

**STATE OF VERMONT
PUBLIC SERVICE BOARD**

Petition of Georgia Mountain Community Wind,)
LLC for a Certificate of Public Good, pursuant)
to 30 V.S.A. § 248, authorizing the construction)
and operation of a 5 wind turbine electric)
generation facility with associated electric)
collection and interconnection facilities on)
Georgia Mountain, in the Towns of Milton and)
Georgia, Vermont, to be known as the “Georgia)
Mountain Community Wind Project”)

Docket No. ____

**PREFILED TESTIMONY OF
ADAM GRAVEL**

**ON BEHALF OF
GEORGIA MOUNTAIN COMMUNITY WIND, LLC**

March 26, 2009

Mr. Gravel’s testimony describes the analysis of Stantec Consulting under Section 248(b)(5) of Title 30, Vermont Statutes Annotated, of the potential impacts of the Georgia Mountain Community Wind Project upon bird and bat migration.

TABLE OF CONTENTS

1.	Introduction	1
2.	Summary of Assessment and Conclusion	2

EXHIBITS

Exhibit Petitioner AG-1	Resumé of Adam Gravel
Exhibit Petitioner AG-2	Fall 2008 Bird and Bat Migration Survey Report

**STATE OF VERMONT
PUBLIC SERVICE BOARD**

Petition of Georgia Mountain Community Wind,)
LLC for a Certificate of Public Good, pursuant)
to 30 V.S.A. § 248, authorizing the construction)
and operation of a 5 wind turbine electric)
generation facility with associated electric)
collection and interconnection facilities on)
Georgia Mountain, in the Towns of Milton and)
Georgia, Vermont, to be known as the “Georgia)
Mountain Community Wind Project”)

Docket No. ____

**PREFILED TESTIMONY OF
ADAM GRAVEL**

**ON BEHALF OF
GEORGIA MOUNTAIN COMMUNITY WIND, LLC**

1 **1. Introduction**

2 Q1. Please state your name and business address.

3 A1. My name is Adam Gravel. My business address is: Stantec Consulting, 30 Park
4 Drive, Topsham, ME 04086.

5

6 Q2. By whom are you employed and in what position?

7 A2. I am a project manager and wildlife biologist with Stantec Consulting.

8

9 Q3. Please describe your educational background and work experience.

10 A3. I earned my Bachelor of Science degree in 2003 from the University of New
11 Hampshire. I was hired by Woodlot (now Stantec) in 2004 as a radar

1 ornithologist and was promoted to Project Manager and Wildlife Biologist in
2 2006.

3
4 I have conducted and coordinated environmental studies as part of state
5 permitting requirements for more than 70 wind projects from Maine to Virginia.
6 Such studies principally include: daytime raptor migration, nighttime radar
7 migration, and acoustic bat detector studies designed to assess potential direct
8 impacts from the proposed wind energy projects. I have also assessed the
9 potential indirect impacts (non-collision related) of projects on wildlife, including
10 habitat impacts and fragmentation effects, impacts to rare species, and impacts to
11 common and local wildlife communities.

12
13 My experience in Vermont includes managing and conducting several nocturnal
14 radar and acoustic bat surveys. I have also consulted with state and federal
15 agencies to identify and discuss potential resources of concern at proposed
16 projects in order to develop field surveys to address concerns for wildlife or
17 plants.

18
19 **2. Summary of Assessment and Conclusion**

20 Q4. What is the purpose of your testimony?

21 A4. My testimony details the results of the Fall 2008 Bird and Bat Migration Survey
22 Report prepared for the Georgia Mountain Community Wind Project (“Project”)

1 by Stantec Consulting. A copy of my report is included as Exhibit Petitioner AG-
2 2.

3
4 Q5. Please summarize your findings and conclusions.

5 A5. Radar surveys provide data to help assess the potential collision risk for the
6 proposed Project to impact nocturnally migrating birds and bats. However, these
7 surveys cannot differentiate between birds and bats, nor quantify the level of
8 collision related mortality to these species that could occur from the proposed
9 project. Although nocturnal radar surveys can not quantify the exact level of
10 collision related fatalities that could occur from the project, they can provide an
11 accurate index of activity that can be compared to other similar studies conducted
12 in the region, and, more specifically, to those projects that have been developed
13 with data collected from both pre and post construction surveys. Predictions of
14 collision risk based solely on nocturnal radar surveys incorporate the following:

- 15 1. Data collected from other studies conducted in Vermont using similar
16 methods and equipment.
17 2. Data collected from other studies in the northeast that used similar methods
18 and equipment.
19 3. Known collision related mortality events from developed wind projects in the
20 northeast.

1 4. Pre and post construction data collected at the Mars Hill Project, the only
2 developed project in New England that has both publicly available pre-and
3 post construction data.

4
5 The scope of the survey conducted at the Project site was based on a combination
6 of standard methods that have developed within the wind power industry for pre-
7 construction surveys, consultation with the Vermont Agency of Natural Resources
8 (“ANR”) and their recommended guidelines for wind project in Vermont, and is
9 consistent with numerous other studies conducted throughout the Northeast region
10 of the United States.

11
12 Our analysis of the flight direction, flight height and passage rate of migratory
13 animals as observed with the on-site radar, as well as what is known from other
14 permitted, or developed projects in New England, indicates that that the potential
15 for nocturnal migratory birds and bats to collide with proposed turbines during
16 fall migration may be low. Nocturnal passage rates, and flight heights, were
17 lower than or similar to the average found at other publicly available studies using
18 similar methods and equipment (See Appendix B Table 2 of Exhibit Petitioner
19 AG-2). Furthermore, compared to the Mars Hill Project in Aroostook County
20 Maine, where pre-construction radar survey results were greater than the Project,
21 overall collision related mortality found during two years of post construction
22 studies at the site was low (0.44 – 2.5 **birds**/turbine/year and .43 – 4.4

1 **bats**/turbine /yr in 2007 and 2.4 – 2.65 **birds**/turbine/yr and .17 - .68
2 **bats**/turbine/yr in 2008). Therefore, we would expect post-operational impacts at
3 the Project to be low and generally similar to the Mars Hill Project.

4

5 Q6. Does this conclude your testimony at this time?

6 A6. Yes, it does.