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 FAIRWINDCT, INC., STELLA AND MICHAEL SOMERS AND SUSAN WAGNER

Pursuant to the Council's invitation to the parties and intervenors to submit briefs and findings of fact by May 27, 2011, FairwindCT, Inc., Stella and Michael Somers and Susan Wagner (the "Grouped Parties") hereby submit this post-hearing brief regarding the petition for declaratory ruling filed by BNE Energy Inc. on December 13, 2011.

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INTRODUCTION

In sum, the Grouped Parties submit that application of the law to the facts of this proceeding demonstrates that the petition must be denied based on BNE's failure to satisfy the requirements of General Statutes § 16-50g et seq., including even the minimal requirement of Section 16-50k(a) that the proposed project comply with the water quality standards of the Connecticut Department of Environmental Protection ("DEP"). Even taking into consideration the numerous revisions to the petition over the course of this proceeding, BNE failed to carry its burden to show that its proposed project complies with DEP water quality standards, applicable noise regulations and other environmental regulations and statutes. These failures are fatal to BNE's petition, because the development and management phase does not apply to petitions. Therefore, even assuming that the failures and inadequacies of this proposal could be resolved after further site investigation and study and further revisions to the proposed project, there is no opportunity for such revision. Moreover, the project should be denied because it expressly violates Colebrook's planning and zoning regulations and its plan of conservation and development, will have a substantial adverse effect on historic and cultural resources, including a property on the National Register of Historic Places and a property designated as a National Natural Landmark and wholly fails to comply with even the minimal setback standards established by the turbine manufacturer. Finally, the project should be denied because the Town of Colebrook Planning and Zoning Commission issued an order pursuant to General Statutes § 16-50k(x) requiring BNE to apply for a zoning change before building its project, and BNE failed to timely appeal to the Siting Council for relief from that order.

BACKGROUND

I. BNE's Petition Is Inadequate

BNE submitted its petition on December 13, 2010, seeking a declaratory ruling that no certificate of compatibility and public need is necessary for its proposed construction of a 4.8 MW industrial wind turbine project in residential Colebrook, Connecticut. In support of and as part of its petition, BNE submitted 13 exhibits. Those exhibits included, inter alia, site plans, a stormwater management plan, an erosion and sediment control plan, a terrestrial wildlife habitat and wetland impact analysis, a visual resource evaluation and a noise evaluation. Those exhibits also included an "interim report" on bat acoustic studies and a "final report" on breeding bird surveys that reported on studies conducted at a different site, namely Wind Colebrook South. BNE's analysis of the potential wind resources on the site are likewise based solely on data collected at the proposed Wind Colebrook South site. The Council is scheduled to issue its decision on BNE's petition for declaratory ruling by June 13, 2011, in accordance with General Statutes § 4-176(i).[1]

In its petition, BNE seeks approval to site three GE 1.6 MW turbines with a hub height of 100 meters on the property located at the intersection of Winsted-Norfolk Road (Route 44) and Rock Hall Road in Colebrook. BNE seeks approval for a blade length of 40.3 meters, but has also requested approval for a blade length of up to 50 meters. BNE proposed locations for all three of the turbines in its petition that are within less than 525 feet from the project site's boundaries. One turbine is just 153 feet from a residential property that is north of the project site.

[1] June 11, 2011, a Saturday, is day 180. June 13, a Monday, is the next business day.

On February 24, 2011, more than two months after filing its petition, BNE submitted a shadow flicker report attached to interrogatory responses, thereby apparently revising its visual resources evaluation submitted as Exhibit J to the petition. (Proposed Findings of Fact by FairwindCT, Inc., Stella and Michael Somers and Susan Wagner, dated May 27, 2011, Finding of Fact 307, "FOF") That report assumed that BNE was seeking approval for 100-meter blades. (FOF ¶ 310.)

On March 25, 2011, more than three months after filing its petition, and more than halfway into the 180-day statutory time limit imposed by Section 4-176(i), BNE again revised Exhibit J by submitting a "Supplemental Visual Resource Evaluation Report" that, for the first time, provided information about the potential visual impact of the 82.5-meter diameter blades. (FOF ¶¶ 310- 311.) The visual resource evaluation report attached to the petition as Exhibit J analyzed the potential visibility of the 100-meter blades. (Petition, Ex. J, page 3.) On that same date, BNE provided a supplemental shadow flicker report analyzing flicker likely to result from the 82.5-meter diameter blades. (FOF ¶ 311.)

On March 25, 2011, again more than halfway into the 180-day statutory time limit imposed by Section 4-176(i), BNE submitted an entirely new set of site plans attached to the pre-filed testimony of Curtis Jones. (FOF ¶ 248.) Those site plans were dated March 18, 2011, and appeared to replace Exhibit F to BNE's petition. BNE also filed new stormwater management and erosion and sediment control plans, which appeared to replace Exhibits G and H to its petition. (FOF ¶ 238.) The "revised" site plans included a proposed "alternate" location for Turbine 1, purported elimination of 1:1 slopes, significant changes and additions to engineering features such as sedimentation facilities and significant changes to the proposed

road. (FOF ¶ 250.) Although Mr. Jones's sworn testimony indicates that these plans are revisions to the original petition, BNE has not withdrawn its first set of plans.

Also on March 25, 2011, BNE submitted two ice throw reports, one for each proposed blade length, thereby apparently revising its petition again more than halfway into the 180-day statutory time limit imposed by Section 4-176(i). (FOF ¶ 280.)

Also on March 25, 2011, BNE submitted its "final" bat acoustic report attached to the pre-filed testimony of David Tidhar. That report presumably was intended to replace the "interim" report submitted by BNE as Exhibit K to its petition. (See FOF ¶¶ 159-160 ("Due to the fact that West was continuing to collect data concerning bat activity on the property, Exhibit K to the petition is a preliminary report. Our final bat acoustic report is attached hereto as Exhibit 2.").) This "final" report, like the "interim" report attached to the petition, reported the results of a survey conducted only at the proposed Wind Colebrook South site. (FOF ¶ 159.)

On March 25, 2011, BNE revealed, in response to interrogatories and in pre-filed testimony, plans to perform a spring migratory bird study on the site and additional acoustic bat monitoring on the site from May to October 2011. The results of these surveys will not be available until well after the Council renders its decision on this petition. (FOF ¶¶ 166, 174.) BNE also revealed, for the first time, that it had hired Dr. Michael Klemens to perform on-site surveys for vernal pools, amphibians and reptiles in March and April 2011. (FOF ¶ 141.)

On May 3, 2011, BNE submitted an on-site, in-season herpetological assessment of the site. (FOF ¶ 142.) The last day of the evidentiary hearing concluded approximately 48 hours later. Dr. Klemens determined that the site contains habitat suitable for four state-listed species. BNE had stated that no state-listed species were likely to be present on the site. (FOF ¶¶ 142,

144, 158.) Based on Dr. Klemens' findings, additional revisions to BNE's site plans will be required. (See FOF ¶ 150.)

II. BNE's Late Attempts to Revise its Petition Prejudiced the Council and the Parties and Intervenors

In short, the petition filed by BNE in December 2010 has been significantly revised in the past several months, during the pendency of the evidentiary hearings. Statements made in the text of BNE's petition are no longer accurate. Exhibits F, G, H and K have been replaced entirely by new plans and studies. Exhibits I, J and L have been significantly revised. Additional studies were conducted during and apparently will continue to be conducted well after the scheduled close of this evidentiary hearing. Despite the repeated revisions, BNE still has not remedied deficiencies in its original petition, including but not limited to its failure to collect wind data on the site and failure to conduct any bat and bird studies on the site.

The combined effect of these revisions was to severely prejudice not only the parties and intervenors opposed to this petition, but also the Council, which is faced with approving or denying a petition that has changed substantially since its original iteration and still contains significant deficiencies based on BNE's failure to conduct site-specific surveys. These constant changes culminated in BNE's filing an entirely new site plan, stormwater management plan and sediment and erosion control plan and producing a brand-new on-site survey with significant environmental findings just 48 hours before the close of the evidentiary hearing. BNE also revealed, again shortly before the evidentiary hearing concluded, that it plans to conduct additional bat and bird studies that will not be concluded until after the Council renders its decision on this petition. In fact, weeks after the close of the evidentiary hearing, just two days before the parties' briefing and findings of fact were due to the Council, BNE submitted yet

another report in support of its petition– this time an "interim" raptor survey that again was conducted at a different site.

ARGUMENT

I. BNE's Failure to Appeal the Zoning Commission's Order Divested the Council of Jurisdiction Over this Petition

While the Council ultimately is granted exclusive jurisdiction to site the proposed project, that jurisdiction is subject to General Statutes § 16-50x(d), which expressly states that "[a]ny town, city or borough zoning commission and inland wetland agency may regulate and restrict the proposed location of a facility . . . . Such local bodies may make all orders necessary to the exercise of such power to regulate and restrict, which orders shall be in writing and recorded in the records of their respective communities, and written notice of any order shall be given to each party affected thereby." That section goes on to provide that such body must issue an order regulating or restricting a project "not more than thirty days after an application has been filed with the council for the siting of a facility" and that "[e]ach such order shall be subject to the right of appeal within thirty days after the giving of such notice." With respect to that right of appeal, the statute goes on to grant to the Council "jurisdiction, in the course of any proceeding on an application for a certificate or otherwise, to affirm, modify or revoke such order or make any order in substitution thereof by a vote of six members of the council."

Accordingly, it is clear that with respect to this petition, the Colebrook PZC possessed a broad statutory grant of authority, if timely exercised, to "make all order necessary to the exercise of such power to regulate and restrict" the proposed site, subject to BNE's right to appeal any such order to the Council. On February 16, 2011, the Colebrook PZC timely availed itself of this procedure and issued an order that BNE could not construct or operate a 4.8 MW

wind renewable generating project until it applied to the PZC for a zone change. (FOF ¶ 22.) There is no record, however, in this docket or any other, of an appeal taken by BNE from the PZC order pursuant to General Statutes § 16-50x(d). Because BNE failed to appeal from the PZC order restricting siting of the turbines within thirty days of the notice of that order, BNE waived its right to contest the PZC order. See, e.g., Plasil v. Tableman, 223 Conn. 68, 73, 612 A.2d 763 (1992) (untimely appeal constitutes waiver).

Further, because no such appeal was taken, the Council necessarily cannot "affirm, modify or revoke such order or make any order in substitution thereof." Conn. Gen. Stat. § 16-50x(d); see also, e.g., Marroquin v. F. Monarca Masonry, 121 Conn. App. 400, 406, 994 A.2d 727 (2010) ("Administrative agencies . . . are tribunals of limited jurisdiction and their jurisdiction is dependent entirely upon the validity of the statutes vesting them with power."). Indeed, the Council's own regulations recognize that an appeal thereto and a petition are separate and distinct proceedings. See RCSA § 16-50v-1a(a) ("All application filing fees required by this section shall be paid to the council at the time an application, amendment to an application, petition, statement of intent, or appeal is filed with the council . . . .") (emphases added.)

Because BNE chose not to appeal the PZC's order regulating its proposal to site industrial wind turbines in a residential zone, the Council by statute does not have jurisdiction to approve or deny BNE's petition, and therefore must dismiss it.

II. BNE Has Not Met Its Burdens

BNE has argued, since the filing of its petition, that it need only show that its proposed project complies with DEP air and water quality standards to secure approval of its petition for declaratory ruling. (FOF ¶3.) This argument is based on the language of Section 16-50k(a) of the General Statutes, which 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 . . . the construction or location of any fuel cell, unless the council finds a substantial adverse environmental effect, or of any customer-side distributed resources project or facility or 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 . . .

BNE argues that the language of this provision commands the Council to approve its petition if it complies with DEP air and water quality standards, regardless of whether the project has other substantial adverse environmental effects, and regardless of whether the project complies with other state and federal laws and regulations.

The simple truth is that this statutory language does not, and cannot, pre-empt all other applicable law, including state and federal environmental statutes – and it explicitly cannot pre-empt any statutes not contained within the Public Utility Environmental Standards Act or Title 16a. The Council has recognized this in its consideration of other petitions for declaratory rulings. For example, in the Council's recent decision to approve a petition for declaratory ruling regarding the retrofit and operation of a biomass-fueled generation unit in Montville, the Council ruled that the project would not have a substantial adverse effect. See Petition No. 907, Letter from D. Caruso to A. Lord, dated Feb. 26, 2010. The Council's decision on that petition relied on its finding that

> the effects associated with the construction, operation and maintenance of an . . . electric generating facility at the proposed site, including effects on natural environment; public health and safety; scenic, historic and recreational values are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the proposed project.

Petition No. 907, Declaratory Ruling, page 2. Identical language has appeared in numerous other declaratory rulings issued by the Council. See, e.g., Petition No. 834, Opinion, page 4 (Apr 24, 2008); Petition No. 831, Opinion, page 2 (Apr. 10, 2008); Petition No. 784, Opinion, page 4 (June 7, 2007); Petition No. 737, Opinion, page 2 (Sept. 14, 2006).

BNE therefore has the burden of showing that its proposed project:

- meets DEP air and water quality standards;
- will not have a substantial adverse environmental effect; and
- will comply with other applicable statutes and regulations.

BNE cannot carry these burdens, as is evident by its failure to conduct any on-site, in-season surveys for bats, birds, vernal pools, other mammals, amphibians and reptiles. Instead, BNE has repeatedly asked the Council to base its assessment of environmental impact on data collected at a different site – which even one of BNE's experts testified he would never do because the sites are substantially different. (FOF ¶ 161.) In the absence of any adequate on-site baseline surveys, the Council cannot possibly determine the nature of the adverse environmental effect of BNE's proposed project. BNE has wholly failed to carry its burden.

The Grouped Parties are each intervenors under the Connecticut Environmental Protection Act ("CEPA"). Upon the filing of CEPA interventions, the Council must, in addition to considering the statutory and regulatory otherwise applicable to BNE's petition, also consider whether BNE's proposed project "has, or . . . is reasonably likely to have, the effect of

unreasonably polluting, impairing or destroying the public trust in the air, water or other natural resources of the state." Conn. Gen. Stat. § 22a-19(a). The project must then be denied if there is a feasible and prudent alternative "consistent with the reasonable requirements of the public health, safety and welfare." Gardiner v. Conservation Comm'n of Waterford, 222 Conn. 98, 109 (1992); Conn. Gen. Stat. § 22a-19(b); see also Mystic Marinelife Aquarium Inc. v. Gill, Conn. 483, 499 (1978). As is discussed in more detail below, BNE's project will have the effect of unreasonably polluting, impairing or destroying the public trust in the air, water and other natural resources of the state, including trees and wildlife. See Paige v. Fairfield Planning & Zoning Comm'n, 235 Conn. 448, 462-63 (1995) (trees and wildlife are natural resources for purposes of CEPA). BNE has not met its burden of showing that there are no feasible and prudent alternatives to the project; therefore, the Council must deny its petition.

III. The Proposed Project Does Not Comply with DEP Water Quality Standards

As discussed above, BNE submitted its petition under the authority of Section 16-50k(a), and therefore claims that it need only demonstrate compliance with DEP air and water quality standards. Contrary to BNE's position, even petitions for declaratory ruling submitted pursuant to Section 16-50k are subject to the analysis set forth in Section 16-50g, which requires balancing the need for public utility services with the need to protect the environment and ecology of the state and minimize damage to scenic, historic and recreational values. However, even if the Council were to find that BNE must only comply with DEP air and water quality standards to get approval of this petition, BNE has failed to carry its burden, despite substantially revising its original plans.

The water quality standards of the DEP include, among other things, the requirements set forth in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control and the 2004 Connecticut Stormwater Quality Manual. (FOF ¶¶ 235-236.) Neither set of BNE's plans complies with the requirements of the water quality standards presented in those DEP manuals.[2] Nor do they satisfy the requirements of the General Permit.

The failures of the site plans and related stormwater management and erosion control plans are discussed in detail in the pre-filed testimony and supplemental testimony of William Carboni, a professional engineer licensed in Connecticut who reviewed the plans at the request of the Grouped Parties. (See FOF ¶¶ 241-247.) Mr. Carboni detailed BNE's extensive use of slopes steeper than 2:1, in violation of good engineering practices and in the absence of the geotechnical testing that shows steeper slopes are possible on the site. Mr. Carboni detailed BNE's repeated failure to provide an adequately sized area for the blade laydown and assembly areas. Mr. Carboni also detailed the failure of BNE to provide adequately sized and appropriately located sediment basins and traps and outlet protection – his most significant findings, because all of those features are required to prevent deposits of sedimentation into the wetlands and watercourses on the site and prevent pollution to the waters of the State. (FOF ¶¶ 242-43.)

[2] BNE has raised the argument that the 2002 Guidelines and 2004 Manual are not requirements, but are merely guidance documents. BNE is correct that both the 2002 Guidelines and the 2004 Manual are guidance documents. (See, e.g., 2002 Guidelines, page 1-1.) However, in practice, these documents provide the minimum requirements for site engineering; moreover, there is no reason that guidance documents cannot be standards. There are numerous different programs in the State regulating stormwater management. Compliance with the 2002 Guidelines and 2004 Manual ensures compliance with all the applicable laws and requirements, including the Soil and Erosion Control Act and the General Permit. (See FOF ¶¶ 235-37; 2002 Guidelines, page 1-4; 2004 Manual, pages 1-6–1-7; Carboni Supp. Pre-Filed Testimony, pages 4-5.)

During the evidentiary hearing, Curtis Jones, BNE's engineer responsible for the site plans and related stormwater management and erosion control plans, testified that both the original and the revised set of plans, submitted on March 25, 2011, comply with water quality standards. (FOF ¶ 249.) Even the revised plans, however, are not final, lack necessary engineering features, are based on assumptions that have not yet been confirmed by geotechnical and other on-site investigation, and will be further revised based on the findings of Dr. Klemens, who recommended several revisions to protect state-listed species that may be present on the site. (FOF ¶¶ 120, 150-56, 256.)

For example, the revised plans provide for two bioretention ponds or basins. (FOF ¶ 250.) The use of such ponds to treat stormwater is contemplated in the 2004 Connecticut Stormwater Quality Manual, but site investigation must be conducted to determine if such ponds are feasible at a particular site. Groundwater depths, including season-high depths, must be determined, appropriate soil types must be present in the area of the pond, embankments may need to be constructed and ponds should be located at least 750 feet away from vernal pools and should not be sited between vernal pools or in areas that are known as primary amphibian overland migration routes. (Council Admin. Notice Item No. 25 ("2004 Manual"), Chapter 11-P1-4 & -5.) BNE has not done any geotechnical analysis of the site, nor has it collected infiltration data or determined the depth of the season-high groundwater on the site. (FOF ¶ 254.) BNE's proposed stormwater ponds therefore are not final.

Also, despite Mr. Jones's claim in his original pre-filed testimony that the revised plans eliminated the use of 2:1 slopes, his supplemental testimony reveals that in fact, there is at least one area of the project where a 2:1 slope is proposed. This area, which is at the downhill leg of

the blade assembly area for Turbine 3, contains a 2:1 slope that is 16 feet high. (Jones Supp. Pre-Filed Testimony, page 5.) The 2002 Guidelines require that where slopes steeper than 3:1 have a vertical height of more than 15 feet, reverse slope or cross slope benches be incorporated into the design. (Council Admin. Notice Item No. 9 ("2002 Guidelines"), Chapter 5-2-5.) In the alternative, engineered structural design features may be incorporated to stabilize the slopes, but such alternatives cannot be designed until detailed soil mechanics analyses are completed. (Id.) The revised plans do not contain reverse slope benches, and BNE has not conducted geotechnical analysis on site that would permit an engineer to design alternative structural features. (FOF ¶¶ 246, 254 .) Moreover, the General Permit states that areas to be graded with slopes steeper than 3:1 and higher than 15 feet shall be graded with appropriate slope benches in accordance with the 2002 Guidelines, and specifies that the use of controls to comply with erosion and sediment control requirements that are not included in the 2002 Guidelines must be approved by the commissioner or designated agent. (FairwindCT Admin. Notice Item No. 1 (General Permit), pages 16-17, section B.6.C; 5/5/11 Tr. 317:24-318:10 (Jones).) BNE does not have such approval, so its plans do not conform to the requirement of the General Permit.

In sum, BNE's own engineer conceded that the site plans submitted with the petition were not complete and contained errors, and, despite having since been significantly revised, remain incomplete and still contain errors. Mr. Jones testified that the plans presented are preliminary drawings that will not be complete until approval of this project. (FOF ¶ 249.) In fact, the plans cannot be completed until BNE conducts a detailed geotechnical investigation, collects test pit and infiltration data, determines the depth of the season-high groundwater on the site, does additional field topographic work, completes design of the dewatering features at the

proposed wetlands crossing and obtains subsurface information for final road and drainage design. (FOF ¶¶ 250, 255.)

The language of Section 16-50k(a) is clear. In order to obtain a declaratory ruling, BNE must, at a minimum, show that its proposed project complies with DEP air and water quality standards. It must make that showing at the time its petition is filed – not through subsequent revision, and not after approval is secured. Mr. Jones testified repeatedly that additional work that is required to complete the project design will be done later, after approval of the petition by the Council. (FOF ¶¶ 254-55.)BNE's repeated claims that, if approved, its project will eventually meet those standards is on its face ground to deny this petition.

IV. BNE's Proposed Project Does Not Comply with Connecticut's Noise Regulations

The noise statutes and regulations of this state are not contained within the PUESA or Title 16a of the General Statutes. Therefore, even under BNE's interpretation of Section 16-50k(a), its proposed project is not exempt from noise-compliance regulations.

A. Noise Levels Must Comply at Property Lines

Throughout these proceeding, BNE has argued that the point of measurement for compliance with the DEP noise regulations is at the nearest residence or bedroom. All of the noise modeling conducted by Mr. Thomas Wholley, the noise witness presented by BNE, models noise levels to residential dwellings. The actual point of compliance is to the property line, and the Grouped Parties presented evidence that the proposed project will not comply with DEP noise regulations at that point of compliance.

Since July 1, 1974, Connecticut has had a strong public policy with respect to noise. That public policy is reflected in Section 22a-67 of the General Statutes:

> (a) The legislature finds and declares that: (1) Excessive noise is a serious hazard to the health, welfare and quality of life of the citizens of the state of Connecticut; (2) exposure to certain levels of noise can result in physiological, psychological and economic damage; (3) a substantial body of science and technology exists by which excessive noise may be substantially abated; (4) the primary responsibility for control of noise rests with the state and the political subdivisions thereof; (5) each person has a right to an environment free from noise that may jeopardize his health, safety or welfare.
>
> (b) The policy of the state is to promote an environment free from noise that jeopardizes the health and welfare of the citizens of the state of Connecticut. To that end, the purpose of this chapter is to establish a means for effective coordination of research and activities in noise control, to authorize the establishment of state noise emission standards and the enforcement of such standards, and to provide information to the public respecting noise pollution.

(Emphases added.) In addition, the legislature commanded in Section 22a-72(a) that "[s]tate agencies shall, to the fullest extent consistent with their authorities under the state law administered by them, carry out the programs within their control in such a manner as to further the policy stated in section 22a-67."

The legislature instructed the Commissioner of Environmental Protection to "develop, adopt, maintain and enforce a comprehensive state-wide program of noise regulation" that was to include controls on environmental noise through the regulation or restriction on the use and operation of stationary noise sources, and the establishment of, in "ambient noise standards for stationary noise sources which in the commissioner's judgment are major sources of noise when measured from beyond the property line of such source . . ." Conn. Gen. Stat. § 22a-69(a)(2) (emphasis added). The DEP adopted such regulations, effective June 15, 1978. See R.C.S.A. § 22a-69-1 et seq.

The Town of Colebrook has not adopted an ordinance providing for the reduction or elimination of excessive noise and the administration thereof. The Colebrook rules are the DEP noise regulations by default. See Conn. Gen. Stat. § 22a-69(b)(2).

The DEP regulation has an unambiguous requirement for noise regulation compliance to take place at the property line. RCSA §22a-69-3.1 provides: "General Prohibition. No person shall cause or allow the omission of excessive noise beyond the boundary of his/her Noise Zone so as to violate any provisions of these Regulations." (Emphasis added.) The definition of Noise Zone is provided in RCSA §22a-69-1.1: "(o) noise zone means an individual unit of land or a group of contiguous parcels under the same ownership as indicated by public land records and, as relates to noise emitters, includes contiguous publicly dedicated street and highway rights-of-way, railroad rights-of-way and waters of the State."

Measurement of noise levels under the Connecticut noise regulations are explicitly to the property line, not the receptor's bedroom. See RCSA § 22a-69-3.1. Regulation § 22a-69-4 provides: "(g) Measurements taken to determine compliance with Section 3 shall be taken at about one foot beyond the boundary of the Emitter Noise Zone within the receptor's Noise Zone." This is definitely not where people sleep. This is definitely not a measurement taken in a bedroom. This is one foot beyond the property boundary. BNE's noise measurements and modeling violate the regulations.

Since the adoption of the statute and regulations, the Siting Council, when considering noise associated with projects before it for consideration, has consistently applied the noise regulations to have a point of compliance at the property line. See, e.g., Petition No. 907, Findings of Fact, ¶¶ 76-77 (Feb. 25, 2010) (noise levels from proposed biomass plant range from

47 to 51 dBA "at residential property boundaries" and therefore will comply with noise regulations); Petition No. 834, Opinion, page 3 (Apr. 24, 2008) ("Noise levels during plant operation are expected to be 62 dBA, which is below the Class B land use noise limit of 66 dBA at a residential property boundary"); Petition No. 831, Opinion, page 2 (Apr. 10, 2008) ("The plant would be designed to meet State of Connecticut and City of Waterbury noise regulations, especially the provision that noise levels during plant operations would not exceed 61 dBA during the day and 51 dBA during the night at the nearest residential property boundary."); Petition No. 784, Opinion, page 3 (June 7, 2007) ("The Council is satisfied that noise levels during plant operations would not exceed a 61 dBA noise level during the day and 51 dBA during the night at the nearest residential property boundary, as required by State noise regulations."); Petition No. 451, Findings of Fact, ¶ 60 (June 20, 2000) (noting that "the calculated future ambient noise level would increase by as much as 5 dBA at the nearest residential properties") (all emphases added).

In considering a petition regarding a proposed biomass plant, the Council found that noise levels from the proposed plant operations "at the nearest residential buildings are expected to range from 37 to 50 dBA but may exceed 51 dBA at the property line." Petition No. 784, Findings of Fact, ¶ 110 (June 7, 2007). The Council further found that "[n]oise mitigation for the exterior fans may be necessary to keep the noise level below 51 dBA at the property line." Id. ¶ 111 (emphasis added).

The judges who have looked at the noise regulations have also applied the regulations at the property line, rather than at the residence. See Russell v. Thierry, Superior Court, No. CV010385198S, 2001 WL 1734441, at *2-3 (Dec. 11, 2001, Rush, J.) (finding the property

line to be the point of compliance); JZ, Inc. v. Planning & Zoning Comm'n of East Hartford, Superior Court, judicial district of Hartford, No. CV 08-4034369, 2008 WL 4378733, at *4 (Sept. 9, 2008, Rittenband, J.) (rev'd on other grounds) (referencing noise levels at the residential property line).

Measurement of noise levels has never been to the bedroom of the nearest residence. BNE can point to no controlling legal authority for the proposition that measurement is to the bedroom rather than to the nearest property line. Like other environmental points of compliance, the correct point of compliance is the property line. BNE's novel argument has not been accepted by any authority.

BNE's argument of industrial versus residential should be resolved by expressly defining emitters and receptors by their existing zoning classifications. This proposed project site is designated a "Residential Zone" under the Town's zoning ordinance and zoning map, and pursuant to the Town's zoning regulations, only limited residential uses are permitted as of right. (See Bulk Filing, Town of Colebrook Zoning Regulations, revised May 28, 2008, and Colebrook Zoning Map.) The correct criteria for measurement is therefore residential to residential.

Any argument that the existence of a gun club, which probably pre-dates zoning regulation in Colebrook since there is no mention of the gun club in the zoning regulation, and a golf driving range in the general business zone south of the proposed Wind Colebrook North turbines has converted the parcel to industrial use and is now for zoning and noise purposes a de facto industrial use would be misplaced. Colebrook's zoning regulations knows no such rule. No Connecticut zoning regulations know such rule. The Council has no authority to overrule this ordinance. Under

the Colebrook zoning regulations, the site may only be treated as industrial for noise regulation if its zoning status is changed. BNE has sought no such zoning change.

Each of the proposed turbine locations will exceed the regulatory residence-to-residence limit by 6 to 10 dB. Three of the four proposed turbine locations will also exceed the regulatory industrial-to-residence limit by 3 to 4 dB – of the four proposed locations, only Turbine 2 meets the 51 dB industrial-to-residence limit. (FOF ¶¶ 213-214.) Therefore, even using the industrial-to-residential standard (which the Grouped Parties do not believe is appropriate), the BNE wind turbines violate DEP noise regulations and cannot be constructed as proposed.

B. BNE's Noise Study Is Incomplete and Inaccurate

Michael Bahtiarian, INCE Bd. Cert., reviewed the report prepared by Mr. Wholley for BNE. Mr. Bahtiarian reached five specific conclusions regarding details presented in BNE's report. Specifically, he found:

- The report claimed that all portions of the noise regulations would be met; however, the study did not address nor assess impulsive noise;
- The report incorrectly selected the DEP A-weighted sound pressure level noise limit and used the Class C Industrial Zone rather than the Class A Residential Zone as the zone for the noise source;
- The methods used to predict sound levels were not done on a worst-case basis. The studies were done using 1000 Hz octave band rather than the 500 Hz octave band, and a worst-case analysis should have used a temperature of 50°F (rather than 68°F) at 70% relative humidity. When using the proper temperature, the value for atmospheric absorption would be 1.9 dB/km rather than 2.8 dB/km. If

1.9 dB/km were used, the predicted sound pressure level would be 1 to 5 dB higher. If no atmospheric absorption were taken into account, the predicted SPL would be 2 to 8 dB higher. The report as originally drafted used maximum wind speeds of 9 m/second as maximum daytime wind speed and 8 m/second as the maximum wind speed for nighttime sound levels;

- BNE's study of existing conditions was diminutive for a project of this scale. Background conditions were measured from 5 to 15 minutes at various locations. Fifteen minutes is far too short a sampling time to accurately characterize the background sound level conditions; and
- Based on Mr. Bahtiarian's own computations of expected noise levels, under worst-case assumptions, sound levels will exceed the State of Connecticut noise regulations based on a comparison of residential-to-residential nighttime noise limits and industrial-to-residential nighttime noise limits.

(Bahtiarian Pre-Filed Testimony, 3/15/2011 pages 3-12.) Sound levels as calculated by Mr. Bahtiarian show that there will be 6 to 10 dB excess to DEP residential-to-residential limits at night and 0 to 4 dB excess to DEP industrial-to-residential limits at various property line locations. (FOF ¶ 213.)

In the past, the Council has approved projects that would violate the sound regulations where effective mitigation measures could be undertaken by the applicant or petitioner. For example, in Petition No. 451, the Council found that post construction noise that exceeded the Connecticut noise standards could be mitigated by the addition of acoustical enclosures silencers. (Petition No. 451, Findings of Fact, ¶ 62 (June 20, 2000).) There, the petitioner, PPL

Wallingford, would undertake post construction noise monitoring to confirm compliance with the Connecticut noise standards. Mr. Bahtiarian testified that a big difference between a traditional power plant and industrial wind turbine projects is that after a traditional power plant is built, many noise mitigation treatments can be built to ensure compliance with noise regulations. (5/5/11 Tr. 209:21-210:4 (Bahtiarian).) The same is not true for wind turbines. If proper setbacks are not included in a wind turbine project, the only effective measure for mitigating turbine noise to comply with the law is by turning off the turbines. (FOF ¶ 210.)

C. Wind Turbine Noise Adversely Affects People Living in Proximity

Evidence presented by the Grouped Parties demonstrates that significant increases in noise levels adversely affect people. The evidence also shows that wind turbine noise adversely affects people living within several thousand feet of industrial wind turbines.

Mr. Bahtiarian undertook his own background noise monitoring program in Colebrook. He installed equipment on the afternoon of Friday, March 25, 2011, and had the equipment removed on the afternoon of Monday, April 4, 2011. One device was located at the end of Flagg Hill Road in the vicinity of VHB's monitoring location M1. (FOF ¶¶ 215-16.) The results showed at location M1, the average background noise level was 30 dB(A), not 37 dB(A) as reported by BNE. The background noise level dropped to as low as 22 dB(A) for three of the seven nights and 28 dB(A) for the four remaining nights. (FOF ¶ 217.)

Mr. Bahtiarian concluded that Colebrook location M1 is extremely quiet, much quieter than indicated by the brief sampling done by the BNE. (FOF ¶ 218.) The significance of these measurements is that the proposed project will raise noise levels approximately 20 dB higher

than current background levels. A 10 dB increase is perceived as a doubling of loudness, and a 20 dB increase will be a quadrupling in loudness. This is extreme. (FOF ¶ 219.)

Dr. Bronzaft, who has a PhD and MA from Columbia University and has been a consultant on noise abatement to the New York City Transit Authority, testified concerning the psychological effects of noise on people. (FOF ¶¶ 220-21.) Based upon her review of the noise reports in this matter, her review of the literature linking noise to adverse mental and physical health and well-being and her many years of experience in the noise field, Dr. Bronzaft testified that residents in the area of the proposed wind turbine project may very well suffer ill effects from the noise generated by the turbines, including physiological health impacts, stress and a diminished quality of life. (FOF ¶ 222.)

In addition to documented physiological health impacts, noise may dramatically affect an individual's quality of life. Individuals living near a constant noise source may not yet have measurable physiological symptoms, but their quality of life may be substantially diminished. (FOF ¶ 223.) In a study by Dr. Bronzaft on the effects of noise on people living in a flight pattern community, those identified as being bothered by the noise reported having difficulty sleeping. While night flights are of special concern in the area of sleep deprivation, the young, the old and the infirm often tend to sleep during the day, and thus day flights may prove intrusive to these individuals. Sleep difficulties as experienced by the subjects in a study done by Dr. Bronzaft show that these individuals may suffer long-term health consequences. (FOF ¶ 224.)

The only witnesses with real experience with living near industrial-sized wind turbines were the fact witnesses who testified regarding BNE's proposed Wind Prospect project, Petition No. 980. This testimony was administratively noticed in this record. (See FOF ¶ 227.)

These witnesses live as close as 1320 feet to 1.5 MW and 1.65 MW industrial wind turbines. They testified that the noise created by the wind turbines disturbs their sleep and causes headaches and other adverse health effects. One witness who complains of noise in Falmouth, Massachusetts, lives 2745 and 3485 from two operating wind turbines and 4065 feet from a third turbine that at the time of his testimony had not yet begun operating. Mr. Meyer of Brownsville, Wisconsin, lives close to five different industrial wind turbines. The closest turbine is 1560 feet from his house and the most distant turbine is 3300 feet from his house. (FOF ¶ 228.) Mr. Meyer presented his diary of wind turbine noise as an attachment to his pre-filed testimony. His almost daily record of disturbing noises is instructive; his account of the effect on his wife, his son and himself is moving. (FOF ¶ 229.)

The testimony of these witnesses demonstrates that wind turbine noise affects residents living within at least 3300 feet of turbines. Buildings on properties on Rock Hall Road range from as close as 908 feet to the nearest wind turbine; residences on Greenwood Turnpike are as close as 1416 feet to the nearest Wind Colebrook North turbine. (FOF ¶¶ 232-33.) These distances are comparable to the distances testified to by the fact witnesses from Falmouth, MA, Vinalhaven, ME, and Brownsville, WI, who have had to live with industrial wind turbine noise for more than two years.

Only one conclusion can be drawn after reviewing the evidence presented to the Council: Wind turbines do not belong in residential neighborhoods. Connecticut should learn from this experience. The siting of industrial wind turbines should not be permitted in residential neighborhoods.

In keeping with the command of General Statutes § 22a-72, the Council must carry out the programs within its control in such a manner as to further the state's policy regarding noise contained in Section 22a-67. BNE has failed to show compliance with Section 22a-69 of the General Statutes, and the Grouped Parties' witness showed non-compliance with the regulations promulgated thereunder. The proposed project is not a traditional power plant, so noise cannot be mitigated after the turbines are built. The Council must deny BNE's petition.

V. BNE's Proposed Project Will Adversely Impact the Environment

"[T]he policy of the state of Connecticut is to conserve, improve and protect its natural resources and environment . . ." Conn. Gen. Stat. § 22a-1. Under both the Public Utility Environmental Standards Act ("PUESA"), codified at Conn. Gen. Stat. § 16-50g, et seq. and Conn. Gen. Stat. § 22a-16, et seq. ("CEPA"), BNE carries the burden of minimizing the environmental impact of its proposed project. Under PUESA, BNE must show that its project will not have "substantial adverse effects." Under CEPA, BNE must show that there are no feasible and prudent alternatives to its project. BNE has not and cannot meet either burden.

A. BNE Has Not Met Its Burdens Under PUESA or CEPA

As discussed above, the proposed project will unreasonably pollute the waters of the State, which means the project will have a substantial adverse effect and will unreasonably pollute the public trust in the water. The Grouped Parties' proposed findings of fact detail other ways in which BNE's project will have substantial adverse effects and will unreasonably pollute, impair and destroy the public trust in other natural resources of the State, including in particular habitat and wildlife. Some of those findings are highlighted below.

BNE concedes that its project will have significant temporary and permanent direct wetland impact. (FOF ¶ 123.) BNE's proposed activities include construction of a wetlands crossing across over streams within the Mill Brook wetland system, part of Wetland 1, an ecologically important, very unique and beautiful wetland system. BNE's own witness testified that habitat on the site is likely to support four state-listed species: the wood turtle, the spring salamander, the smooth green snake and the eastern ribbon snake. (FOF ¶¶ 120-121, 147.) BNE has not made a showing that this crossing is required or that there are no feasible and prudent alternatives to it.

BNE's proposed activities as a whole will have additional substantial adverse effects on the site and will unreasonably pollute, impair and destroy the public trust in the environment. BNE plans to clear acres of trees, many of which grow in the wetlands on the site – and it has not even offered a tree survey showing how many trees will be cleared. (FOF ¶ 213.) Mr. Carboni testified on behalf of the Grouped Parties that BNE's inadequate erosion control measures are likely to result in erosion and deposits of sediment into wetlands, having an adverse effect on wetlands not contemplated by BNE and not included in BNE's deliberately modest estimates of wetlands disturbance. He testified that the modifications necessary to resolve the plans 'failures to meet 2002 Guidelines would result in a greater direct impact to wetlands than shown in the plans. (FOF ¶¶ 241-247.)

Moreover, the Connecticut Inland Wetlands and Watercourses Act, Conn. Gen. Stat. §22a-37 et seq. (the "IWWA"), provides for the protection of wetlands. Under the statutory scheme in Section 22a-39, the Commissioner has the duty to grant, deny, limit or modify an application for license or permit for any proposed regulated activity. Conn. Gen. Stat. § 22a-

39(h), (i). BNE's activities are regulated activities because they involve "the removal or deposition of material, or any obstruction, construction alteration or pollution of . . . wetlands or watercourses." See Conn. Gen. Stat. § 22a-38(13). BNE's regulated activities do not include any activities permitted as of right by the IWWA. See Gen. Stat. § 22a-40.

Section 22a-41 provides factors to be taken into consideration in regulating, licensing or enforcing the provisions of the IWWA. These include but are not limited to:

> (1) The environmental impact of the proposed regulated activities on wetlands or watercourses;
>
> (2) The applicant's purpose for, and **any feasible and prudent alternatives** to, the proposed regulated activity which alternatives would cause less or no environmental impact to wetlands or watercourses;
>
> (3) The relationship between the short-term and the long-term impacts of the proposed regulated activity on wetlands or watercourses in the maintenance and enhancement of long-term productivity of such wetlands or watercourses;
>
> (4) Irreversible and irretrievable loss of wetland or watercourse resources which would be caused by the proposed regulated activity, including the extent to which such activity would foreclose a future ability to protect, enhance or restore such resources, and any mitigation measures which may be considered as a condition of issuing a permit for such activity including, but not limited to, measures to (A) prevent or minimize pollution or other environmental damage, (B) maintain or enhance existing or environmental quality, or (C) in the following order of priority: restore, enhance and create productive wetland or watercourse resources;
>
> . . . and
>
> (6) Impacts of the proposed regulated activity on wetlands or watercourses outside the area for which the activities proposed and future activities associated with, or reasonably related to, the proposed regulated activity which are made inevitable by the proposed regulated activity and which may have an impact on wetlands or watercourses.

Conn. Gen. Stat. § 22a-41(a) (emphasis added).

Section 22a-41(b)(1) provides that if there is a finding of a significant impact on the wetlands or watercourses, a permit shall not be issued unless the commissioner finds on the basis

of the record that a feasible and prudent alternative does not exist. The finding and the reasons therefor are to be stated on the record in writing.

In its petition, BNE stated that the construction of a gravel access road over Wetland 1 would require permanent direct impact to 3,194 square feet of wetlands. Further, approximately 1,785 square feet of wetlands would be temporarily impacted. The total direct wetland impact in the petition is therefore at least 4,979 square feet. (FOF ¶ 124.) Indirect wetland impact (i.e., clearing of, and building in, the area within 100 feet of wetlands) was identified in BNE's petition as 1.77 acres (77,199 square feet). (FOF ¶ 125.) BNE's revised site plans do not identify how the revisions would affect the area of direct and indirect wetland impact as set forth in its petition, but the plans do identify "regulated activity" in 4,860 square feet of wetlands. (FOF ¶ 126.)

There can be no other conclusion than that BNE proposes activity that will have significant impact on the wetlands or watercourse. No alternatives analysis has been presented. There has been no showing that a feasible and prudent alternative does not exist.

BNE has made no alternatives showing under either the IWWA or CEPA, Conn. Gen. Stat. §22a-19(b). The Council, acting in lieu of the Commissioner, has nothing in this record on which it can make a decision concerning feasible and prudent alternatives, the short-term and long-term impacts of the activity on the wetlands, irreversible and irretrievable loss of wetland and watercourse resources and the impacts on the wetlands and watercourses outside of the proposed area of activity.

In addition, BNE's proposed activities are likely to have a substantial adverse effect on other wildlife in the area surrounding Wind Colebrook North, including birds, bats, amphibians,

reptiles and other terrestrial wildlife. BNE failed to conduct any on-site studies for birds, bats or other mammals, instead relying on the bird and bat studies conducted at Wind Colebrook South and a desktop wildlife evaluation. (FOF ¶¶ 130, 134, 159, 168.) Residents of properties abutting the site testified that they frequently observe wildlife on their properties such as deer, coyote, turkey, porcupine, fox and black bear. (FOF ¶¶ 136-137.) BNE has the burden of showing that its proposal will not have a substantial adverse environmental effect and will comply with other applicable statutes and regulations. Conn. Gen. Stat. § 16-50k(a). The significant wetland impact and construction of industrial wind turbines proposed by BNE will have a substantial adverse environmental impact, and the inadequacy of BNE's wildlife studies does not demonstrate that its proposed project will not adversely affect wildlife and other natural resources of the State.

In sum, the Grouped Parties presented evidence sufficient to satisfy the requirements of General Statutes § 22a-19(a) and demonstrate that Wind Colebrook South will unreasonably pollute, impair or destroy the public trust in natural resources of the State. The Council must therefore consider feasible and prudent alternatives, pursuant to General Statutes § 22a-19(b). BNE has made no showing that there are no feasible and prudent alternatives to using the wetlands crossing – in fact, BNE has made no showing that there are no alternatives to putting its proposed project on this site, given the significant value of the habitat and wildlife found on the site and its location in an area dominated by residences and conservation land. CEPA requires the consideration of alternatives once the prima facie case of unreasonable pollution has been shown. Quarry Knoll II Corp. v. Planning & Zoning Comm'n, 256 Conn. 674, 736 n.33 (2001).

B. The Council Should Not Compare the Environmental Impact of Residential Development to the Impact of the Proposed Project

As an alternative to the development of the site for wind turbines, BNE suggested that the site might be developed as a residential subdivision. No one presented any subdivision site drawings. BNE offered no evidence of the results of septic percolation tests. (FOF ¶ 60.) Any proposed residential subdivision would be subject to Department of Health requirements for septic and Colebrook planning and zoning and inland wetland regulations. (FOF ¶¶ 57-59.) Without sufficient engineering to demonstrate that septic fields are supportable at the site any discussion of site development is truly imaginary, unsupported by any engineering, or anything other than wind.

VI. The Petition Does Not Propose 80-Meter Hub Heights

At the end of the hearing on May 5, 2011, Mr. Corey on the behalf of BNE proposed that "In Colebrook the 80 meter hub height does work and if the Council were to decide and determine the hundred meter hub heights are just too tall we would — certainly would like the opportunity to be at 80 meters and make it work." (FOF ¶ 90.)

No evidence concerning the deployment of wind turbines with 80-meter hub height was offered at any time in any hearing. No evidence was offered as to the length of the wind turbine blades to be deployed on the 80-meter alternative. No view shed analysis has been provided for the 80 meter hub height; no shadow flicker analysis has been provided; no ice throw or blade throw studies have been performed. A multitude of effects are simply unknown, or if known, no evidence was presented to support the alternative.

Mr. Wholley, BNE's noise engineer, opined that the nacelle is the dominating noise source for both the 82.5 meter diameter blades and the 100 meter diameter blades. (FOF ¶ 195.)

If one assumes that the noise from the nacelle will remain the same, moving the nacelle closer to the earth will shorten hypotenuse on the triangle that is used to measure the distance from the nacelle to the nearest property line. Since the Wind Colebrook North project violates the noise standards with the 100 meter hub height, the 80 meter hub height will move the hub height closer to the property line and result in no sound reductions, and perhaps a sound increase.

SHPO concluded that both the 100 meter hub height and the 80 meter hub height would have adverse effects on Rock Hall. (FOF ¶¶ 90-110.)

There is no evidence to support this alternative. It should be rejected out of hand. Only with a proper petition should this alternative be considered.

VII. BNE Cannot Remedy the Defects in its Petition in a Development and Management Plan/Phase

As noted above, BNE's witnesses repeatedly referred to future additional work to be completed that might eventually result in bringing BNE's proposed project into compliance with, among other things, DEP water quality standards. BNE's witnesses, BNE's counsel, and even members of the Council and its staff have made repeated reference to the development and management plan/phase that this project will purportedly go through if it is approved by the Council. (See, e.g., 4/28/11 Tr. 33:5-13 (M. Davison); 5/5/11 Tr. 136:3-140:25 (Ashton), 231:20-232:8 (Corey), 248:1-15 (Klemens), 280:6-15 (M. Davison), 326:22-327:11 (Tait).)

Mr. Ashton grilled two of the Grouped Parties' witnesses about the impact of the development and management plan that the Council typically uses for applications. Both witnesses testified that even if there was to be a development and management plan for this project, BNE should be required to show that it can meet the basic minimum water quality standards, such as showing that the necessary sedimentation facilities will actually fit on the site.

Both witnesses testified that developers should be required to do more than make unsubstantiated and conclusory statements "that the grading will meet the state sedimentation and erosion control procedures." (5/5/11 Tr. 136:3-140:25 (Ashton examination of Carboni and Klein).)

Mr. Tait denied the Grouped Parties' motion to strike BNE's closing statement asking the Council to consider approving its petition with turbines of 80-meter hub heights – a proposal wholly unsupported by any evidence in the record – because "[m]y thought is that we have a D&M plan. And sometimes on cell towers when the only question is can it be moved X number of feet and the testimony indicates that it might be and does not involve wetlands and things that require further study, my thought is that at this point we will not require a late file. . . . In the petition I suspect there will be a D&M plan." (5/5/11 Tr. 326:20-327:11 (Tait).)

These statements show a fundamental misunderstanding of the statutes and regulations governing petitions for declaratory rulings. First, again, Section 16-50k(a) does not state that the Council may grant a petition for declaratory ruling if it does not already comply with DEP water quality standards. Second, and perhaps more significant, the development and management plan/phase that the Council is so accustomed to following as part of its "typical procedure" does not apply to petition proceedings.

As the Council is well aware, the "typical" proceedings it hears are applications for certificates of environmental compatibility and public need, which are brought pursuant to Section 16-50k(a). Several statutory provisions make explicit reference to the development and management plan.

- Section 16-50j(c), concerning the makeup of the Council during proceedings under Chapter 445, specifies that ad hoc members "shall be appointed by the chief

elected official of the municipality they represent and shall continue their membership until the council issues a letter of completion of the development and management plan to the applicant." (Emphasis added.)

- Section 16-50*l*(d), concerning applications to amend certificates, provides: "No such resolution for amendment of a certificate shall be adopted after the commencement of site preparation or construction of the certificated facility or, in the case of a facility for which approval by the council of a right-of-way development and management plan or other detailed construction plan is a condition of the certificate, after approval of that part of the plan which includes the portion of the facility proposed for modification." (Emphasis added.)
- Section 16-50v(h) provides: "With regard to any facility described in subsection (a) of section 16-50i, the council shall, by regulation, establish such fees and assessments as are necessary to meet the expenses of the council and its staff in conducting field inspections of (1) a certified project constructed pursuant to a development and management plan, or (2) a completed project for which a declaratory or advisory ruling has been issued." (Emphasis added.)

Each of these statutory provisions indicates that development and management plans apply only to certification proceedings. In Section 16-50j(c), the use of the word "applicant" indicates that the development and management plan is limited to applications, not petitions. In Section 16-50*l*(d), the language again applies projects approved pursuant to a development and management plan as a condition of the certificate. Section 16-50v(h) is the most significant of the three statutory provisions, however. In that section, the legislature demonstrated that it

intended to draw a distinction between "certified projects" constructed pursuant to development and management plans and "completed projects for which a declaratory . . . ruling has been issued." BNE filed a petition for a declaratory ruling, not an application for a certificate.

The Council's regulations echo this statutory distinction. The Council's regulations provide for development and management plans for rights-of-way "for any proposed electric transmission or fuel transmission facility for which the council issues a certificate . . ." R.C.S.A. § 16-50j-60(b). The Council's regulations also provide for development and management plans for "proposed cable antenna television or telecommunications towers and associated equipment or a modification to an existing tower site . . ." R.C.S.A. § 16-50j-75(a). The siting of cable antenna television and telecommunications towers and associated equipment is considered by the Council via certification proceedings.[3] See Conn. Gen. Stat. § 16-50k. In contrast, the regulations concerning petitions for declaratory ruling makes no mention of a development and management plan. See R.C.S.A. § 16-50j-38–40.

The distinction between certificate applications and declaratory rulings is also reflected in the Council's regulations concerning fees. See R.C.S.A. § 16-50v-1a (up to $25,000 fee for filing a certificate, $500 fee for a petition); see also R.C.S.A. § 16-50v(e) (distinguishing between expenses incurred for Council field inspection of a "certified construction project" versus a "project for which a petition for declaratory or advisory ruling was filed").

[3] The Grouped Parties are aware from the Council's docket that modifications to television and telecommunications towers are sometimes considered by the Council via the petition process, and that the Council sometimes approves such modifications subject to conditions that are later worked out in a development and management phase. Even assuming that the Council has the authority to conduct development and management plans in those circumstances, there is no question that BNE is not here seeking a modification to a television or telecommunications tower or associated equipment.

The Council is entirely a creature of statue. Our Supreme Court has held:

> Administrative agencies [such as the commission] are tribunals of limited jurisdiction and their jurisdiction is dependent entirely upon the validity of the statutes vesting them with power and they cannot confer jurisdiction upon themselves. . . . We have recognized that [i]t is clear that an administrative body must act strictly within its statutory authority, within constitutional limitations and in a lawful manner. . . . It cannot modify, abridge or otherwise change the statutory provisions, under which it acquires authority unless the statutes expressly grant it that power.

Figueroa v. C & S Ball Bearing, 237 Conn. 1, 4 (1996) (applying rule to the Workers' Compensation Commission); see also Ross v. Planning & Zoning Comm'n of Westport, 118 Conn. App. 55, 58 (2009) (applying rule to planning and zoning commission); Dep't of Pub. Safety v. Freedom of Info. Comm'n, 103 Conn. App. 571, 576-77 (2007) (applying rule to Freedom of Information Commission).

The express language of the Public Utility Environmental Standards Act and the Council's own regulations, then, set the limits of the Council's jurisdiction and ability to command preparation of a development and management plan. Those authorities reveal that the development and management plan does not apply to BNE's petition. Moreover, absent a grant of express authority from the legislature, the Council does not have the authority to sua sponte begin applying a development and management plan procedure to its petition proceedings. See Figueroa, 237 Conn. at 4; Dep't of Pub. Safety, 103 Conn. App. at 576-77.

The Council may not, therefore, approve BNE's petition and rely on the development and management plan as an opportunity to work out the details of the proposed project. BNE's petition must be denied for failure to comply with state law, both at the time the petition was filed and after subsequent revision.

VIII. BNE's Proposed Project Violates Municipal and State Policy

Pursuant to General Statutes § 16-50x(a), "[i]n ruling on applications for certificates or petitions for a declaratory ruling for facilities and on requests for shared use of facilities, the council shall give such consideration to other state laws and municipal regulations as it shall deem appropriate." Accordingly, consideration should be given by the Council to the regulations adopted by the Colebrook Planning and Zoning Commission ("PZC") and the Colebrook Inland Wetlands Commission ("IWC"), as well as to Colebrook's Plan of Conservation and Development ("POCD"), which was approved by the PZC in 2005. The Council also should give consideration to any relevant state law and policy, including the Conservation and Development Policies Plan for Connecticut 2005-2010.

A. BNE's Proposed Project Violates Colebrook Zoning Regulations

As the municipal comments provided to the Council demonstrate, Colebrook has recognized that BNE's petition "presents . . . several potential violations of the town's zoning regulations." (FOF ¶ 17.) The PZC's concerns are well founded.

At the outset, Colebrook's zoning regulations state as one of their purposes "[t]o conserve and maintain the value of land and buildings, and to promote the most appropriate uses of land and buildings especially as recommended in the Town Plan of Conservation and Development." (Colebrook Zoning Regulations, contained in BNE's Bulk Filing, § 1.1(C).) The regulations make clear that one significant way in which the town has conserved its land is its lack of explicit industrial zones, only allowing certain limited industrial uses within the residential and business zones established by the regulations, many of which require special exceptions even within the town's business districts. (Id. § 3.9.)

It is undisputed that the parcel where BNE proposed to site its industrial wind turbines is primarily located in an R-2 residential zone, with only a small section running along Route 44 that is located in the General Business Zone. Pursuant to the regulations, permitted uses in the R-2 zone involve dwellings or signage and parking areas, and other uses – including primarily small commercial enterprises and municipal endeavors – may be permitted by special exception. (Id. §§ 3.3, 3.5.) Permitted uses even in the small portion of the property subject to general business classification involve retail stores, personal service establishments, and offices, and other uses – including hotels, motels, restaurants, and apartments in businesses – may be permitted by special exception. (Id. § 3.6.)

Nowhere in the regulations is there any process by which an applicant can site three power-generating industrial facilities that are hundreds of feet tall, least of all in an area currently zoned for residences. Accordingly, the petition violates Colebrook's zoning ordinances, and the Council should, in its discretion, abide by the local determination of appropriate uses within its borders.

B. BNE's Proposed Project Violates the Colebrook POCD

In addition to concerns related to violations of the town zoning regulations, the PZC also has indicated to the Council that the petition "contradicts both the spirit and intent of the state-mandated Town Plan of Conservation and Development." (FOF ¶ 17.)

Again, the PZC properly has recognized that the town's preferences and priorities with respect to development and conservation will be contravened if the Council agrees to grant BNE's petition. The POCD's overarching goal is quoted as follows:

> It is the recommendation of this plan to preserve and protect the ecosystems and natural features of Colebrook, including trees, scenic roads, viewsheds, ridgelines,

> brooks, streams, water bodies, vernal pools, rock outcrops, farms and farmland, forest resources, prime and important agricultural soils, realized and potential aquifers, public water supply lands, wetland soils, and open fields and meadows. The justification for this policy is the community's collective belief in the importance of conserving our natural resources and our affordable rural way of life.

(Petition, Bulk Filing, Colebrook POCD, page 11.)

Clearly, the three proposed industrial wind turbines that BNE seeks to site in the petition do not assist in preserving and protecting the "natural features" of Colebrook, particularly with respect to the ecosystems and forests that will be disturbed by the project, as well as the natural scenic viewsheds that will be adversely affected by the presence of three 500-foot wind turbines dropped on the landscape. Placement of the BNE turbines on the proposed site also unquestionably will destroy the "rural character" protected by Colebrook's POCD, instead replacing that character with the home to the state's only large-scale industrial wind farm. (FOF ¶¶ 54-55.)

Again, FairwindCT urges the Council to exercise its discretion to consider the town's locally adopted development preferences, as set forth in the POCD, and to reject the petition in conformance with those preferences.

C. BNE's Proposed Project Violates Colebrook Wetlands Regulations

Apart from issues arising from town planning priorities, the petition violates Colebrook's regulations governing wetlands and watercourses. The Colebrook IWC has adopted regulations, in accordance with Chapter 440 of the General Statutes, governing activities in inland wetlands and watercourses in town. (Petition, Bulk Filing, Colebrook Inland Wetlands Regulations, § 4.1.)

The site plans associated with the petition in this case provides that certain of the construction activities required to erect BNE's proposed turbines will affect wetlands and/or

watercourses on the proposed site. (FOF ¶ 123.) It also is undisputed that BNE has failed to obtain a permit from the IWC permitting the operations and uses proposed by BNE in the petition. Pursuant to regulation, certain operations and uses are permitted in wetlands and watercourses as of right, and certain others are permitted as non-regulated uses. (Petition, Bulk Filing, Colebrook Inland Wetlands Regulations, §§ 4.1, 4.2.) Aside from these categories, all other activities require a permit. (Id. § 4.3.) As BNE's proposed activities do not fall into any of the exceptions identified in the regulations, and because BNE has not obtained a permit from the IWC, the activities proposed by the petition are not in compliance with Colebrook's IWC regulations, and the Council should, in its discretion, defer to the local interest in maintaining the integrity of the town's wetlands and watercourses.

D. BNE's Proposed Project Contravenes the Conservation and Development Policies Plan for Connecticut

In addition to local considerations, the Council also should consider the Conservation and Development Policies Plan for Connecticut, 2005-2010 ("CDPP"). (Council Admin. Notice item No. 10; Hemingson Pre-Filed Testimony, pages 8-9.) That plan contains a number of "growth management principles," one of which is titled "Conserve and Restore the Natural Environment, Cultural and Historical Resources, and Traditional Rural Lands." (CDPP, page 55.) That principle includes specific goals of the state plan, including to "assure for all residents of the state safe, healthful, productive, and aesthetically and culturally pleasing surroundings," "attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences," and "preserve important historic, cultural, and natural aspects of our Connecticut heritage and maintain, where possible, an environment which supports diversity and variety of individual choice." (Id.)

The CDPP also includes specific provisions for the protection of rural areas, including the goals "to preserve and protect the land, water, farm open space, and forest resources which characterize the state's rural areas," and "to ensure appropriately scaled economic development in rural communities which provides an adequate financial base and range of employment opportunities but which is compatible with the varied economic, social, and environmental needs and concerns of rural areas." (Id., page 75.)

This plan, of course, is not consistent with the Petition's proposal to site three 492-foot industrial wind turbines in a rural town with no existing industry whatsoever. Colebrook could only reasonably be described as constituting "traditional rural lands," and as the statewide development plan makes clear, such land should be protected, not desecrated.

IX. BNE's Proposed Project Will Have a Substantial Adverse Effect on Nearby Historic and Natural Resources

As the Council knows, the statutes providing authority to render decisions with respect to locating power-generating facilities explicitly recognize the import of historic preservation by acknowledging the possible adverse effects of such facilities on our state's historic resources. In fact, the legislative finding associated with the Council's enabling jurisdiction recognizes "that power generating plants . . . have had a significant impact on the environment and ecology of the state of Connecticut; and that continued operation and development of such power plants, lines and towers, if not properly planned and controlled, could adversely affect the quality of the environment and the ecological, scenic, historic and recreational values of the state." Conn. Gen. Stat. § 16-50g. The legislature explicitly set forth that the very purpose of the statutory scheme is to balance the requirement for utility services with the need "to minimize damage to scenic, historic, and recreational values." Id.

A. BNE's Proposed Project Will Adversely Affect Rock Hall, a Property Listed on the National Register of Historic Properties

The most developed source of law discussing how to assess potential impacts on historic properties is the National Historic Preservation Act, 16 U.S.C. § 470 et seq. ("NHPA"). While section 106 of the NHPA requires that any federal undertaking consider the effects of such undertaking on any historic properties, the standards established by the regulations implementing the NHPA are appropriate for the Council's consideration of potential adverse impacts on historic and cultural resources located near the proposed site. Pursuant to these regulations, the agency responsible for the undertaking must identify any historic properties within the "area of potential effects," which is defined by the regulations as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking." 36 C.F.R. § 800.16. Fundamentally, then, the NHPA attempts to identify projects that will alter the "character or use" of nearby historic properties.

In this case, BNE's consultant, VHB, reached out to the State Historic Preservation Office (SHPO) seeking an advisory opinion with respect to potential impacts that the proposed project would have on historic properties in the area. Notwithstanding the fact that Rock Hall – located within the area of potential effect cited by VHB – had been officially listed on the National Register of Historic Places six months prior to VHB contacting the SHPO (and ignoring the fact that the appropriate test is not just listed properties but also includes those eligible for listing), VHB represented to the SHPO that no "historic resources listed or eligible for listing on the National Register of Historic Places . . . at or within 1.5 [miles] of the proposed wind

turbines." (Petition, Ex. B.) In response to VHB's letter, the SHPO indicated that the project would have no effect on historic resources. (Id.) BNE included this "no effect" determination in its petition. (Id.)

In response to correspondence with counsel for FairwindCT, and upon realizing its mistake in issuing a determination of no effect, on March 21, 2011, the SHPO expressly rescinded its prior determination and conducted a more detailed investigation of the proposed project's potential impact on Rock Hall. (FOF ¶ 103.) On May 19, 2011, the SHPO by letter to VHB issued a revised finding with respect to this petition. In the letter, the SHPO concluded "the proposed Wind Colebrook North project (whether at 100 meter hub height or 80 meter hub height) has a clear and substantial presence at close proximity to the Rock Hall property. As a result, the undertaking appears to alter directly the characteristics of the historic property that qualified it for inclusion on the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association." (FOF ¶ 104.) In accordance with these findings, the SHPO concluded that "this office believes that the proposed Wind Colebrook North project will have an **adverse effect** on the Rock Hall property." (FOF ¶ 105 (emphasis in original).)

In reaching this conclusion, the SHPO observed that

> the Rock Hall historic property encompasses approximately 22.5 acres and includes the main house, gazebo, garage, garage/pool house, gates and landscape elements. These elements in their setting as a whole constitute the historic property that must be considered under Section 106 of the National Historic Preservation Act. As stated in the National Register registration form. Rock Hall's historical significance, in part, derives from the property's association with the "country house movement" of the late nineteenth and very early twentieth centuries. Houses associated with this movement were specifically sited in rural settings to allow the owners to enjoy the "stylized country life." The three

turbines proposed directly alter the character-defining location and setting of this historic country house.

(SHPO Letter, dated May 19, 2011, pages 2-3.)

As the above demonstrates, the proposed project will have significant adverse effects on a nearby historic property, a factor relevant to the Council's determination regarding whether to site the proposed project. In light of such impacts, the Council should protect and preserve Rock Hall and deny the petition.

B. BNE's Proposed Project Will Adversely Affect Beckley Bog, a National Natural Landmark

With respect to determining a presumptive area of potential effects, the Federal Communications Commission has promulgated regulations relating to its responsibilities under Section 106 of the NHPA. In those regulations, the FCC has determined that the presumptive area of potential visual effects for "towers"[4] that are more than 400 feet high is anywhere within 1.5 miles from the proposed tower site. 47 C.F.R. part 1, app'x C, section VI.C. Admittedly, there is no federal rule or regulation that is specific to conducting a Section 106 review of a wind turbine project. However, absent detailed evidence provided by the petitioner establishing that the project will not alter the character of a nearby cultural resource, the 1.5-mile presumption should logically serve as a guide for the Council's review of this petition. We further urge the Council to consider the 1.5 miles as only a minimum presumptive area of potential effects, because the size, scope, movement and noise associated with the wind turbines that BNE seeks

[4] "Tower" is defined by the regulations as "Any structure built for the sole or primary purpose of supporting Commission-licensed or authorized Antennas, including the on-site fencing, equipment, switches, wiring, cabling, power sources, shelters, or cabinets associated with that Tower but not installed as part of an Antenna as defined herein." 47 C.F.R. part 1, app'x C, section II.A.14.

to site obviously make their impacts far greater than the stationary towers that are the subject of the FCC regulation. (FOF ¶¶ 100-102.)

With this presumptive area of potential effects in mind, the project will not only have an adverse effect on Rock Hall, but also will have an adverse impact on Beckley Bog, a National Natural Landmark[5] located on Nature Conservancy property in Norfolk that abuts the proposed site. Beckley Bog is the most southerly sphagnum-heath-black spruce bog in New England and possesses all of the principal elements of a boreal bog. It is a rare relic of the early Pleistocene epoch and was designated a National Natural Landmark in 1977. Connecticut has only 8 of the 586 sites listed on the National Registry of Natural Landmarks. (FOF ¶¶ 45, 107-109.) Beckley Bog is located within 1.25 miles of the proposed project. (FOF ¶ 45.)

As a result of the Bog's close proximity to the project, there will be significant adverse effects on this designated natural landmark. The Council should exercise the opportunity to ensure the continuing protection of this ecological resource, as directed in the General Statutes mandate governing the Council's jurisdiction.

X. BNE's Proposed Setbacks Are Inadequate to Protect Public Health and Safety

Adequate setbacks could solve all public health and safety concerns of the proposed project. Placement of wind turbines at a sufficient distance away from persons and property would eliminate concerns of ice throw, ice drop, shadow flicker and noise. Although the State of

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[5] The National Natural Landmarks Program was established by the Secretary of the Interior in 1962, under authority of the Historic Sites Act of 1935 (16 U.S.C. § 461 et seq.) to identify and encourage the preservation of the full range of geological and biological features that are determined to represent nationally significant examples of the Nation's natural heritage. Potential sites are evaluated by qualified scientists and, if determined nationally significant, recommended to the Secretary of the Interior for designation. Once a landmark is designated, it is included on the National Registry of Natural Landmarks, which currently lists 586 National Natural Landmarks nationwide. (FairwindCT Admin. Notice Item No. 69.)

Connecticut does not currently have regulations for the siting of wind turbines, nor setback requirements for them, science indicates that the further turbines are away from property lines, the less adverse impact they have on people. BNE has failed to present a petition with adequate setbacks to protect public health and safety.

The wind turbine manufacturer, GE Energy recommends a setback distance of 1.5 x (Hub Height + Rotator Diameter). (FOF ¶¶ 268, 273.) This calculates to 273.75 meters (approximately 898 feet) for the 82.5-meter blade diameter and 300 meters (approximately 984 feet) for the 100-meter blade diameter. There are both residences and property lines within those distances from BNE's four proposed turbine locations. (FOF ¶ 273.)

Ice can be thrown from one of the proposed turbines a distance in excess of the GE recommended setbacks. An ice fragment can be thrown an estimated 285 meters (935 feet) or more from the GE 1.6-100 and 265 meters (869 feet) or more from the GE 1.6-82.5. (FOF ¶ 271.) A turbine placed at or beyond GE's recommended setback would not be safely out of distance for ice thrown to impact an abutting property. Seven residentially zoned property lines are within 869 feet of one or more of the proposed turbines. Nine residentially zoned property lines are within 935 feet of one or more of the proposed turbines. (FOF ¶ 273.)

The maximum distance ice could drop with the 100-meter diameter blades is 120 meters, or approximately 394 feet. (FOF ¶ 289.) There are two residential property lines and a town road located within that distance from proposed turbine locations. (FOF ¶ 289.) Turbine 3 is just 153 feet from a residential property line to the north of the site, located at 49 Rock Hall Road. Turbine 1 is just 390 feet from the Maasser Annual Reunion Association property, located at 112 Rock Hall Road. Turbine 1a is 20 feet closer to the Maasser property. Rock Hall Road is just

300 feet from Turbine 1a and 330 feet from Turbine 1. (FOF ¶ 290.) Ice could therefore drop beyond the boundaries of the site onto two residential properties and a local town road.

"Shadow flicker," an annoyance unique to wind turbines, is defined as the effect of alternating changes in light intensity of the sun caused by the rotating blades of the turbine casting a moving shadow to a nearby area. (FOF ¶ 306.) Under certain circumstances, shadow flicker can be cast through an unobstructed window of a home, so that a room could experience repetitive changes in brightness. Shadow flicker can also occur outside by casting alternating shadows. (FOF ¶ 308.) One hundred thirty-six occupied structures within the 2,000 meter (6,561 feet) radius area studied by BNE's witness for shadow flicker impact will experience shadow flicker from the 82.5-meter and 138 structures will experience shadow flicker from the 100-meter blade diameter. (FOF ¶ 316.)

If BNE constructs Wind Colebrook North using the 82.5-meter diameter blades, Susan Wagner, the owner of 117 Pinney Street and a party to this proceeding, can expect to have worst-case shadow flicker every evening between May 16 and July 27, lasting between 2 minutes and 18 minutes. The same property is expected to have shadow flicker from Wind Colebrook South for less than 10 hours per year. (FOF ¶ 329.) Clearly the shadow flicker impact on Ms. Wagner's residence would be reduced if Turbine 2 and Turbine 3 were located further away from her home.

At the property boundary of the site, modeled noise conditions demonstrate that the proposed wind turbines will be in excess of 6 to 10 dB above the permissible residential-to-residential nighttime noise and up to 4 dB above the permissible industrial-to-residential nighttime noise pursuant to the Connecticut Department of Environmental Protection (CTDEP)

noise regulations (Regulations of Connecticut State Agencies (RCSA) Title 22a, Section 22a-69-1 and 22a-69-7). (FOF ¶¶ 203, 213.) There are no noise control treatments such as barriers, silencers or acoustic cladding that can be added after the wind turbine is installed to reduce the noise. The only method of minimizing noise after the fact is to shut the turbine down during windy conditions. (FOF ¶ 210.)

As proposed, the project contemplates placement of industrial wind turbines as close as 153 feet from residential property lines. The project fails to meet the recommended setback identified by GE Energy because ten residentially zoned property lines and two homes are within 984 feet of one or more of the proposed turbine locations. GE's recommended setback in itself is inadequate given that properties within their recommended setback are not safe from the hazards of ice throw, shadow flicker and noise. Adequate setbacks could solve all of these public health and safety concerns of the proposed project.

XI. BNE Has No Mitigation Plan for the Annoyance Created by Shadow Flicker

"Shadow flicker," an annoyance unique to wind turbines, is defined as the effect of alternating changes in light intensity of the sun caused by the rotating blades of the turbine casting a moving shadow to a nearby area. (FOF ¶ 306.) Accordingly, shadow flicker can have both an adverse impact on the health and well-being of the residents living in areas subject to the phenomenon.

A. BNE's Shadow Flicker Studies Are Not Reliable

The shadow flicker studies submitted into the record by the petitioner are not reliable, and, accordingly, BNE has not met its burden to establish that shadow flicker effects will not adversely impact nearby residents and properties. Mr. Libertine produced two studies; one with

100-meter diameter blades for Turbines 1, 2 and 3 (the "100 meter study") and one with 82.5-meter diameter blades for Turbines 1a, 2 and 3 (the "82.5 meter study"). (FOF ¶¶ 310.) The shadow flicker studies submitted by BNE are defective for the following reasons:

- The studies were performed by Michael Libertine of VHB, a purported expert who had never conducted a shadow flicker study and analysis prior to being hired by BNE to conduct the studies associated with the proposed wind turbine projects in Prospect and Colebrook (FOF ¶ 307);
- The studies relied exclusively upon WindPRO software, which is a developmental modular-based software package developed by EMD International that was designed for the wind industry for the planning and evaluation of wind power projects (FOF ¶ 314), which does not appear to have previously been used to produce evidence in Connecticut proceedings. Mr. Libertine's use of the software has not benefited from full discovery, including the deposition of those who have used the software, and reliance on the accuracy of the result does not appear to be warranted. Time constraints imposed by the Siting Council process prevented adequate cross-examination of Mr. Libertine to determine if the appropriate foundation for computer-generated evidence, as required by State v. Swinton, 268 Conn. 781, 847 A.2d 921 (2004), could even be established for the use of WindPRO;
- The studies assume, without any evidence to establish that this assumption was sound, that at distances greater than a 2,000 meter (6,561 feet) radius from the

turbines, the frequency of shadow flicker occurrence is low enough and its intensity faint enough to not be a distraction to human activities. (FOF ¶ 317);

- The studies use an arbitrary "probable-case scenario" achieved by using the software's worst-case assumptions and reducing the result by 50%. (FOF ¶ 320.) No meaningful statistical evidence was submitted to substantiate this assumption.

For the above reasons, the petitioner has failed to submit reliable evidence related to shadow flicker into the record, and, accordingly, the petitioner has failed to demonstrate that shadow flicker will not pose a problem to nearby residences and properties.

B. BNE's Project Will Subject Nearby Properties to Unacceptably High Levels of Shadow Flicker

While there are no federal or State of Connecticut standards for exposure to shadow flicker, some other countries have adopted standards that limit shadow flicker to amounts ranging from 8 hours per year to 30 hours per year at an occupied structure. (FOF ¶¶ 322-23.) With the 30-hour per year standard relied upon by Mr. Libertine comes with an additional limitation that no one receptor may be subjected to more than 30 minutes per day of shadow flicker. Denmark has an unofficial guideline of 10 hours per year, and Sweden uses 8 hours per year. (FOF ¶ 342.)

In the 82.5 meter study, worst case, a total of ten receptors are predicted to experience shadow flicker at some time during the year, with annual durations ranging from nearly 1 minute to over 44 hours. The impact on the 44 hour receptor is spread over 114 days; one residence is predicted to experience flicker on 73 summer days; four residences are predicted to experience between 9 and 19 hours; and five residences will experience less than 6 minutes annually. (FOF ¶¶ 332-33.) According to the 82.5 meter study, four buildings will exceed the Danish

10-hour annual limit. (FOF ¶ 332.) Under the 100 meter study, five buildings will exceed this limit. (FOF ¶ 333.)

Mr. Libertine's optimistic "probable case" model should not be considered as there is no technical or scientific support for the arbitrary reduction in hours of flicker he applied in his analysis.

Even apart from these structures, other properties will still experience significant shadow flicker. For example, according the map provided by BNE, various open fields under the "probable case" will be assaulted with less than 10 hours of shadow flicker a year. (FOF ¶ 329.) The effects of flicker on domestic field animals in pastures are unknown. (FOF ¶ 319)

Other areas, including portions of Route 44, will experience 10 to 20 hours of shadow flicker each year. The times of year were not calculated, so one cannot draw a conclusion as to the effects on traffic. (FOF ¶ 330.) Rock Hall Road will experience more than 40 hours of shadow flicker under the "probable case." Worst case for these locations was never provided, as these values are only displayed on Figure 1, Probable Case Shadow Flicker, provided in the 82.5 meter study. (FOF ¶ 333.)

Beckley Bog was left out of the flicker analysis by use of the 2,000 meter radius so the effect on this National Natural Landmark is unknown. (Libertine Pre-Filed Testimony, Ex. 3, Figure 1.). The effect of shadow flicker on wildlife in Beckley Bog is unknown.

The effects of shadow flicker cannot be properly considered on the evidence presented. Figure 1 the "Probable Case Shadow Flicker" should have been supplemented with a figure showing the worst case shadow flicker produced from the raster image computer file. The information presented to the Council is incomplete and misleading without it.

Accordingly, it is evident that the amount of shadow flicker established by BNE's reports fails to prove that the flicker effects produced by the proposed turbines are within reasonable standards for permissible impacts. Moreover, BNE has offered no mitigation plan for shadow flicker. Given that flicker is apparently so predictable that BNE can provide start and stop times for flicker caused by each turbine, BNE should be required to manage turbine operations so there is no resulting flicker if this petition is granted. Known flicker events could be programmed into each turbine's remote operations to make sure that they are turned off during times of predicted flicker. Additional flicker events not predicted by Mr. Libertine should be collected and included in a no-flicker mitigation plan.

XII. Council Rulings Have Violated Parties' Statutory and Due Process Rights

A. The Council's Proceedings Were Fundamentally Unfair

> The UAPA and our Supreme Court have provided broad instruction on the procedures applicable to hearings before administrative agencies. In a contested case, each party and the agency conducting the proceeding shall be afforded the opportunity (1) to inspect and copy relevant and material records, papers and documents not in the possession of the party or such agency, except as otherwise provided by federal law or any other provision of the general statutes, and (2) at a hearing, to respond, to cross-examine other parties, intervenors, and witnesses, and to present evidence and argument on all issues involved. . . . In contested cases: . . . [a]ny oral or documentary evidence may be received, but the agency shall, as a matter of policy, provide for the exclusion of irrelevant, immaterial or unduly repetitious evidence[.][A] party and such agency may conduct cross-examinations required for a full and true disclosure of the facts. . . . Although hearings before administrative agencies are not governed by the strict rules of evidence, they must be conducted so as not to violate the fundamental rules of natural justice. . . . [W]e have recognized a common-law right to fundamental fairness in administrative hearings. . . . Due process of law requires not only that there be due notice of the hearing but that at the hearing the parties involved have a right to produce relevant evidence, and an

> opportunity to know the facts on which the agency is asked to act, to cross-examine witnesses and to offer rebuttal evidence. . . . The agency is not required to use the evidence and materials presented to it in any particular fashion, as long as the conduct of the hearing is fundamentally fair.

Evans v. Freedom of Information Comm'n, Superior Court, judicial district of New Britain, Docket No. CV040527344, 2005 WL 2129067, at *5 (Aug. 10, 2005, Owens, J.T.R.) (Alterations in original; citations omitted; internal quotation marks omitted).

Particularly with respect to the right to cross-examination, the Connecticut Supreme Court also has recognized that "the procedures required by the UAPA exceed the minimal procedural safeguards mandated by the due process clause." Pet v. Dep't of Public Health, 228 Conn. 651, 662, 638 A.2d 6 (1994) (internal quotation marks omitted). Specifically, General Statutes § 4-178(5) states that "a party . . . may conduct cross-examinations required for a full and true disclosure of the facts."

Explaining this right, the Connecticut Supreme Court has stated that

> 'the test of cross-examination is whether there has been an opportunity for full and complete cross-examination rather than the use made of that opportunity.' (Internal quotation marks omitted.) Pet v. Dept. of Health Services, 228 Conn. 651, 663, 638 A.2d 6 (1994); see General Statutes § 4-178(5) (pursuant to the Uniform Administrative Procedure Act, 'a party ... may conduct cross-examinations required for a full and true disclosure of the facts'); Gordon v. Indusco Management Corp., 164 Conn. 262, 271, 320 A.2d 811 (1973) (party must be able to 'substantially and fairly [exercise]' right of cross-examination). To establish a violation of the right to cross-examination, a party who has been deprived of its opportunity to conduct a full and complete cross-examination must additionally show that such deprivation has caused substantial prejudice. See Pet v. Dept. of Health Services, supra, at 663-64, 638 A.2d 6; Concerned Citizens of Sterling, Inc. v. Connecticut Siting Council, 215 Conn. 474, 489, 576 A.2d 510 (1990).

Ann Howard's Apricots Restaurant, Inc. v. Comm'n on Human Rights and Opportunities, 237 Conn. 209, 230-31, 676 A.2d 844 (1996) (alterations in original).

The proceedings in this case fail to satisfy both the "fundamental fairness" standard established by due process and the standards for meaningful and effective cross-examination, as expressly granted by the UAPA in General Statutes § 4-178(5). Specifically, the Council has violated FairwindCT's rights to due process and meaningful cross-examination as a result of the following evidentiary rulings:

- The Council repeatedly overruled FairwindCT's objections to the hearing procedures associated with this Petition, particularly with respect to the arbitrary time limits placed upon opponent cross-examination, which was required to be shared among six groups;
- On April 26, 2011, the Council granted BNE's objection to the inclusion of Mr. Frederick Riese of the DEP as a witness to be cross-examined by FairwindCT;
- On three occasions, the Council denied motions to compel interrogatory responses, or, in the alternative, motions to strike, filed by FairwindCT, which sought to require the Petitioner to fully and fairly respond to interrogatories to which the Petitioner had filed groundless objections;
- On April 26, 2011, the Council, over FairwindCT's objection, implemented a protective order in this case, under which the Petitioner could file certain material relevant to the petition under seal, and which did not allow dissemination to a party's expert witnesses or viewing at any site other than the Council offices,

where parties, even after signing a non-disclosure agreement, were not permitted to take notes regarding the material's content; and

- On April 26, 2011, the Council denied FairwindCT's motion requesting that the Council issue a subpoena requiring the attendance and testimony of Michael Guski, Principal of Epsilon Associates, which the Council had hired as a consultant in association with its consideration of the Petition.

Each of these decisions caused substantial prejudice to FairwindCT by depriving it of the opportunity to fully and fairly present evidence in opposition to the petition, particularly with respect to meaningful cross-examination of evidence submitted into the record by the petitioner. Specifically, FairwindCT (and its retained expert witnesses as its agents) was deprived of the ability:

- to have adequate time to conduct complete and meaningful cross-examination of the Petitioner's expert witnesses during this first-of-its-kind Petition;
- to receive from the petitioner full and fair answers to relevant interrogatories seeking additional information related to the petition, with which FairwindCT would have obtained additional material for cross-examination and/or additional evidence for use in opposition to the petition;
- to use in any meaningful way material filed under seal by the petitioner and subject to the Council's protective order, which material – consisting of hundreds of pages of technical documents and thousands of lines of wind data – in many ways formed the basis for the petition;[6] and

[6]The Grouped Parties expressly rely upon and incorporate by reference their Objection,

- to access the consultant employed by the Council to provide assistance with respect to its consideration of the Petition, which consultant undoubtedly provided information that the Council will use in reaching its decision.

Accordingly, as the foregoing demonstrates, the proceedings violate due process protections and statutory rights afforded to FairwindCT by the UAPA, and FairwindCT requests that the Council deny the petition pending additional proceedings that comply with such requirements.

B. The Council Improperly Precluded Evidence Related to Cumulative Effects of BNE's Petitions

Pursuant to General Statutes § 16-50p, which establishes the Council's procedures for certification decisions, the Council is directed to consider "[t]he nature of the probable environmental impact of the facility alone and cumulatively with other existing facilities" (emphasis added). While the Grouped Parties recognize that this is not a certification proceeding, the principle is generally applicable: To the extent that the Council is considering environmental, including visual, effects of BNE's proposed turbines, it must do so in light of currently existing and proposed facilities. Moreover, pursuant to the Council's articulation in Petition No. 980, the Council's decision regarding this petition "is governed by the criteria set forth under CG.S. § 16-50p." (Petition No. 980, Motions Memo dated Apr.8, 2011.)

In the course of the proceedings governing Petition 983, the Council, in directing questions in that proceeding to cover only the turbines subject to that petition, noted that "this is about Colebrook South since this one came first. When we get to the next one, then we can talk

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including the Affidavit of Emily A. Gianquinto, dated April 22, 2011, and their Objection to and Motion to Modify, including the Affidavit of Emily A. Gianquinto, dated April 29, 2011.

about the cumulative impact." (4/21/11 Tr. 149:13-15 (Stein).) However, when time came to provide evidence related to cumulative impacts in this petition – in conformance with the Chairman's prior ruling – the Council reversed itself and sustained an objection to questioning regarding cumulative effects:

> MS. BACHMAN: Under 16-50p in discussing cumulative impact, the idea behind the provision is that the cumulative impacts would be assessed based on existing facilities and not proposed.
> CHAIRMAN STEIN: The Chair will have to rely on Attorney Bachman's definition. And to the extent that it requires me to correct my previous statement, I stand corrected.
> MR. HARDING: So I take it you're -- Mr. Chairman, that you are sustaining the objection?
> CHAIRMAN STEIN: I will rely on what counsel has stated.
> MR. HARDING: Are -- can we have a clear ruling for the record please?
> CHAIRMAN STEIN: Yes, the objection is sustained.

(4/28/11 Tr. 109:23-110:11.)

The confusion reflected above is further demonstrated by the fact that the Council at times permitted evidence that established cumulative impacts to remain in the record, while at other times prohibiting such evidence. (Compare Council Motions Memo, dated 4/27/11, item no. 20 (denying BNE motion to strike) with 4/28/11 Tr. 109:23-110:11 (prohibiting cross-examination on cumulative effects).) Accordingly, the Council's decisions to prohibit certain evidence reflecting cumulative impacts from entering the record were arbitrary and unsupported by the statutory scheme governing the Council's decision.

As that statutory scheme makes clear, and as common sense provides, the Council must consider cumulative effects with respect to this petition. The turbines proposed in Colebrook South are approximately three-quarters of a mile from this project, and evidence in the record in

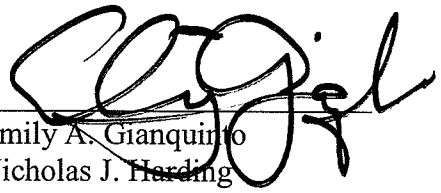
this proceeding demonstrates that several residential properties will be subjected to views of both projects. (FOF ¶¶ 262-63.) There is simply no logical basis for drawing a distinction between a proposed project by the same petitioner, in the same town, and of the same type as the instant petition and "existing facilities" for purposes of General Statutes § 16-50p.[7] To ignore evidence of cumulative impacts in this petition is nothing more than willful ignorance.

CONCLUSION

BNE has failed to carry even its minimal burden of demonstrating that its petition complies with DEP water quality standards. That fact alone is reason enough for the Council to deny this petition for declaratory ruling. BNE has also failed to demonstrate compliance with DEP noise regulations and has failed to show that its proposed project will not have a substantial adverse environmental effect and that there are no feasible and prudent alternatives to its proposed activities. The defects in BNE's petition were not cured despite significant revision from the time of filing, and they cannot be cured in a development and management plan because development and management plans do not apply to petitions. Moreover, BNE's failure to appeal the Colebrook Planning and Zoning Commission's order has divested the Council's authority to consider this petition.

[7] This is particularly true in this case, where BNE appears to have arbitrarily split the proposed project into two petitions, possibly in an attempt to achieve precisely this result, permitting it to compartmentalize the substantial cumulative impacts on the Town of Colebrook caused by siting these projects.

Therefore, the Council must deny BNE's petition for declaratory ruling.

By: 

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CERTIFICATION

I hereby certify that a copy of the foregoing document was delivered by first-class mail and e-mail to the following service list on the 27th day of May, 2011:

Lee D. Hoffman
Paul Corey
Thomas D. McKeon
David M. Cusick
Richard T. Roznoy
David R. Lawrence and Jeannie Lemelin
Walter Zima and Brandy L. Grant
Eva Villanova

and sent via e-mail only to:

John R. Morissette
Christopher R. Bernard
Joaquina Borges King

Emily A. Gianquinto