STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Petition of BNE Energy Inc. for a Declaratory Ruling for the Location, Construction and Operation of a 3.2 MW Wind Renewable Generating Project on New Haven Road in Prospect, Connecticut ("Wind Prospect")	**Petition 980**
	February 16, 2011

PRE-FILED TESTIMONY OF PIERRE HÉRAUD, Ph.D

Q1. Dr. Héraud, please state your name and position.

A. Dr. Pierre Héraud, I manage the Wind Farm Design Team within the North American Project Development group. I work for Helimax Energy, Inc. in Montreal, Quebec, Canada which is part of GL Garrad Hassan ("GL GH"). GL GH has offices located at 45 Main Street, Suite 302, Petersborough, New Hampshire.

Q2. Please state your qualifications.

A. I am responsible for wind farm project development and engineering for GL Garrad Hassan North America. Specifically I'm involved with wind farm impact assessments, commissioning of meteorological towers, wind resource assessment programs, detailed analysis of wind farm constraints (technical, environmental, social) and optimization of wind farm layouts and other matters, including post-construction noise monitoring.

I obtained a PhD in physics from the Universite de Provence in 2002. Since 2005, my professional career has been dedicated to wind energy related issues. I have over five years of experience in environmental impact assessments of wind farms in North America. I set up an ice throw risk, noise impact and shadow flicker assessment team

within GL Garrad Hassan North America and have conducted multiple comprehensive ice throw risk assessment on utility-scale wind farms.

A copy of my resume is attached hereto as Exhibit 1.

Q3. Please describe your involvement in this matter.

A. GL GH was retained to conduct studies concerning ice throw risk assessment of BNE Energy Inc.s' ("BNE") project located at 178 New Haven Road in Prospect (the "Site"). The project is known as Wind Prospect. A copy of GL GH's ice throw risk assessment is attached hereto as Exhibit 2.

Q4. Please describe the results of GL GH's ice throw risk assessment.

A. The ice throw analysis is contained in Exhibit 2 (referred herein as "Ice Throw Report"). GL GH analyzed BNE's worst case scenario wind turbine model, the 1.6 MW GE 1.6-100 with a 100 meter hub height and 100 meter rotor diameter using meteorological data supplied by BNE's collected at the Site.

The assessment methodology used was developed by GL GH in conjunction with the Finnish Meteorological Institute and Deutsches Windenergie-Institut as part of the research project entitled Wind Energy Production in Cold Climates ("WECO"). The results of the numerical modelling are shown in the Ice Throw Report. The number of ice fragment potentially thrown by an operating turbine per year was calculated according to WECO guidelines. As an illustration of the typical distance of ice throw events, the distance within which 90% of the ice throw or drop events would be expected to occur

has been calculated to be within 155 m of the turbine, based on the GE 1.6-100 turbine model.

Based on the result of the analysis, it would be prudent to employ a control method at the Project to minimize the risk of potentially damaging ice fragments. These control methods are described in the Ice Throw Report. If the control methods are implemented, only ice fragments being dropped from the wind turbine will present a significant risk level and I estimate that only very high winds in a specific direction may cause ice fragments of any significant mass to be blown a distance beyond 50 m from the base of the turbine. At this distance, there is the probability of an ice fragment landing in any particular square meter of ground beyond 50 m to occur of once in 272,000 years. Base on an assumed 8 days of icing, the probability of an ice fragment striking a stationary person located at 50 m and present for all icing events is once in 88 years.

Q4. Does this conclude your testimony?

A4. Yes.

February 16, 2011
Date

Dr. Pierre Héraud