

**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**

**March 25, 2011**

**PETITIONER BNE ENERGY INC.’S INTERROGATORY RESPONSES  
TO KRISTIN M. AND BENJAMIN C. MOW INTERROGATORIES**

Petitioner BNE Energy Inc. (“BNE”) submits the following responses to Kristin M. and Benjamin C. Mow’s Interrogatories dated March 7, 2011.

**Q1. Please provide the visibility areas for the maximum heights of your proposed wind turbine towers, including the turbine blades, for both projects, as related to visibility from the home of the Mows at 12A Greenwoods Turnpike, Colebrook CT.**

**A1.** BNE objects to this interrogatory because the requested information has already been made available. See petition 984 at Exhibit J. Subject to this objection and without waiving the same, BNE responds as follows:

<b>Calculations of Potential Visibility 12A Greenwoods Turnpike, Colebrook</b>	
<b><u>Turbine Height</u></b>	<b><u>Year Round Visibility Total</u></b>
100-meter hub height	0.0018 acres (32,895 sqft)
141.25-meter hub and blade height	0.75 acres

**Q2. Please provide copies of the calculations of these visibility readings, as related to both of your proposed sites.**

**A2.** See response to interrogatory #1 above.

**Q3. Please describe any specific actions BNE will take to minimize the visual (including but not limited to flicker effect), auditory, traffic, safety and other impacts of the proposed operation of this project on the property of the Mows at 12A Greenwoods Turnpike, Colebrook CT.**

**A3.** BNE has gone to great lengths in choosing the locations for the turbines at the Property in order to reduce visual impacts to the surrounding area. The three wind turbines proposed by BNE will be located in a heavily wooded area on 125 acres, adjacent to hundreds of acres of undeveloped land and a golf driving range. While there are a few

homes near the project, BNE has provided for appropriate setbacks from residential properties to ensure safe and reliable operations and comply with applicable laws.

**Q4. Has BNE engaged in any wetlands assessments of either property site, or are any planned? If so, please describe each completed or ongoing wetlands assessment, provide an estimated date of completion, if not complete, and a copy of the assessment, if complete.**

**A4.** BNE has completed a wetlands impact analysis of the Property. See petition 984 at Exhibit I.

**Q5. What precautions are being planned and will be taken to prevent disruption of or adverse impact upon Mill Brook, which is located on the property of at least one of the projects? Please identify how BNE plans to control construction runoff, contamination of the stream how BNE plans to protect the wildlife that depend on the stream.**

**A5.** See pre-filed testimony of Curt Jones Civil1 and Matthew Davison filed on March 25, 2011.

**Q6. Please identify BNE's plans for remediation or retention of any wetlands identified on either site.**

**A6.** BNE objects to this interrogatory because it is vague and ambiguous.

**Q7. What studies has BNE undertaken to determine the effect of both projects on the property values of homes of families living within 1000 feet of each project? Please identify any such studies, the date of the study, the entity performing the study, and the specifics of effects upon the property of the Mows at 12A Greenwoods Turnpike, Colebrook.**

**A7.** BNE objects to this interrogatory because it is irrelevant. Specifically, economic impacts—both positive and negative—are outside the Siting Council's jurisdiction pursuant to Conn. Gen. Stat. § 16-50g and Conn. Gen. Stat. § 16-50k. Subject to this objection and without waiving the same, generally studies have shown no impact on property values. See the extensive property value study attached hereto conducted by the Berkeley National Laboratory entitled, "The Impact of Wind Power Projects on Residential Property Values in the United States: A Multi-Site Hedonic Analysis," also available at <http://eetd.lbl.gov/ea/ems/reports/lbnl-2829e.pdf>.

**Q8. What effects will blasting or drilling have on the water wells for families living within 1,000 feet of both projects, and what actions will BNE undertake to remediate or minimize those effects or provide alternate sources of water to the affected families?**

**A8.** See pre-filed testimony of Douglas Roy of GZA GeoEnvironmental, Inc. filed on March 25, 2011.

**Q9. Please identify precautions BNE is taking to prevent ice being thrown within 1,000 feet of each tower.**

**A9.** The primary precaution for ice throw is to provide for proper setbacks. BNE has proposed setbacks that address ice throw concerns and comply with GE recommended setbacks. Additionally, BNE is proposing an alternate location for Turbine 1 that significantly increases the setbacks from the nearest homes. Below are the step-by-step procedures that BNE would follow in the event of potential turbine blade icing, and the techniques that would be employed to remove ice from the turbine blades:

- Wind Colebrook North will be monitored 24 hours per day, 7 days per week. The turbines are expected to be monitored remotely by GE and by onsite personnel during regular business hours and icing events.
- BNE and GE will be continuously monitoring weather forecasts for conditions which are favorable to producing icing events. If there is a potential for an icing event, BNE and remote monitoring staff will monitor the total aggregate output of the facility in comparison to the actual wind speed.
- The turbines operate within a specific operating range producing certain amounts of power at different wind speeds. Ice formation will affect the aerodynamics of the turbine blades and will decrease the power output of the turbines. If the power output is not within a certain range, the turbines will be automatically shut down.
- In addition to this system, the turbines will be equipped with vibration sensors which will detect imbalance. If ice does start to form on the blades, the blades could become unbalanced and a vibration will be detected by the vibration sensors. If this occurs the turbines will automatically be shut down.
- The turbines can also be shut down remotely and manually on-site.

**Re-start procedure:**

- If the turbines are shut down due to icing, BNE will be responsible for monitoring the turbines until the ice has fallen from the blades and the turbines can resume normal operating conditions.
- The turbines will remain shut down until BNE can assess the operating conditions of the turbines. At that time, BNE may restart the turbines provided that the area affected by possible ice falling is appropriately monitored to prevent injury to people in the area or damage to property. A designated technician will be present at the turbine site before and after an iced turbine is started up. This individual will assess the suitability of an iced turbine for any potential impact to adjacent individuals or property.
- In extreme conditions, BNE will curtail or shut down turbines in advance of subjecting the turbines to ice build-up on the turbine blades and risk of ice throw. Depending on the wind direction and conditions of the icing event, turbines may be manually positioned (by yawing) out of the upwind position to reduce direct ice build-up on the turbine and blades.
- There will be no specific technique to remove ice build-up on the blades. It is common to wait for the ice to melt and fall from the blades. BNE will thoroughly

inspect and validate the turbines to ensure that there is no remaining ice on the blades prior to restart.

**Q10. Please identify the distance the red flashing lights on the windmills can be seen in all directions and the impact of those lights on homes within 1,000 feet of each nearest windmill tower. What action will BNE take to lesson the effect of these flashing lights during night-time on homes within 1,000 feet?**

**A10.** BNE must comply with Federal Aviation Administration (“FAA”) lighting requirements. Based on wind turbine lighting guidelines from the FAA, flashing red (L864), or white (L-865) lights may be used to light wind turbines. The FAA has indicated that studies have shown that red lights are most effective, and should be the first consideration for lighting recommendations of wind turbines. As a result, BNE proposes to utilize red lights on the wind turbines. The light fixtures will be placed on the turbine nacelle and will flash simultaneously.

**Q11. Since 2008, has any representative of BNE communicated — orally, in writing, via email, other electronic communication or otherwise — with any Colebrook Inland-Wetlands Commission member regarding this project? If so, please provide the type and date of each communication, the name of the BNE representative involved and the Colebrook Inland-Wetlands Commission member involved.**

**A11.** BNE objects to this interrogatory because the information sought is irrelevant to this proceeding.

**Q12. Please provide the distance from each turbine as depicted on your site plans for each Petition to the property line, and to the home, respectively, of the Mows at 12A Greenwoods Turnpike, Colebrook CT.**

**A12.**

<b>12A Greenwoods Turnpike</b>	<b>Western Turbine (1)<sup>1</sup></b>	<b>Southwestern Turbine (2)</b>	<b>Northeastern Turbine (3)</b>
Distance to House	1,595 feet	2,170 feet	2,780 feet
Distance to Property Line	1,400 feet	1,760 feet	2,435 feet

**Q13. Please provide the dates representative(s) from Zapata, Inc. visited each site — Petition #983 and Petition #984 — to perform field work in preparation for developing the documents which support the petitions. Please identify by name the Zapata representative(s) who visited each site, the dates of the visit(s) and the length of time the representative(s) were on each site.**

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<sup>1</sup> This calculation was performed using the alternate location for the Western Turbine (Turbine 1).

**A13.** BNE objects to this interrogatory because the information sought is irrelevant to this proceeding. Subject to this objection and without waiving the same, BNE responds as follows: see interrogatory response #45 to FairwindCT, Inc.'s amended first set of interrogatories in petition 984.

**Q14. Please identify specific actions BNE will take to minimize the impact of the wind turbines, if approved, on persons afflicted with Vertigo, and specifically, but not only, a juvenile diagnosed with Benign Paroxysmal Vertigo living within 1,000 feet of one of your proposed turbines.**

**A14.** See response to interrogatory #3.

BNE ENERGY INC.

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## **Certification**

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

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