

THE STATE OF NEW HAMPSHIRE

SITE EVALUATION COMMITTEE

DOCKET NO. 2014-03

APPLICATION OF GRANITE RELIABLE POWER LLC

PRE-FILED TESTIMONY OF LISA LINOWES

The WindAction Group

September 15, 2014

1 **1) Please state your name and address for the record.**

2 My name is Lisa Linowes, and my address is 286 Parker Hill Road, Lyman, NH 03585.

3 **2) Please summarize your education and background as it relates to this matter.**

4 I serve as Executive Director of the Industrial Wind Action Group (Windaction.org) a New
5 Hampshire corporation formed in 2006. In this role, I am responsible for tracking wind energy
6 development worldwide with specific focus on the impacts of industrial-scale wind energy on the
7 natural environment, communities, and the regional grid systems. I am a principal and regular
8 contributor to MasterResource.org, a blog dedicated to analysis and commentary about energy
9 markets and public policy. I was co-host of Wind Wise Radio, a weekly radio news show focused
10 on the issues and impacts of large-scale wind energy development and technical advisor of the
11 award-winning documentary, *Windfall*, which examined the impact of large-scale wind
12 development on small communities.

13 I have testified before Congress¹ on the issue of tax subsidy programs for renewable energy and
14 have been invited to speak on the topic of wind energy at numerous venues throughout the United

¹ Lisa Linowes, *Testimony before the Committee on Science, Space, and Technology*, April 19, 2012,
<http://science.house.gov/sites/republicans.science.house.gov/files/documents/hearings/HHRG-112-SY21-WState-LLinowes-20120419.pdf>

1 States including the annual meeting of the Midwest chapter of the Energy Bar Association, the ISO-
2 NE Regional System Plan meeting and the National Association of Realtors legislative meeting.

3
4 **3) Have you participated in any proceedings before the NH SEC or other similar bodies?**

5 Yes. I was granted full intervenor status before the NH SEC on four separate dockets (*Community*
6 *Energy, Inc. and Lempster Wind, L.L.C. Project SEC Docket No. 2006-01, Granite Reliable Power,*
7 *LLC Docket No. 2008-04, Brookfield Renewable Power Inc. SEC Docket No. 2010-03 and Antrim*
8 *Wind, LLC SEC Docket No. 2012-01*), each pertaining to wind energy development in the state of
9 New Hampshire. I submitted expert testimony on behalf of a party involved in SEC Docket No.
10 2012-04 and assisted intervenors involved in the Groton Wind enforcement proceeding still pending
11 before the SEC (*Docket No. 2010-01*). I was also a full intervenor for the Deerfield Wind LLC
12 proceeding before the Vermont Public Service Board (*Docket No. 7250*).

13 **4) Are you familiar with the project application?**

14 Yes. I reviewed the project application materials as well as the testimony submitted by Granite
15 Reliable Power LLC (GRP or the Applicant) including testimony by Dr. Kenneth Kimball of the
16 Appalachian Mountain Club. I also attended the site visit of the project hosted by GRP and
17 Brookfield representatives on August 29.

18
19 **5) What is the purpose of your testimony?**

20 The purpose of my testimony is to address concerns I have with the revised High Elevation
21 Restoration Plan (HERP), incorporated into the amended High Elevation Mitigation Settlement
22 Agreement (HEMSA). My concerns can be separated into two areas. The first relates to whether the
23 applicant has sufficiently demonstrated that there is a need to amend the plan. The second relates to
24 whether the proposal addresses the environmental concerns.

25
26 **6) Do you believe the applicant has demonstrated there is a need to amend the plan?**

1 No. The Applicant claims that repair and maintenance on the turbines along Mount Kelsey will
2 require re-vegetated areas along the road to be roll backed to allow for large transport vehicles or
3 cranes that extend beyond the 12-foot travel surface. GRP's April 3, 2014 *Objection of Counsel for*
4 *the Public to Expedited Motion to Amend* cites transcripts from March 2009 to support the claim
5 that the Committee knew all along that such repairs would essentially prohibit planted trees from
6 reaching maturity. Cherry-picked excerpts from the transcript poorly illustrate the fact that in 2009,
7 witnesses for Noble Environmental were repeatedly pressed on whether the 12-foot road widths
8 were realistic. The Committee ultimately trusted Noble's assurances that the re-vegetated roads
9 would not pose a problem.

10
11 GRP now claims that the frequency of turbine repairs is such that it is necessary to widen the road
12 widths to 16-feet or more and to eliminate any tree plantings on Mount Kelsey in certain areas to
13 accommodate crane assembly and mobility. In testimony, GRP cites two examples where a crane
14 was needed on Mount Kelsey since the project was placed in service. The first of the two instances
15 was due to a Vestas-reported defective bearing cage identified in six of the 33-turbines. One of
16 those turbines was located on Kelsey. The second incident involved repairing a blade damaged by
17 lightning on a turbine also located on Kelsey.

18
19 Vestas informed GRP that the project has a 97-percent up-time which means that if the wind is
20 blowing, the turbines will be available and ready to generate electricity 97-percent of the time
21 (*Transcript Jul 24, 2014, p 176, lines 1-13*). Since going on-line in December 2011, the project
22 would have had up-time of approximately 723,000 hours (2.5 years * 8760 hr/year * 33 turbines).
23 The likelihood of a turbine on Kelsey experiencing a failure and for that failure to require a large
24 vehicle for repairs appears very small. Additionally, the chances of the failed turbine being located
25 at the farthest point on the turbine string along Mount Kelsey is limited. Of the two repairs that
26 occurred on Kelsey, the one involving replacement of a defective bearing cage was a problem
27 known by Vestas in 2011², reported to GRP in 2012 and will not happen again.

28

² <http://www.offshorewind.biz/2012/05/02/denmark-vestas-reports-q1-revenues-of-eur-1105-million/>

1 According to Mr. Cyr, GRP does not anticipate any cranes or large vehicles being brought in for
2 normal maintenance of the eight turbines on Mount Kelsey or the remaining 25 turbines.
3 *(Transcript Jul 24, 2014, p 194, lines 9-24)* He also stated that he is unaware of any analysis of the
4 probabilities of major components having to be replaced or repaired, such that large transport
5 equipment and/or a crane would be necessary. Nor could he confirm whether Brookfield Renewable
6 Power or GRP had access to such an analysis. *(Transcript Jul 24, 2014, p 182, lines 1-10)*

7
8 Mr. Cyr also states in his testimony that it is highly unlikely that every turbine will need to be
9 serviced by large cranes over the life of the Project, yet the proposed plan calls for an extensive
10 length of road on Mount Kelsey to be left devoid of trees. Based on the proposed plan, up to 40% of
11 roadway will include just organic material and no seedlings. If we include the corners of the road
12 that are proposed to be widened beyond 16-feet (up to 26-feet) and not re-vegetated, the percent of
13 road that will not have trees will reach over 50%.

14
15 This change in plan is a significant deviation from the plan as approved by the SEC. Before the SEC
16 can agree to paring back an important condition of the certificate, we would recommend a full
17 analysis be conducted to evaluate whether these changes are necessary and the extent of the
18 changes. It is not sufficient to base this decision on a single turbine failure.

19
20 **7) Tyler Phillips states in his prefiled testimony that "[o]perational experience provides**
21 **insight into certain site specific needs." He also states that this amendment "is an opportunity**
22 **to improve upon key elements of the Plan, and, in doing so, is more protective of the natural**
23 **environment than the Certificate as currently approved." Do you agree?**

24 No on both points. Brookfield Renewable Power owns and operates 28 wind energy facilities
25 located in four countries³. It is difficult to believe that a company with such extensive experience
26 could fail to understand the impact on operations if required to re-vegetate the roads on Mount
27 Kelsey to 12-feet wide . The issue of road width and access would have been paramount from the
28 outset since turbine manufacturers impose specific requirements for access.

³ http://brookfieldrenewable.com/content/portfolio/about_hydro_and_wind_power-30491.html

1 Brookfield also now claims that operational experience at the project has raised concerns that more
2 maintenance will be needed on the turbines than previously realized yet cannot demonstrate the
3 basis of this claim.

4
5 With regard to improvements to the environment, it is important to recall the significance of the
6 Mount Kelsey habitat and why the condition was included in the HEMSA. I cite the following from
7 the HEMSA:

8
9 Mount Kelsey and Dixville Peak encompass high-elevation ecosystems of particularly high
10 quality, and that development of the Windpark will impact these habitats and wildlife
11 species of conservation concern that are known to or may potentially utilize them, including
12 but not limited to American marten, Bicknell's thrush, three-toed woodpecker and Canada
13 Lynx.
14

15 The HEMSA, as initially adopted, was a requirement in order to find that the project would not
16 produce an unreasonable adverse effect on the natural environment. The intent of re-vegetating the
17 road back to 12-feet was to help minimize fragmentation impacts along the high elevation
18 ridgelines. This combined with restricting motorized access on the roads would encourage use of
19 the area by marten. The new plan gets us no closer to meeting these intentions⁴.

20
21 As the Committee further investigates the proposed change, we recommend reconsideration of
22 whether implementation of the current re-vegetation plan is working as intended. Upon inspection
23 of the project site, it is evident that many of the planted seedlings were not thriving. In some cases,
24 they were chewed by animals. Others simply did not take to the environment (Picture 4 attached).
25 The count of trees was minimal and represented nothing akin to the existing, established forest
26 (Pictures 2 and 3 attached). The initial rate of growth may appear rapid, but will likely slow as the
27 trees get bigger.

28
29 Also, there was clear evidence of the forest along the road dying and will continue to die back as a
30 result of the road being kept wide open and exposing interior trees to the winds (Picture 1 attached).

⁴ Docket 2008-04 Supplemental testimony of Adam Gravel and Steven Pelletier. (Feb 23, 2009)

1 It is not known how far the disturbance will creep into the existing healthy forest but there is
2 evidence that edge trees were dying as recently as this year. I've attached photos to my testimony to
3 demonstrate the effect of the die back.

4

5 **8) Is there anything further you wish to add?**

6 Yes. In considering the impacts on the forested area and the apparent impacts on marten⁵ and other
7 species, the Committee may wish to reconsider whether the project, even with the HEMSA, is
8 producing an unreasonable adverse effect on the natural environment, After all post-construction
9 studies are evaluated and further review of this docket is conducted, it may be necessary to consider
10 decommissioning the turbines on Mount Kelsey, fully blocking the road from predators, scarifying
11 the land, and planting as many trees as possible to allow the area to grow back.

12

13 **9) Does this complete your pre-filed testimony?**

14 Yes.

⁵ Alexej Peder Kelly Siren, *Population Ecology Of American Marten In New Hampshire: Impact Of Wind Farm Development In High Elevation Habitat*, (2009)

Picture 1: Dying Trees Along The Road



Picture 2: Plantings along the side of the road



Picture 3: More plantings along the side of the road



Picture 4: Seedlings impacted by grassy growth

