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Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Petition No.s 983 and 984
BNE Energy, Inc. petitions for declaratory rulings that no Certificates of Environmental Compatability and Public Need are required for the construction, maintenance, and operation of 4.8 MW Wind Generating facilities located on Flagg Hill, Colebrook, CT ("Wind Colebrook South") and Winsted-Norfolk Road, Colebrook, CT ("Wind Colebrook North").

Party David R. Lawrence, MD and Jeannie Lemelin, LPN Post-Hearing
Brief

Introduction

As a party to the hearings for these petitions we respectfully request that the Connecticut Siting Council deny BNE's petitions because placement of the wind turbines would result in violations of CT DEP noise statutes (CSG 22a-69).

Furthermore, wind turbines are a unique source of power generation and pose unique health problems, specifically related to the emission of low frequency sound and infrasound. BNE's proposed siting would result in generation of sound levels deemed hazardous by the World Health Organization. Exposure to the hazardous levels cannot possibly be mitigated to achieve a safe level. In addition, the wind turbines by virtue of their size and appearance would corrupt the rural and scenic character of Colebrook.

BNE Non-Compliance with CT Statute 22a-69

BNE has demonstrated by its own testimony (Pre-File Testimony of Thomas Wholly) that it will not achieve safe noise levels for the abutting residents of both projects. This was further established by the findings of Michael Bahtiarian (Pre-File Testimonies 983 and 984 and supplement to 984 of Michael Bahtiarian) wherein noise levels will exceed statutory limits for both residential to residential and industrial to residential emission/reception. Furthermore, BNE demonstrated unethical behavior in 1) choosing noise limits for industrial emission to a residential zone, 2) predicting noise levels at the residences instead of at one foot within the lot line, 3) disregarding turbulence, infrasound and low frequency sound, and coherent reflection in their calculations. As an expert in noise, it was Mr. Wholly's obligation to ensure that his findings were complete and in compliance with statutory standards.

Wind South and Wind North will be placed in residential zones. Colebrook zoning official John Garrels testified that placement of wind turbines on these sites will not change the zones that they are in. Zones can only be changed by application to and approval by the zoning board in the town that they will be sited in.

Neither BNE nor the CSC have applied for a zone change. Therefore, residential to residential zone limits must be enforced. It is presumptuous for BNE to apply industrial to residential limits, and deceptive to imply that this would be the accepted standard. However, BNE would not be in compliance even if their standards were accepted.

Sound limits are set at one foot within the boundary line of the receptor (CSG 22a-69-4(g)). BNE's ethics are again called into question as they chose to predict noise levels at the residences instead of at the boundary line as dictated in the statute.

Mr. Bahtiarian demonstrated that the acceptable noise limits will be exceeded when properly predicted.

Noise includes infrasound and prominent discrete tones. State statutes address infrasound and prominent discrete tones. Mr. Wholly's study did not include these.

Furthermore, other factors need to be considered when siting turbines, specifically turbulence, topography, and coherent reflection (pre-file testimony

Lawrence A.10) and amplitude modulation (pre-file testimony Bahtiarian). As a noise expert, Mr. Wholly should have included these factors in his

predictions. BNE Chairman Corey stated that he is 'an expert in wind turbines' (testimony at Barkhamsted) yet he is complicit in his disregard of these

factors. Infrasound is associated with health hazards (Lawrence), therefore it must be accounted for. Should prominent discrete tones be found to exist, they would further lower the acceptable sound levels by 5dBA (CGS 22a-69-3.3)

BNE Fails to Cite Safe Siting Standards

BNE's proposal lacks scientific standards for safe siting. As CT has not yet developed siting standards, BNE implies that their standards will be at an acceptable, safe

level. BNE is using standards set by the

manufacturer of wind turbines, i.e. General Electric. However, GE

was not a party to the proceedings and its data was under protective order. As such, no

scientific safety data was submitted-should it even exist-and there was no data to be scrutinized under cross-examination. As a manufacturer of wind turbines, GE data is expected to be biased until proven otherwise. Therefore, GE standards lack merit and should not be considered in this petition. Furthermore, BNE offered no scientific data regarding the potential health impact of noise emission related to setback distances.

BNE Disregards Health Concerns

BNE Chairman Paul Corey stated in cross-examination that he is concerned about the health and well being of the surrounding residents (CSC testimony). However, Mr. Corey testified that he did not read the pre-file testimony of Dr. Lawrence, that he "wasn't sure" if he included a health expert on his panel-he did not-and was evasive when asked about his knowledge of prominent health advocate and wind turbine opponent Dr. Nina Pierpont despite his being a "wind turbine expert". Furthermore, as previously discussed, he is willing to use his own expert's revised standards in determining noise levels, standing in contempt of statutory guidelines.

Additional Considerations

The potential impact on wetlands, wildlife, and flora are concerns that have been brought up in other testimonies which we will leave for those more studied in those areas. Similarly, issues of "flicker" and "ice shedding" have been addressed by others; it is our feeling that setbacks long enough to limit sound exposure will obviate those problems.

We note that there would likely be a significant drop in the value of the neighboring properties, a financial issue that would not be easy to tolerate for most if not all of us. Furthermore, should the noise cause undo harm to residents, BNE's suggestion of redesigning our homes to abate the noise (at our own expense) is monetarily unreasonable.

The aesthetic impact on what is now a rural hamlet would be contrary to the efforts of the state of CT to preserve regions of the state as "scenic." It would also undermine part of our reason for choosing to move to Colebrook.

CSC Statutory Responsibility to Protect the Health of CT Residents

The CT Siting Council Statutory Responsibility states that:

"To fulfill its mission, the Council is responsible for: 2) providing environmental standards for the location, design, construction, and operation of public utility facilities that are at least as stringent as federal environmental standards and that are sufficient to assure the welfare and protection of the people of Connecticut."

Neither the state of CT nor the federal government have siting standards in place.

Therefore, in carrying out its responsibilities, the CSC is in the position of determining safe siting based on information from health experts and noise experts. The World Health Organization has clearly stated that noise levels above 35 dBA pose a health risk, at the very least in relation to "annoyance" and associated physical ailments, such as sleep disturbance with associated issues of daytime fatigue, reduced performance and accidents, as well as cardiovascular disease, depression and

mental illness. Noise experts have demonstrated that wind turbines emit low frequency and infrasound, and that low frequency and infrasound cause health problems. Wind turbine studies have specifically shown that exposure to noise from wind turbines above 35dBA cause annoyance and associated health problems. (Lawrence pre-file citations).

The State of CT has a strong policy regarding protection of its residents from noise:

Sec. 22a-67. State Policy Regarding noise. *(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 CT; (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 and 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 CT. 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.

Health researchers such as Nina Pierpont, MD and Amanda Harry have published studies on the negative health impact of wind turbine noise on nearby residents.

Because of the nature of the studies, it is difficult to defend their conclusions as detractors readily attribute ill-effects to non-turbine causes. However, as a physician in primary care practice since January 1992, I feel that such conclusions are credible and deserve serious consideration. The art of medicine includes assessment of patient complaints and physical findings, and determining with some certainty the likely causes based on science and degrees of probability. In my review of available literature I believe that there is ample scientific information to support that wind turbine generation of infrasound and low frequency noise causes health problems and that residents must be shielded from harmful levels to protect their safety.

Mr. Bahtiarian testified that there is no way to mitigate the noise from wind turbines, and that the only way to protect residents is to site wind turbines far enough away from residents such that harmful levels do not reach them. BNE's proposal places the abutting residents in harms way. Of particular concern are those who are more vulnerable to noise (e.g. Daniel Mow; elderly residents with multiple health problems) and those who for physical reasons cannot escape the noise (shut-ins, homebound). Setbacks should be far enough away so as to uphold the CT state statutes on noise control. The setbacks are not nearly long enough to limit infrasound and low frequency sound to acceptable levels.

Concluding Remarks

Green energy is an important goal and deserves every good effort to achieve it. However, the establishment of energy sources should not be at the expense of the

health and well being of neighboring residents, and indeed the Statutes and Regulations of our governing bodies are set to protect residents. The petitions of BNE pose a risk to neighbors of the proposed sites. BNE has been negligent of adhering to CT statutes, and has been dismissive of health concerns. They have employed various methods of omission, vagueness, and poorly constructed studies to mislead the council and the public. The deficiencies of their preparation and presentations, and the testimonies refuting their conclusions deem these petitions unacceptable.

Respectfully submitted.

Under penalty of perjury I swear that the statements I have made are true and free of inaccuracy to the best of my ability.

David R. Lawrence, MD

Date

Winsted, CT

Notary

Date

The following have been sent a copy of this document by US Mail and/or email:

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