grid-side distributed generation project of less than 65 megawatts meets the air and water quality standards of the DEP, the Council *shall* grant approval of that project by declaratory ruling. Thus, approval of the Project is required under 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). Such heightened review is specifically limited by the language of section 16-50k, which states that approval shall be granted “[n]otwithstanding the provisions of this chapter or title 16a,” so long as the air and water quality standards of the DEP are met. Nonetheless, even if a heightened standard of review is applied to this petition, which BNE argues is not the standard of review provided for by the General Assembly, the record is clear that the Project will not have a substantial environmental impact. 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 12,614 megawatt hours (MWh) per year of clean, renewable energy will reduce carbon dioxide emissions by approximately 6,332 tons per year. *See* BNE Exhibit 2 (A23), 8b, 8h.

DEP itself acknowledged the same in its comments, dated April 6, 2011, that were submitted to the Council in this proceeding. In those comments 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, and many of the generation units that would be called upon at the margins are older, less efficient and higher emitting units.

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.

As Fairwind's witness admitted on the record, even other generators of renewable energy can have negative impacts to air quality. For example, Fairwind's witness stated that corn biomass plants emit carbon dioxide, particulate matter, nitrous oxide, sulfur oxide and carbon monoxide. Fairwind's witness admitted that the Project will not emit any of these pollutants. *See* May 5, 2011 Tr. at 135-36. In fact, the production of 12,614 MWh per year of clean, renewable energy generated by the Project 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 8b, 8h.

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 8d, 8h, 15.

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 approximately 7.85 acres of disturbance. Coupled with the 1.1 acres that were cleared to create a useable area in which the Sodar unit could operate, this results in only 8.95 acres of disturbance on the entire 124.9 acre parcel. Of this 8.95-acre aggregate area, 4.88 acres will be disturbed only temporarily, during construction of the Project, and will be restored and planted with native grasses and allowed to return to its natural state. Thus, the Project will permanently impact only 4.07 acres of the entire 124.9 acre parcel; this area will remain as compacted stone roads, rip rap cover slopes, and the location of the turbine towers. *See* BNE Exhibits 8h, 15.

The development of this Project will result in far less impact than the development of the Property for residential purposes. *See* BNE Exhibit 15; May 5, 2011 Tr. at 314, 316.

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.

The Project will require direct impacts to surface waters of the State, primarily related to two intermittent watercourse crossings. These crossings will be constructed in accordance with the DEP Inland Fisheries Division Stream Crossing Guidelines, dated February 26, 2008. These guidelines were established to minimize impacts associated with stream crossings to water quality and to resident fish and wildlife. *See* BNE Exhibit 8d.

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 DEP's 2004 Connecticut Stormwater Quality Manual ("Water 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 DEP's 2002 Guidelines for Soil Erosion and Sediment Control ("Erosion and Sediment Control Guidelines"). Due to the 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 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. *See* BNE Exhibit 8h; Council Administrative Notice 9, 25; May 5, 2011 Tr. at 277.

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 above, existing and designated uses will be protected by maintaining and protecting the quality of surface water both during and after construction of the Project. See BNE Exhibit 8h; Council Administrative Notice 9, 25.

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 above, potential non-point source pollutants originating from erosion and sedimentation during construction will be minimized by incorporating best management practices detailed in the Erosion and Sediment Control Guidelines. Additional measures will be required 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. See BNE Exhibit 8h; Council Administrative Notice 9, 25.

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.

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. *See* BNE Exhibit 8h; Council Administrative Notice 9, 25.

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 location of the original wetland crossing, which includes two watercourse crossings, was chosen to minimize square footage of permanent wetland impacts. Following incorporation of the updated topographical data, it was determined that wetland impacts would increase as a result of filling on the south side of the road in the vicinity of the easternmost watercourse crossing that would extend further into the wetland than originally anticipated. Thus, the crossing was moved approximately 50 feet, which will allow for the proposed access road to intersect the easternmost and more significant watercourse at an existing woods road crossing. *See* BNE Exhibit 8d; May 5, 2011 Tr. at 328-29. Once snow on the Property had melted and Dr. Michael Klemens was able to begin his herpetological assessment,² Dr. Klemens recommended that the westerly end of the road shift approximately 40 feet to the north (the easterly end would remain the same) to be even more protective of habitat. *See* BNE Exhibit 13; May 5, 2011 Tr. at 295-97. Contrary to the testimony of anti-wind witness William Carboni, the access road will not cross the second largest stream in a different manner than what was previously proposed. *See* May 5, 2011 Tr. at 297. This very minor shift of the access road will be even more

² Opponents of the Project made much of the fact that BNE's herpetological assessment was not conducted until the spring of 2011, when the petition was already pending. These objections are meritless. First, it is not uncommon in Council practice to continue on-site investigations while a petition or application is pending, or even after proceedings are closed. Furthermore, Fairwind's own expert admits that the appropriate time of the year to conduct such an assessment is in the spring. *See* Fairwind Exhibit 17, 22. Had BNE conducted such an assessment prior to filing, Project opponents would likely have objected that the study was not conducted during the appropriate time of year.

protective of amphibians, reptiles and other species. *See* BNE Exhibit 13. It has not yet been incorporated into the plans as this is anticipated to take place during the D&M phase of this proceeding. *See* May 5, 2011 Tr. at 380.

Three-sided box culverts will be utilized to span each of the two watercourse crossings. Again, these crossings will be constructed in accordance with the DEP Inland Fisheries Division Stream Crossing Guidelines, dated February 26, 2008. These guidelines have been established to minimize impacts to water quality and to resident fish and wildlife. As required by the DEP, unconfined in-stream work associated with the culvert installation will occur between June 1 and September 30. If possible, impacts associated with the installation of the box culvert will be located outside of the stream channel. *See* BNE Exhibit 8d; May 5, 2011 Tr. at 327-30.

The DEP stated that the use of three-sided box culverts at the two watercourse crossings is “consistent with the recommendations of the Stream Crossing Guidelines of the DEP Inland Fisheries Division in that these types of crossing structures allow for the maintenance of natural stream bottom substrates.” The DEP also agreed that the construction window selected by BNE is “consistent with the Stream Crossing Guidelines to take advantage of seasonal low flow conditions.” This is in direct contrast to the testimony of Project opponents, who claimed that the use of box culverts was not protective of the watercourse and that BNE’s proposed timing of construction was inappropriate. *See* May 5, 2011 Tr. at 155, 178-79. Clearly, DEP’s opinion regarding consistency with its own stream crossing guidelines carries more weight than that of an opposition party.

Additionally, erosion and sedimentation controls will be installed in accordance with the Erosion and Sediment Control Guidelines prior to construction in order to decrease the likelihood of sediment inputs into streams. Following construction activities, cleared or

disturbed areas in proximity to the streambanks will be adequately stabilized to prevent erosion and sedimentation of downstream resources. A detailed restoration plan identifying these measures will be submitted during the development and management (“D&M”) phase of the Project. *See* BNE Exhibit 8d.

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, 8d, 8h, 15.

Opponents of the Project have attempted to argue that the soil erosion and sedimentation controls, as proposed, are insufficient, do not comply with the Erosion and Sediment Control Guidelines and Water Quality Manual and will therefore result in impacts to surface waters. *See*, e.g. Fairwind Exhibits 14, 17, 22, 24. 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* BNE Exhibit 15.

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 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); *see also* BNE Exhibit 15. 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). While opponents of the Project have argued that this is inappropriate because a D&M plan is not statutorily required, this argument is unavailing; just because a D&M plan is not required does not mean that it is outside the Council’s jurisdiction to impose such a requirement.

The Council has confirmed on the record that it is the Council’s intention to require the same in this proceeding. *See* May 5, 2011 Tr. at 158 (Mr. Ashton cross-examined Fairwind’s witnesses regarding their knowledge of “the two-step process that the Siting Council goes through on applications in general that come before it where assuming it’s warranted – if

the application warrants it, there is an approval given, and then the details are thrashed out in what they call a development and management process”), 384-85 (Mr. Tait: “My thought is that we have a D&M plan.” and “In the petition I suspect there will be a D&M plan.”).

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, 8d, 8h 15.

The anti-wind set additionally criticizes the fact that BNE’s engineering plans were revised. Indeed, as the Council is well aware and as noted in Section II, *supra*, BNE has proposed a relocation of turbine 1. This relocation was proposed partially in response to comments and concerns raised by parties, intervenors, the general public, and the Council and demonstrates BNE’s continuing commitment to developing the best project possible with as little environmental impact as possible. It is as if Fairwind and other opponents would have preferred that BNE *ignore* the comments and concerns raised by it and other parties. Instead, BNE recognizes that the Council process is iterative, and indeed that the Council can relocate any of the three proposed turbines and/or the access road if it so chooses. In relocating turbine 1, any environmental impacts were further minimized due to the elimination of a second access road. The size of the road was narrowed once it became clear that a narrow track crane could be utilized during construction, which further mitigates any environmental impacts. *See* BNE Exhibit 11 (A2).

Project opponents' criticism of these revisions, which result in a net benefit to the Property and the habitat and wildlife contained therein, demonstrate that the opponents are not interested in being a part of a constructive evolutionary process to result in the best possible renewable energy project, but simply want no project at all – at least not in their backyards.

Furthermore, 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. *See* BNE Exhibit 15.

Instead, the Erosion and Sediment Control 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 Water 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 25.

Despite this, opponents of the Project have continued to make the baseless argument that the Erosion and Sediment Control Guidelines and Water Quality 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 regulations. These

misguided interpretations of narrative guidelines are simply not relevant to this proceeding. *See* BNE Exhibit 15.

Opponents of the Project further criticize BNE's proposal claiming that there are deficiencies in the topographic data. *See, e.g.* Fairwind Exhibits 17 and 22. Not only is the "expert" who criticized the Project proposal on this ground not an engineer, (*see* Fairwind Exhibit 17), but these purported deficiencies simply do not exist. The topographic data in the area of the wetlands crossing is based upon very accurate field measurements and the remaining topographic data presented is based upon Lidar information provided by the State of Connecticut. The centerline elevations of the proposed roadway have been field measured and compared to the Lidar information. The field survey information compares favorably with the Lidar information, with comparative precision ranging from zero to two feet. The topographic data is entirely adequate for the present phase of the Project. Additional field topographic work will be completed for final design during the anticipated D&M portion of this proceeding. *See* BNE Exhibit 4 (A80), 15.

The same purported engineering "expert" categorizes the engineering plans as including steep slopes with significant cuts and fills. *See, e.g.* Fairwind Exhibits 17 and 22. In fact, the centerline cuts and fills for the access road do not exceed eight feet and more generally are in the three to four foot range. The maximum road grade is 9.9%. *See* BNE Exhibit 15. And, as the Council is aware from its own field review of the Property, the Property is simply not steeply sloping.

Contrary to the criticism of the same anti-wind witness that significant erosion will occur as a result of the Project and will degrade wetlands on the Property, as noted in BNE's Stormwater Pollution Prevention Plan and Erosion Control Plan, a variety of measures will be

utilized to control and minimize erosion. Additionally, and equally importantly, regular inspections will occur during construction. These inspections will occur weekly or after any rain event greater than 0.1". These inspections will recognize any incipient issues with regards to erosion control and corrective action will then be taken. *See* BNE Exhibit 15.

Not only is the Fairwind witness who provided the aforementioned criticisms of BNE's engineering plans *not* an engineer, as he admitted on the record in this proceeding, the engineer employed by Fairwind in this matter did not even bother to visit the site or do any field work. *See* May 5, 2011 Tr. at 195. Thus, BNE's engineering information has not been and cannot be credibly refuted in 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. 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." *See* DEP correspondence dated April 6, 2011.

The DEP further stated that the use of three-sided box culverts at the two watercourse crossings is "consistent with the recommendations of the Stream Crossing Guidelines of the DEP Inland Fisheries Division in that these types of crossing structures allow for the maintenance of natural stream bottom substrates." The DEP agreed that the construction window selected by BNE is "consistent with the Stream Crossing Guidelines to take advantage of seasonal low flow conditions." *See* DEP correspondence dated April 6, 2011. This is in direct contrast to the

unsubstantiated testimony of Project opponents that the use of box culverts was not protective of the watercourse and that BNE's proposed timing of construction was inappropriate. *See, e.g.* May 5, 2011 Tr. at 155, 178-79.

Clearly, the largest stakeholder in ensuring compliance with DEP's 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. No 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 8h.

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 8j. This fact is unrefuted in the record.

Overall, the Project will 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 8d, 8h, 8j, 15.

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

As stated previously, the appropriate legal standard to review this petition is compliance with DEP air and water quality standards—which BNE has fulfilled. Nonetheless, 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 this 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). 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. *See* BNE Exhibits 1, 8a, 8d, 8g, 8h, 8i, 13.

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, along with BNE’s other projects pending before the Council, would be the

first commercial wind energy generation facilities to be approved and constructed in the State, and would represent a meaningful step toward achieving Connecticut's expressed commitment to renewable energy. *See* BNE Exhibit 1.

The Project has been specifically designed to minimize environmental impacts. BNE's team of experts worked carefully through numerous iterations of potential turbine locations and spacing to balance capturing optimum wind conditions while avoiding and/or minimizing effects to the existing environment and habitat. *See* BNE Exhibit 1, 3 (A20), 8h.

2. Ecological Balance

The Project will not have a substantial adverse environmental effect in terms of ecological balance. While a total of approximately 8.95 acres will be disturbed, only 4.07 acres will be permanently impacted. This represents a very small portion of the almost 125 acre site. *See* BNE Exhibits 1, 8d.

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. *See* BNE Exhibits 1, 8d.

The Project is not expected to adversely impact amphibians and reptiles. This information is unrefuted in the record. No vernal pools were identified on the Property. Dr. Klemens assessed the Property for potential suitable habitat to support the Jefferson salamander, a State-listed Species of Special Concern, and the spring salamander, a State-listed Threatened Species spring salamander. Two additional State-listed Species of Special Concern, the smooth green snake and the eastern ribbon snake, were identified as potentially occurring on the Property. *See* BNE Exhibit 13. The DEP initially indicated that the smooth green snake may

occur on the Property, but eventually concluded that suitable habitat for the smooth green snake does not occur on the Property and that the proposed Project is unlikely to have an impact on these species. *See* DEP correspondence dated April 6, 2011. If these reptiles are in fact utilizing the Property, the proposed clearing activities associated with the Project will actually enhance habitat for both of these species. Additionally, the proposed Project will not negatively impact wetlands or significant habitat used by amphibians or reptiles on the Property, including the wood frog and four-toed salamander. The anticipated minor relocation of the access road per Dr. Klemens' recommendation will ensure that more habitat is protected and will further minimize any potential impacts to amphibians, reptiles and other species. *See* BNE Exhibit 13; May 5, 2011 Tr. at 295-97.

The wood turtle, a State-listed Species of Special Concern, has been observed as occurring in the area, though not specifically on the Property. Dr. Klemens identified Mill Brook as providing potential wood turtle habitat. To ensure that this population is protected to the utmost degree, BNE has committed to employing a detailed Wood Turtle Protection Program for construction and related work surrounding Turbine 1, the only part of the Project site that could coincide with areas of wood turtle terrestrial activity. These protocols will prevent any incidental impact to wood turtles during construction. *See* BNE Exhibit 13; May 5, 2011 Tr. at 291, 316-17.

Similarly, there will be relatively minor habitat disturbance associated with the proposed Project. Anticipated construction activities do not encroach on the shrub swamp along the southern Property boundary, which provides the richest wildlife habitat on the Property. Rather, construction activities would primarily affect areas characterized as a Northern Hardwood forest, which is the most common forest type throughout northern Connecticut. Locally, this cover type

is abundant throughout Colebrook and the surrounding towns of northern Litchfield County. The loss and/or conversion of this amount of forested habitat is not significant on a landscape scale as there are several large areas of similar forested habitat adjacent to and in the vicinity of the Property. *See* BNE Exhibits 1, 8d. In fact, as BNE witness Dr. Klemens testified, the conversion of Northern Hardwood forest to meadow will actually be beneficial to the smooth green snake and other reptile species that may utilize the Property. *See* BNE Exhibit 13.

The Property is within a mile of the Algonquin State Forest, and the Project will help maintain a habitat corridor for wildlife. The impacts of the Project on wildlife are minimal especially when compared to the alternative of developing the site for residential use, e.g., as a subdivision. *See* BNE Exhibit 1, 8d, 8g; May 5, 2011 Tr. at 314. This information is unrefuted in the record.³

Dr. Klemens, a renowned ecologist specializing in herpetology, conservation biology, and land-use planning, performed a site-specific analysis on the Property and testified that:

I can say for certain that residential development of these types of sites can -- it is often very damaging, particularly sites that have delicate hydrology, seeps, and all of this. It's a complicated -- what is called a complicated -- system. And certainly the type of construction that's associated with roads, with -- with the construction sites, lighting, increased traffic, residential pollutants, all type -- septic systems, bird strikes on windows of houses -- I mean all of this -- pets that people can have -- basically it can destroy -- even -- even half a dozen houses on a site like that can do a lot to destroy the ecological integrity.

I think one of the things that -- when you think about development, people tend to think development being restricted to a very very small zone and clearing limits to that. And that's the part that we see, the development footprint, but the ecological footprint is many many orders of magnitude larger. And certainly in a residential development lacing through a site -- this actually was my doctoral dissertation about land use patterns in Connecticut . . . it would be a lot worse. And that's actually why I'm kind of attracted to some of these types of projects. I think it does protect a lot of land in the mix.

³ The lone witness attempted to refute this information, Michael Klein, has not conducted any on-site surveys of terrestrial wildlife.

May 5, 2011 Tr. at 314-15.

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 4,860 square feet of direct impact associated with the installation of two box culverts to create an access driveway. *See* BNE Exhibit 8d, 15.

Where wetland impacts are unavoidable, careful consideration has been given to the location of these impacts in order to minimize the effect on wetland functions and values. The location of the original wetland crossing, which includes two watercourse crossings, was chosen to minimize square footage of permanent wetland impacts. Following incorporation of the updated topographical data, it was determined that wetland impacts would increase as a result of filling on the south side of the road in the vicinity of the easternmost watercourse crossing that would extend further into the wetland than originally anticipated. Thus, the crossing was moved approximately 50 feet, which will allow for the proposed access road to intersect the easternmost and more significant watercourse at an existing woods road crossing. *See* BNE Exhibit 8d; May 5, 2011 Tr. at 328-29.

Once snow on the Property had melted and Dr. Michael Klemens was able to begin his herpetological assessment, Dr. Klemens recommended that the westerly end of the road shift approximately 40 feet to the north (the easterly end would remain the same) to be even more protective of habitat. *See* BNE Exhibit 13; May 5, 2011 Tr. at 295-97. Contrary to the testimony of anti-wind witness William Carboni, the access road will not cross the second largest stream in a different manner than what was previously proposed. *See* May 5, 2011 Tr. at 297. This slight

shift of the access road will be even more protective of amphibians, reptiles and other species. *See* BNE Exhibit 13. It has not yet been incorporated into the plans as this is anticipated to take place during the D&M phase of this proceeding assuming the Project is approved. *See* May 5, 2011 Tr. at 380.

Three-sided box culverts will be utilized to span each of the two watercourse crossings. These crossings will be constructed in accordance with the DEP Inland Fisheries Division Stream Crossing Guidelines, dated February 26, 2008. These guidelines have been established to minimize impacts to resident wildlife and fish. *See* BNE Exhibit 8d; May 5, 2011 Tr. at 326-30. The DEP stated that the use of three-sided box culverts at the two watercourse crossings is “consistent with the recommendations of the Stream Crossing Guidelines of the DEP Inland Fisheries Division in that these types of crossing structures allow for the maintenance of natural stream bottom substrates.” *See* DEP correspondence dated April 6, 2011.

The wetland area that will be subject to permanent impacts by the construction of the gravel access road provides wildlife habitat and sediment/shoreline stabilization functions at a principal level. By incorporating stream crossing measures as recommended by DEP and erosion and sedimentation controls, the construction of the gravel access road is not likely to result in a significant adverse impact on these functions. These planned measures have been described in BNE’s application, Stormwater Management Plan, Soil Erosion and Sedimentation Control Plan, Terrestrial and Habitat Wetland Impact Analysis and pre-filed testimony in this proceeding, and a detailed restoration plan will be submitted during the D&M phase of the Project.

Following construction activities, wetland areas subject to temporary disturbance will be restored with native wetland plants and proximate areas subject to temporary disturbance will be

restored with a wildlife/conservation seed mix containing native grasses and forbs. Streambanks will be adequately stabilized to prevent erosion and sedimentation of downstream resources. 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, 8d, 8h, 15. The DEP specifically commended BNE for this feature of its proposal. *See* DEP correspondence dated April 6, 2011.

In accordance with DEP guidelines, unconfined in-stream work associated with the culvert installation will occur between June 1 and September 30. If possible, impacts associated with the installation of the box culvert should be located outside of the stream channel. *See* BNE Exhibit 8d, 8h. Contrary to the testimony of anti-wind witnesses (*see, e.g.*, May 5, 2011 Tr. at 155, 178-79) the DEP agreed that the construction window selected by BNE is “consistent with the Stream Crossing Guidelines to take advantage of seasonal low flow conditions.” *See* DEP correspondence dated April 6, 2011. Sixty days is sufficient time for installation of the proposed culverts; in most cases, the installation can be accomplished in less than three weeks. *See* BNE Exhibit 8h.

The elimination of the possibility of suburban development on the Property will contribute to a healthy watershed, as Mill Brook outlets to the Mad River, which is a tributary to the Rugg Brook Reservoir. 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* BNE 1, 8d, 15; May 5, 2011 Tr. at 317.

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, 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 8b.

(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, 8a.

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, 8a; May 5, 2011 Tr. at 338-39.

(c) Icing

The Project complies with GE recommended setback distances related to ice throws. *See* BNE Exhibit 8b. BNE's unrefuted ice throw study established that 90% of any ice potentially projected from a turbine would land within 525 feet from the base of the turbine and that the maximum distance of ice projection is 935 feet. No residences are located within this area. One approximately 100-square foot portion of Rock Hall Road was identified as presenting a chance of ice throw impact to a passing car of once in 1,073 years. These are worst case scenarios that assume continuous operation of turbines during icing conditions and that no mitigation measures are implemented. 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 throw. *See* BNE Exhibit 8f.

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 2 (A25), 8f.

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. The implementation of these shut down procedures ensures that the risk of ice impacting surrounding properties, residences or roadways will be zero. *See* BNE Exhibit 8f.

(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* Council Administrative Notice 42; BNE Exhibit 1, 2 (A9), 8e.

Despite opposition arguments to the contrary, DEP noise criteria require a noise impact analysis to classify any property based on the proposed use. *See* Council Administrative Notice 42. The construction of electric generating wind turbines would render the property a Class C land use. Fairwind's own noise witness admitted that a wind turbine would be considered an industrial use. *See* May 5, 2011 Tr. at 182. 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. The projected sound levels generated by the Project range from 32-46 dBA during both daytime and nighttime conditions, in compliance with DEP criteria. *See* Council Administrative Notice 42; BNE Exhibit 1, 2 (A9), 8e. This is underscored by the fact that the 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. *See, e.g.* Fairwind Exhibits 10-13. This argument is meaningless because DEP does not have noise regulations for noise increases, only maximum noise levels. *See* Council Administrative Notice 42; BNE Exhibit 8e. 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* BNE Exhibit 1, 8e.

Second, the opponents have attempted to argue that the sound levels presented in the BNE noise report will occur all the time, therefore, resulting in the need for noise mitigation. *See, e.g.* Fairwind Exhibits 10-13. 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, 8e; May 5, 2011 Tr. at 322. 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 (i.e. when the windows of residences are generally more likely to be closed). The remainder of the time (89%), the wind turbines will be generating lower sound levels, 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 required industrial classification (Class C) and

even comply with the residential (Class A) noise impact criteria, which are not applicable to the Project. *See* BNE Exhibit 1, 8e; May 5, 2011 Tr. at 258.

Although sound levels are so low that mitigation measures are not necessary, mitigation options are available, despite Project opponents' misrepresentations to the contrary. These options include house insulation and insulated windows. The concerns expressed by residential property owners at the evidentiary hearings in this proceeding centered around the cost of mitigation measures and the fact that mitigation measures could not be employed in their backyards. *See, e.g.*, May 5, 2011 Tr. at 58 (Stauffer, Lemelin), 260 (Grant). In response to the first concern, BNE has committed to establishing a funding mechanism for mitigation measures if results of the two year post-construction noise study BNE has offered to perform show levels over DEP noise limits. *See* May 5, 2011 Tr. at 262, 282. Regarding the second concern, the vast majority of the time (89%) and especially during the lower-wind summer months when people are likely to be outside in their backyards, the turbines will not be generating the levels of sound predicted in BNE's analysis. Again, the sound levels presented in the BNE noise report represent *worst case* sound levels. Even in the worst case scenario, the sound generated by the Project meets DEP noise criteria. *See* BNE Exhibit 1, 8e; May 5, 2011 Tr. at 258.

Opponents of the Project further criticized BNE's noise analysis on the grounds 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, e.g.* Fairwind Exhibits 10-13; May 5, 2011 Tr. at 220-21. Fairwind's noise expert criticized BNE for not discussing infrasound, then admitted that he did not have infrasound measurements either. *See* May 5, 2011 Tr. at 144. 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 1, 8e; May 5, 2011 Tr. at 322-23. Specifically, BNE has provided unrefuted evidence that anticipated infrasonic sound levels will be well below the DEP criteria. *See* BNE Exhibit 1, 8e; May 5, 2011 Tr. at 323. Moreover, 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, despite claiming that "you need the data from the vendor as a starting point" to assess low frequency sound or infrasound. *See* May 5, 2011 Tr. at 221.

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, e.g.*, Fairwind Exhibits 10-13. As noted above, they have argued this despite the fact that their own noise witness 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 classification. *See* May 5, 2011 Tr. at 182; Council Administrative Notice 42. Despite this baseless argument, BNE has established that the Project complies with the DEP noise criteria even when utilizing the Class A emitted for the proposed Project. *See* BNE Exhibit 1, 8e.

Opponents of the Project also criticized the background noise levels collected by BNE. *See, e.g.* Fairwind Exhibits 10-13. 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; BNE Exhibit 8e. In fact, Fairwind's own witness admitted this to be the case. *See* May 5, 2011 Tr. at 182.

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 230 feet as the closest distance to a property line for turbine 1, 401 feet for turbine 2 and 102 feet for turbine 3. *See* Fairwind Exhibit 12; May 5, 2011 Tr. at 190-91. In reality, these distances are as follows: 370 feet for turbine 1, 525 feet for turbine 2, and 155 feet for turbine 3. *See* BNE Exhibit 4. Fairwind's noise expert admitted this on the record and apparently was not going to correct his known error until he was directly questioned about it. May 5, 2011 Tr. at 190-91. Despite admitting this on the record, Fairwind's noise expert then proceeded to continue to utilize incorrect distances in his post-hearing supplement to his pre-filed testimony, dated May 12, 2011. 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 to Fairwind's interrogatories. *See, e.g.*, BNE Exhibit 11 (A17). 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.

Fairwind's noise expert further testified that he does not know where the Gun Club is located and "had no reason to investigate that." *See* May 5, 2011 Tr. at 186. He testified that he used average wind speeds from Bradley International Airport, approximately 25 miles away from the Property, in his noise analysis, rather than using BNE's site-specific wind data which was available at the Council's offices. *See* May 5, 2011 Tr. at 187. Rather than using the accurate property distances provided by BNE in response to interrogatories, Fairwind's noise expert used the admittedly inaccurate "Google maps" feature to estimate distances to property lines. *See* May 5, 2011 Tr. at 189-90. Overall, rather than using available, accurate data, Fairwind's noise "expert" chose to ignore significant producers of noise located in close proximity to the Property or resorted to coarse and/or simply inaccurate estimations. Project

opponents simply had no basis to refute BNE's conclusion that the proposed turbines would not create sound above DEP criteria levels.

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 10-13; May 5, 2011 Tr. at 225-26. Fairwind's noise expert admitted on the record in this proceeding that this "annoyance" standard is entirely subjective. Fairwind encourages the Council to ignore the DEP noise criteria and instead rely on the limited appearance statements from random, selective individuals about impacts of noise from different wind projects of different sizes, locations, and distance to receptors, as Fairwind advocated in Petition 983, or on the unsubstantiated limited appearance statement of Arlene Bronzaft that no one should be *ever* subjected to "unwanted" sound. *See* Fairwind 6, admitted as a limited appearance statement only.⁴ Fairwind's noise expert testified that based his testimony regarding his recommendations for setbacks to minimize noise on the "I don't hear it at all any more" standard. *See* May 5, 2011 Tr. at 167.

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."

Again, the DEP's seven page comment letter did not mention any concerns with noise potentially generated by the Project. The comment letter did, however, mention that road noise from Route 44 is "easily perceptible" at the Turbine 2 and 3 sites. The DEP also noted that

⁴ Arlene Bronzaft additionally makes the incredulous blanket statement in her limited appearance statement that "with so many articles and books being written dealing with noise pollution and so many voices being raised against noise, one cannot say that anyone complaining about noise is unusual or being unreasonable." *See* Fairwind 6, admitted as a limited appearance statement only.

“noise from the shooting range at the Northwestern Connecticut’s Sportsmen’s Association property just south of US-44 is easily heard throughout the Colebrook North site.” *See* DEP correspondence dated April 6, 2011.

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 175 acres within a five mile “Study Area” emanating from the Property. This represents less than 0.5% of the 53,332-acre Study Area. At its apex, the blade(s) may be visible above the tree canopy from approximately 329 acres (less than 1 percent of the Study Area). The majority of potential year-round views of the turbine hub would occur in close proximity to the Project site, primarily from low-lying areas associated with open water bodies and swamps. Select locations along Route 44, Rock Hall Road and Route 182 (Stillman Road) would have brief views, as would outlying areas at higher elevations with open fields. Generally, views would be limited by the steep topography associated with the significant ridgelines within the surrounding area. *See* BNE Exhibit 1, 8c.

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 15 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 9 additional properties within one mile could have views of the blade(s) at its apex above the trees. *See* BNE Exhibit 1, 8c.

Approximately 1,389 acres (representing about 2.6% 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 88%) occurs at and within approximately one mile of the Project site. Approximately 56 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, 8c.

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. The DEP stated that no homes or structures are visible from the Turbine 2 or 3 sites. The DEP noted that the relocated site for Turbine 1 is "substantially more removed from homes along US-44 and Greenwoods Turnpike than the original site" and that the relocated site "will significantly reduce the prominence of turbine [1] to the homes" along those transportation corridors. The DEP found that the few homes on those transportation corridors "all benefit from some screening, mostly of a deciduous nature." The DEP did note that one home possesses only very partial screening toward Turbine 1, but notes that this reflects the *original*, not relocated, site for Turbine 1 and that "the revised Turbine 1 location adds 400' to 550' of separation between these homes and Turbine 1." *See* DEP correspondence dated April 6, 2011.

The DEP found that “most homes on Rock Hall Road are on wooded lots with mature trees close to the homes, as well as screening along the east side of that road” and that the closest homes on that road are approximately 1,200 feet from the closest turbine. *See* DEP correspondence dated April 6, 2011.

Fairwind criticized BNE’s visibility analysis, despite the fact that its own renderings depict turbines floating in the middle of the air or located in the middle of the street. *See, e.g.*, Fairwind Exhibit 18. As the Council is well aware, no turbine is proposed to be sited in the middle of any street and certainly no turbine will be floating in mid-air. The Council noted the misleading nature of Fairwind’s testimony at the hearings in this proceeding. *See, e.g.*, May 5, 2011 Tr. at 169-70 (Mr. Willensky’s cross-examination of Glenn Chalder: “. . . some of these renderings show them right in the middle of the road, which I know is not – not to be --....”); “Why did you . . . insert . . . the digital design of the turbine right there? I don’t think it shows a true picture.”); *see also* BNE Exhibit 17; May 5, 2011 Tr. at 365-66.

Assessing the Project location from the “big picture,” the Project is located along the Route 44 transportation corridor, which is not designated as a scenic road and is in fact a state highway. *See* May 5, 2011 Tr. at 28-30. The Chairman of the Colebrook Planning & Zoning Commission admitted on the record that a commercially zoned area is located along Route 44. *See* May 5, 2011 Tr. at 27. 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. 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 baseless 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. BNE's shadow flicker assessment utilized numerous "worst case" assumptions – e.g., the sun is shining and the wind is blowing all day; the turbines are spinning all day; each "receptor" (occupied building) is assumed to have windows facing perpendicular to the turbines. A 50% reduction factor was applied to the worst-case calculations to represent a more realistic, or "probable case" scenario. The 50% reduction was based on historical weather data showing frequency of cloudy days plus additional conditions that inhibit or mitigate the casting of shadows. Nonetheless, the methodologies employed in BNE's analysis were extremely conservative. Even using these conservative methodologies, of 136 potential receptor locations evaluated, a total of only ten receptors are predicted to have some shadow flicker events. No receptor is predicted to experience more than 30 hours of shadow flicker *annually*. The Gun Club lodge, not a residence, is expected to experience the highest number of annual shadow flicker hours. This information is entirely unrefuted in the record. *See* BNE Exhibit 1, 8c.

In terms of historic impacts, VHB completed a review of the Project with the State Historic Preservation Office ("SHPO"). The agency's initial review resulted in the issuance of a "no effect" letter on November 29, 2010, indicating that the Project is not expected to have any adverse impact on historic and cultural resources in the State of Connecticut, including but not limited to the Rock Hall Luxe Lodging. After substantial lobbying by parties Fairwind and Stella and Michael Somers, the SHPO revoked the no effect letter only as it related to the Rock Hall Luxe Lodging property and subsequently requested photographic simulations and a

visibility assessment specifically from the Rock Hall property, which is located approximately one-half mile from the nearest turbine. The results of VHB's reconnaissance and photo-documentation indicate that the Project will not be substantially visible from the Rock Hall Luxe Lodging structure, which is listed on the National Register. As depicted in the photo-simulations, overall views from this property would be limited. The Project will not be visible from any historically significant areas of the inn, nor is it visible from any interior rooms. The only places from which the Project may be visible are from the pool and balcony areas; however, both of those areas were recently renovated and are not of historical significance. *See* BNE 17.

On May 19, 2011, after significant lobbying conducted by Fairwind and Stella and Michael Somers, including the inappropriate use of a helicopter during the SHPO's site visit to the property, the SHPO issued a determination claiming that the Project will have an adverse effect on the Rock Hall Luxe Lodging property. While BNE disagrees with the SHPO determination, BNE notes that, as the SHPO itself admits, the SHPO has no jurisdiction over this Project and would only be involved in consulting if another federal agency has jurisdiction over the Project. Such jurisdiction not been established in this proceeding. Therefore, the SHPO's comments are only advisory to the Council. As noted in all of the SHPO correspondence in the record in this proceeding, no other historic resources are in question as potentially impacted by the Project. Even with the issuance of this determination and assuming it to be accurate, the impact on historic resources in the vicinity of the Project is minimal.

Therefore, in totality, the Project will have no impact in scenic or recreational values, have severely limited visual impact and shadow impact and will have minimal impact on a single historic resource in the area. This limited effect does not rise to the level of "substantial" impact sufficient to deny the Project. *See* CGS § 16-50p(a)(3)(B) and (C).

5. Forests and Parks

The only potential impact to forests and parks of the State would be potential visibility of the turbines from those areas. Elevated monuments and/or towers may provide some opportunity for visibility. The turbines are expected to be distantly visible from a distance of over four miles from the vantage point at Haystack Mountain. *See* BNE Exhibit 1, 8c. In its comment letter in Petition 983, the DEP stated 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 in Petition 983. Only the very tips of the blades, not the hubs of the turbines, are expected to be visible from the lookout tower at Soldiers’ Memorial Park. The blade tips are not nearly as significant on the horizon as the Winchester monopine already visible from the lookout tower. In terms of distant views, the turbines are not expected to constitute a significant feature along the horizon from distant forests and parks. *See* BNE Exhibit 1, 8c.

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 and other health-related air pollutant 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 quality standards and guidelines. *See* BNE Exhibit 1, 8d, 8h, 15. 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 expected to be impacted by the Project. As discussed *supra* in Section IV.A.2, the two watercourse crossings will be constructed in accordance with the DEP Inland Fisheries Division Stream Crossing Guidelines, dated February 26, 2008. These guidelines have been established to minimize impacts to resident fish and wildlife. In accordance with DEP recommendations, unconfined in-stream work associated with the culvert installation will occur between June 1 and September 30. If possible, impacts associated with the installation of the box culvert will be located outside of the stream channel. *See* BNE Exhibit 8d.

The DEP agreed that the use of three-sided box culverts at the two watercourse crossings is “consistent with the recommendations of the Stream Crossing Guidelines of the DEP Inland Fisheries Division in that these types of crossing structures allow for the maintenance of natural stream bottom substrates.” The DEP also agreed that the construction window selected by BNE is “consistent with the Stream Crossing Guidelines to take advantage of seasonal low flow conditions.” This is in direct contrast to the testimony of Project opponents, who claimed that the use of box culverts was not protective of the watercourse and that BNE’s proposed timing of construction was inappropriate. *See, e.g.* May 5, 2011 Tr. at 155, 178-79.

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 8d.

The Project is not expected to adversely impact amphibians and reptiles. *See* BNE Exhibit 13, May 5, 2011 Tr. at 291, 298. No vernal pools were identified on the Property. Dr. Klemens assessed the Property for potential suitable habitat to support the Jefferson salamander, a State-listed Species of Special Concern, and the spring salamander, a State-listed Threatened Species spring salamander. Two additional State-listed Species of Special Concern, the smooth green snake and the eastern ribbon snake, were identified as potentially occurring on the site. *See* BNE Exhibit 13. The DEP concluded that suitable habitat for the smooth green snake does not occur on the Property and that the proposed Project is unlikely to have an impact on these species. *See* DEP correspondence dated April 6, 2011. If these reptiles are in fact utilizing the Property, the proposed clearing activities associated with the Project will actually enhance habitat for both of these species.

Additionally, the proposed Project will not negatively impact wetlands or significant habitat used by amphibians or reptiles on the Property, including the wood frog and four-toed salamander. The wood turtle has been observed as occurring in the area, though not on the Property. Despite not locating any wood turtle population on the Property, to ensure that this population is protected to the utmost degree, BNE has committed to employing a detailed Wood Turtle Protection Program for construction and related work surrounding Turbine 1, the only part of the Project site that could coincide with areas of wood turtle terrestrial activity. These protocols will prevent any incidental take of wood turtles during construction. The anticipated slight shift of the access road recommended by Dr. Klemens will ensure that the Project is even more protective of habitat, amphibians and reptiles. *See* BNE Exhibit 13; May 5, 2011 Tr. at 291; 295-97.

As for birds and bats, potential impacts as a result of the Project were evaluated based on detailed surveys completed at the Colebrook South (Petition 983) site. As discussed during this proceeding and as the Council is aware from its site visits, the Colebrook South and Colebrook North sites are closely situated and contain similar vegetation composition and physiographic characteristics, with the exception of the golf driving range located at the Colebrook North site. Both Colebrook North and South are located along forested ridges with little variation in vegetation or topography relative to the surrounding landscape. Deciduous forest dominates both Colebrook South and North, and both properties contain palustrine wetlands. Due to the similarities of habitat, land use and land cover, results of bat and bird surveys for Colebrook South are likely indicative of species composition and relative abundance for Colebrook North. Further, on larger wind projects with much larger sites that may vary in terms of vegetation and habitat across the site, similar inferences are commonly made regarding the community composition of species. This information is unrefuted in the record. *See* BNE Exhibit 8g; April 28, 2011 Tr. at 52-54.

In terms of birds, the breeding birds identified were regionally common and no high value bird habitats were identified within the area. 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. In fact, overall conclusions on the scale of impact to birds from wind energy remains qualified as being orders of magnitude lower than other sources of mortality such as windows, domestic cats, road collisions or tall lit communications towers. 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, 8g, 14.

The record is clear that BNE met with the DEP in March, 2010 to discuss the BNE wind projects and specifically discuss protocol for the bird and bat studies to be undertaken. BNE surpassed the level of work requested by the DEP at this meeting by completing breeding bird surveys in addition to the requested acoustic surveys for bats. *See* BNE Exhibit 14.

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. In fact, five-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* BNE Exhibit 14.

BNE began conducting pre-construction bird surveys for the spring migration period in early March 2011. BNE has additionally committed to conducting pre-construction bird surveys for the summer breeding season and the fall migration season, and post-construction bird surveys during two separate calendar years between April–October. This additional data will be provided to the DEP to better inform of bird activity on the Site. *See* BNE Exhibit 1, 3 (A22), 8g, 11 (A7).

In terms of bats, the Project is not anticipated to 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 North 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 1, 8g, 14.

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 United States have been completed at facilities with substantially larger numbers of turbines and megawatt capacity than what is proposed for Wind Colebrook North. For example, the 76 projects evaluated in BNE's bat acoustic report had an average of 53.8 turbines per site. Wind Colebrook North 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 8g.

DEP stated 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. 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. *See* BNE Exhibit 14.

DEP also expressed a concern with the timing of the acoustic bat survey, stating that it was “a bit later than ideal for our area.” *See* DEP correspondence dated April 6, 2011. 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. *See* BNE Exhibit 4 (A31), 14.

Limited appearance statements in this proceeding criticize the acoustic bat report claiming that it lacks spring data. This criticism 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 4 (A32), 14.

BNE has volunteered to perform pre-construction bat monitoring at the Property between April 15-October 31, 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 3 (A22), 14.

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 competing guidelines from the states of New York, Pennsylvania, New Jersey and even other countries. *See e.g.* Fairwind Interrogatories, Set 2, Q. 58-60 (dated March 8, 2011) and Set 3, Q. 54 (dated April 12, 2011). Fairwind apparently ignores the fact that the Project is located in the State of Connecticut.

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 14.

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 14.

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 North 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, while not the proper legal standard under which the Council must review this Project, 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 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. *See* May5, 2011 Tr. at 384.

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

Respectfully Submitted,
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Certification

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

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