THE STATE OF NEW HAMPSHIRE
BEFORE THE
NEW HAMPSHIRE
SITE EVALUATION COMMITTEE

DOCKET NO. 2008-__

APPLICATION OF GRANITE RELIABLE POWER, LLC
FOR CERTIFICATE OF SITE AND FACILITY
FOR GRANITE RELIABLE POWER WINDPARK
IN COOS COUNTY

TESTIMONY OF DAVID HESSLER
ON BEHALF OF
GRANITE RELIABLE POWER, LLC

July 2008

Qualifications

Q. Please state your name and business address.

A. My name is David Hessler. My business address is 3682 Clifton Manor Place, Haymarket, VA 20169.

Q. Who is your current employer and what position do you hold?

A. I am employed by Hessler Associates, Inc. ("Hessler"), which is an acoustical engineering and consulting firm. In my present position I am a principal consultant.

Q. What are your background and qualifications?

A. I hold a Bachelor of Science degree in Mechanical Engineering from the University of Maryland in College Park, MD and a Bachelor of Arts degree from the University of Hartford in Hartford, CT. I am a registered Professional Engineer and a member of the Institute of Noise Control Engineering ("INCE"). I have more than 16

years of experience in the acoustical design and evaluation of power generation facilities of all kinds. I have been the principal acoustical designer of well over 300 combined cycle, coal and diesel power stations worldwide but have been working almost exclusively for the past several years on noise impact assessments for proposed wind turbine projects. I am currently involved in roughly 30 wind energy projects, mostly in New York, Pennsylvania, the New England States, the Midwest and Eastern Canada. Almost all of these projects have involved one or more field surveys of background sound levels and computer modeling of project sound emissions.

Purpose of Testimony

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to address the potential noise impacts related to Granite Reliable Power, LLC's ("GRP") wind power project in Coos County, New Hampshire that is the subject of this Application.

Q. Are you familiar with the Project that is the subject of this Application ?

A. Yes, I am. I have reviewed the site plans and discussed the Project with the developer.

Q. Have you been to the site of the proposed windpower park ?

A. Yes. I toured the site and its environs extensively on two occasions with the specific objective of identifying any residences or other potentially sensitive receptors that might be impacted Project noise emissions.

Acoustics of the Project

Q. Have you conducted any assessments or evaluations related to the potential noise from the operation of this Project?

A. Yes. In October of this year I carried out a two-week field survey of existing sound levels in the vicinity of the site in order to determine what levels of natural background sound are likely to exist at the nearest potentially sensitive receptors. This was done in order to predict whether or to what degree noise from the Project would be audible. The potential noise impact from any wind project depends on the degree to which the turbines are audible above the background sound level, if they are audible at all. Thus, if the sound level of the Project is close to or below the background level any significant adverse impact from noise is highly unlikely.

Q. Please describe your noise assessment/evaluation in this case.

A. During calm and quiet times the Project is not operating, therefore background sound levels for wind projects must be determined as a function of wind speed because the turbines only generate noise of any significance when the wind is blowing. The background sound level for this Project as a function of wind speed was determined by relating the sound level measured every 10 minutes to the concurrent wind speed measured by an on-site met tower. This correlation conservatively indicates that a background sound level of about 36 dBA is likely to exist site-wide during an 8 m/s wind when the turbine model proposed for this Project (the Vestas V90-3.0 MW) makes the maximum amount of noise. The full results of this study and the details of how the

background levels were related to wind speed are contained in our Report 1808-102707-0 dated November 26, 2007, which is included as Appendix 28 to the Application.

In addition to the background sound level study, the future noise emissions from the Project were predicted using sophisticated modeling software (Cadna/A developed by DataKustik GmbH, Munich) that recreates the site terrain in three dimensions, which was important at this site due to its mountainous character. The results of this modeling indicate that under worst-case conditions, the Project sound level will fall to 36 dBA, the measured background level, well before it reaches any of the nearest seasonal cabins located on Project land and well before reaching any of the nearest off-site residences, which are at least 2.9 miles away to the east and 3.5 miles away to the west. This result means that even at the critical wind speed of 8 m/s when turbine sound levels are maximum relative to the background level, the sound emissions from the Project are likely to be substantially lower than the normal environmental sound level and therefore largely, if not completely, inaudible.

Q. In your opinion will this Project have an unreasonable adverse effect on public health and safety, specifically from noise?

A. No. This Project is located in a remote area and is surrounded by an unusually large (83,000 acre) buffer of largely uninhabited land. In all likelihood operational noise from the project is highly unlikely to be audible beyond the properties of landowners that have concluded leasing agreements with the Project. Consequently, I would not expect any adverse noise impact from the Project.

Q. Are there any other comments you would like to make at this time?

A. No.

Q. Does this conclude your prefiled testimony?

A. Yes.

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