

Comments on Draft Board Order Dated 8/26/13

- Licensee's Comments (Gordon Smith) (9/10/13)
- Friends of Maine's Mountains (Rufus Brown) (9/17/13)
 - E-Coustic Solutions (Richard James)
 - Stephen Ambrose and Robert Rand
- Comments by Interested Persons
 - A. Barnett
 - M. Bond
 - P. Gray
 - P. Lucas

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September 10, 2013

VIA Electronic Mail

Erle Townsend, Project Manager
Maine Department of Environmental Protection
17 State House Station
Augusta, ME 04333-0017

**Re: Licensee Comments on Draft Board Order
Saddleback Ridge Wind, LLC
L-25137-24-H-N/25137-TG-I-N (Approval of Permit after Remand)**

Dear Erle,

I am writing on behalf of Licensee Saddleback Ridge Wind, LLC ("SRW"), to submit the following comments on the above-referenced Draft Board Order posted on August 26, 2013.

- On page 7, second full paragraph, first sentence: SRW suggests deleting the word "originally." The project has been "designed to comply with Department regulations applicable to sound levels from construction, routine operation and routine maintenance" at all times during its development.
- On page 7, third full paragraph, first sentence: The citation to the DEP noise rule references incorrect sections of Chapter 375. The correct citation is to Chapter 375(10).
- On page 8, fifth paragraph: The discussion of SDRS refers to the SDRS provision contained in the generally applicable section of Chapter 375(10), rather than the SDRS provision contained in the newly-adopted wind power specific section at 375(10)(I)(4). As stated in my April 9, 2013 cover letter to the Board, "The Court's order was not clear whether it intended the Board to apply the entirety of the newly-adopted Chapter 375(10)(I) wind power-specific noise limits or just the 42 dBA nighttime noise limit. However, as discussed in the RSG Study, SRW is demonstrating compliance under either framework." For the sake of consistency, SRW suggests that Board apply the wind power specific SDRS provision contained at Chapter 375(10)(I)(4). This provision is more stringent and its application by the Board to SRW would be a more conservative reading of the Court's remand order.
- On page 9, first full paragraph: The discussion of tonal sound refers to the tonal sound provision contained in the generally applicable section of Chapter 375(10), rather than

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the tonal sound provision contained in the newly-adopted wind power specific section at 375(10)(I)(3). For the reasons discussed above with respect to SDRS, SRW suggests that Board apply the wind power specific tonal sound provision contained at Chapter 375(10)(I)(3).

- On page 10, first full paragraph: Starting with the sentence "Carthage does not have local ordinances regulating wind energy developments," the remainder of the paragraph should be replaced with following text, to provide clarity: "Carthage does not have local ordinances regulating noise levels from wind energy developments or from any other sources. Sound limits imposed by the Dixfield ordinance are the same as those imposed by Chapter 375(10)(I)(2)(b), therefore analysis of compliance under both Dixfield and Department limits yields the same result. The Wilton noise standard expresses limits in terms of an increase in A-weighted and C-weighted noise levels over pre-construction levels. This type of regulation of noise (*i.e.* increase over ambient sound) was discussed and rejected as too difficult to administer during the Board's rulemaking that led to the adoption of the fixed limits contained in Chapter 375(10)(I). The Wilton ordinance also does not regulate all of the types of noise, including SDRS and tonal sounds, that are regulated by Chapter 375(10). Accordingly, the Wilton noise standard does not contain a quantifiable noise standard consistent with the noise limits contained in Department's noise rule. In addition, due to the distance between the project and the closest properties in Wilton and Dixfield, noise impacts in those municipalities will be negligible. The proposed project's sound contour map indicates that project sound emissions will be in the range of 25-30 dBA well before contact with any municipal boundary. Therefore, consideration of local noise limits imposed by Dixfield and Wilton does not impact the Board's findings with respect to the project's compliance."
- On page 13, first indented paragraph: At the end of the paragraph, add the sentence, "In any case, the applicant provided a map depicting the boundaries of all adjacent properties within one mile."
- On page 14, second full indented paragraph: At the end of the paragraph, add the sentence, "Furthermore, GE has approved SRW's turbine layout."
- On page 17, first full paragraph: reference to "Chapter 375(10)" should be changed to "Chapter 375(10)(I)" to clarify that the project has demonstrated compliance with and will be regulated by the wind power specific provisions of the Department's noise rule.
- On page 17, first full paragraph: SRW requests removal of condition (2), which requires compliance locations to be "fully operational prior to operation of the facility." Chapter 375(10)(I)(8)(e)(5) and SRW's license (Board Order § 6(G)) both require SRW to conduct and submit compliance monitoring during the first year of operation and once every five years thereafter. The requirement that monitoring locations be installed prior to operation of the project is inconsistent with the compliance monitoring framework established by Chapter 375(10)(I) and creates a regulatory burden without any apparent benefit. Similarly, SRW requests that language regarding the same condition on page 47 paragraph B and page 49 paragraph 8 be removed.

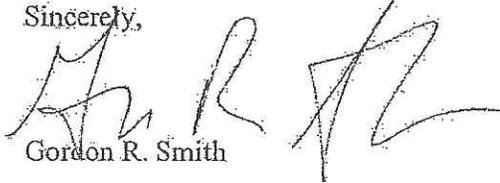
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- On page 47, paragraph B, second sentence: Replace the text "The applicant has made adequate provisions for . . ." with the text "The development will not adversely affect existing uses, . . ." This change would make the language in the license conform to the applicable statutory standard.

Thank you for your consideration of these comments. Please let me know if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Gordon R. Smith". The signature is stylized and cursive.

Gordon R. Smith

Cc: Chairman Robert Foley; c/o Ruth Ann Burke
BEP Executive Analyst Cynthia Bertocci
Assistant Attorney General Gerald Reid
Assistant Attorney General Peggy Bensinger

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M. THOMASINE BURKE

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September 17, 2013

VIA EMAIL and U.S. Mail

Erle Townsend, Project Manager
Maine Department of Environmental Protection
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Augusta, ME 04333

**Re: Comments of Friends of Maine's Mountains and the Other Petitioners
In the case of *Friends of Maine's Mountains v. BEP* on the Draft
Board Order on Remand from the Law Court**

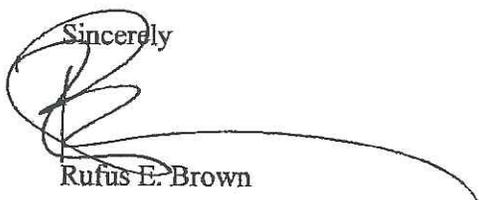
Dear Erle:

I am submitting the following comments on behalf of Friends of Maine's Mountains and the other Petitioners ("Petitioners") in the Law Court case of *Friends of Maine's Mountains v. BEP* on the draft Order approving the Saddleback Ridge Wind Project.

First, Petitioners object to the findings of the draft Order that the Project will be able to comply with the nighttime noise limit of 42 dBA. In support of this object, I attach (1) the Comments of Rick James dated September 17, 2013, as well as his earlier comments dated June 28, 2013 on the RSG Noise Report and (2) the comments of Rand-Ambrose dated September 17, 2013, with attachments, as well as their earlier comments on the RSG Noise Report dated June 28, 2013.

Second, Petitioners object to the procedure adopted by the Board on remand pursuant to which the Commissioner of the Department was excluded from the decision concerning compliance with the requirements of the remand. In support of this objection, I attach a copy of my letter to Chair Robert Folely dated April 29, 2013.

Sincerely



Rufus E. Brown

REB/

cc. Clients

Peggy Bensinger, AAG (via email)

Gordon Smith, Esq. (via email)

E-Coustic Solutions

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September 17, 2013

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 BROWN & BURKE
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 Portland, ME 04112-7530

Subject: Board Of Environmental Protection, State Of Maine Draft Board Order : L-25137-24-H/N/L-25137-Tg-I-N Regarding Saddleback Ridge Wind, LLC

Dear Mr. Brown:

Please accept my response to the assertions presented in the August 26, 2013 Draft Board Order referenced above, in particular those related to previous reports that were prepared by me and filed on behalf of Friends of Maine's Mountains (FMM). These reports described significant flaws in the noise studies and models prepared for Patriot Renewables by Resource Systems Group (RSG) for the Saddleback Ridge Wind project. The Maine Board of Environmental Protection (MBEP), in its August 26, 2013 draft order dismissed the concerns raised in my report: "Issues regarding the April 2013 Noise Impact Study For Saddleback Ridge Wind," dated June 28, 2013. I respectfully disagree with the conclusions of the Board as expressed in the draft order. The basis for this disagreement follows.

RSG MODEL DOES NOT MEET THE REQUIREMENTS OF CHAPTER 375 S(10)(I)

My April 2013 report identified a number of reasons why the RSG model did not meet the new requirements for models set in Chapter 375 (10)(I). The Draft Order response addresses one criticism, the need to apply known tolerances and variances to input data and output from the ISO based model. This requirement is not optional in scientific and engineering work, in spite of the implication in the draft order that they are optional. All credible scientific/engineering studies disclose and apply the known variances. The RSG model cherry picks which tolerances it will include and ignores others, even when the controlling Standard (both ISO 961302 and IEC 61400-11/14) states that such variances shall be included when using the information and procedures. The Draft Order accepts RSG's argument that it need not apply known tolerances for variance between predictions made with the ISO 9613-2 model algorithms and for measurement variability in the sound power levels derived from the IEC 61400-11/14 measurement and reporting procedures. I have reviewed those rebuttal comments and find them unconvincing and contrary to the generally accepted understanding of the limitations of sound propagation models based on ISO 9613-2.

While RSG may assert that its models have a high degree of precision and can be accepted as representing the worst case conditions, its track record on other projects shows otherwise. In Vermont, RSG has worked on behalf of wind energy developers at both the Georgia Mountain and Lowell Mountain projects. In both of these cases, the RSG model applied similar methods to what was done for the Saddleback Ridge project. In both cases, RSG assured the community and permitting agency that its model was conservative and that sound levels would not exceed the predicted values. In both cases, there have been complaints of excessive noise from residents located in the homes that RSG had indicated would have acceptable sound levels. There is no reason to believe RSG's claims that the Saddleback Ridge model will not result in similar situations if the project is constructed as planned.

RSG offers as support for its claim that the sound power data used as input to the Saddleback Ridge Wind model a letter (July 3, 2013) from Mr. Matthew Thompson, allegedly an employee of GE with the title: "Commercial Leader." This letter is presented as "proof" that the GE wind turbines

E-Coustic Solutions

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SUBJECT: BEP, Draft Board Order Regarding Saddleback Ridge Wind, LLC

proposed for Saddleback Ridge Wind will not exceed an output of 105 dBA. However, upon inspection the letter raises several questions. First, the letter states that the alleged guarantee is for 107 dBA, not 105 dBA. Mr. Thompson correctly includes the 2 dBA variance with the mean sound power level as is required to meet the IEC 61400-14 declaration requirements. This is in accordance with one of my recommendations that was rejected by RSG and by the BEP in its draft order. Second, the letter is presented as though it is a separate and independent guarantee by GE. This is not correct. A Commercial Leader would not be authorized to alter the previously negotiated terms of the guarantee. No legitimate guarantee would cover operation for either noise or warranty "irrespective of wind shear." There are limits to the wind shear the wind turbines can tolerate, some of which require the blades to be positioned in a safe mode to prevent damage and higher winds may cause damage even when in the protected mode. Did Mr. Thompson mean that GE was saying that the sound power levels would not exceed 105 (+2) dBA even under extreme conditions? This letter can only be accepted as a letter from a sales engineer and not as a legally binding contract.

WIND TURBINE SPACING

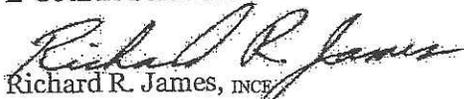
The second point made in the Draft Order regarding my April 2013 report is to reject my concerns that the inter-tower spacing along the ridge is too close. RSG responds that no support is given for this assertion and that spacing has been considered based on local conditions and determined to be adequate. RSG also claims that only a few acousticians can make the necessary calculations to make these decisions. I respond to this latter claim that one does not need to 'make the necessary calculations' in order to see that the wind turbines are located within 5 rotor diameters and in some cases within 3 rotor diameters. Nor does one need to be able to do the calculations to know that other projects where wind turbines are located this close have resulted in significantly higher sound levels than the model predicted due to inter-turbine wake interactions. Whether approved by GE or not, it is considered to be a poor design when the inter-tower spacing is as close as is observed for Saddleback Ridge Wind.

One very well known example in Maine of complaints and exceedances of MDEP noise limits due to wake effects is the three GE wind turbine facility (Fox Island Wind) located on Vinalhaven Island, ME. These wind turbines are arranged such that the spacing between them is less than 5 rotor diameters. It is commonly observed by neighbors and has been documented by measurements that on nights when the wind direction puts one of the wind turbines upwind of one or both of the other wind turbines the sound levels can be as much as 12 dB above the sound levels predicted using the ISO and IEC standards as applied to Saddleback Ridge.

CONCLUSION

The assertion by RSG that criticisms raised in my April 2013 report can be ignored are not supported by review of other projects in which RSG has been involved and other projects with similar wind turbine arrangements where RSG was not involved. The MBEP makes a grave error when it uncritically accepts RSG's arguments and rejects the independent assessment presented in the April 2013 report. If constructed as planned it is my opinion based on the review of projects in Maine since 2010 and other jurisdictions since 2007 that Saddleback Ridge Wind will cause complaints and during conditions that promote higher noise emissions will be out of compliance with the Chapter 375 regulations.

Sincerely,
E-Coustic Solutions


Richard R. James, INC.

Stephen E. Ambrose, INCE, Bd.Cert.
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Robert W. Rand, INCE
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September 17, 2013

Rufus E. Brown, Esq.
 Brown & Burke
 152 Spring Street
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 Portland, ME 04112

Subject: Response

DRAFT BOARD ORDER : L-25137-24-H-N/L-25137-TG-I-N
 Board of Environmental Protection, State of Maine
 SADDLEBACK RIDGE WIND, LLC
 Carthage, Canton and Dixfield Franklin and Oxford Counties
 SADDLEBACK RIDGE WIND PROJECT

Rufus:

We are responding to BEP discussion in the subject draft order, pages 11-13, of our peer review June 28, 2013 of the latest submittal for the Saddleback Ridge Wind (SRW) facility. We respectfully disagree with the conclusions drawn by the Board in its Draft Order. We respectfully find fault with all of RSG's comments about our deficiency findings with respect to RSG's Revised Noise Impact Study (April 2013). We further respectfully find fault with the DEP 3rd party reviewer's assertions regarding our peer review. Our review focused on the deficiencies of RSG's model and the strong likelihood of the SRW facility exceeding the State night noise limit of 42 dBA and generating complaints. RSG and Tech Environmental dismissed our objections and cautions to the RSG modeling and risks to neighbors. We stand by our peer review and state again: it appears certain that the SRW facility can exceed night limits and generate complaints.

1. RSG recent modeling does not match measurements

We contended that RSG should take lessons learned from Mars Hill and use larger uncertainty factors in its models. RSG dismissed our review as "novel". The DEP 3rd party reviewer, Peter Guldberg of Tech Environmental stated, "*appellants' use of data from Mars Hill is inappropriate. The data were not collected using the current protocol outlined in Chapter 375(10)(I)[(8)](e), and the method for processing and use of compliance measurements has changed significantly since the Mars Hill analysis was done.*" We submit that the assertions by RSG and Tech Environmental amount to red herrings. The protocol referred to by Tech Environmental was developed from lessons learned at Mars Hill in 2006 and 2007, and refined and put into place during the Mars Hill 2007-2008 study. The data acquisition practices

now codified by routine rulemaking into Chapter 375.10 were developed and used at Mars Hill. The Leq noise data acquired at Mars Hill were accepted by the DEP and formed the basis for requesting 5 dB uncertainty factors.

The Board's draft order quotes RSG's contention that Ambrose/Rand's review of Mars Hill data "is an 'apples to oranges' comparison and not consistent with the requirements of Chapter 375 (10), which requires site-specific parameters when preparing predictive modeling estimates of sound levels." This is a red herring. The DEP's takeaway from Mars Hill was that actual wind turbine noise levels can exceed predicted levels by 5-8 dB, when those predictions are based on the manufacturer's near-field sound power level quotes. The DEP sought a 5 dB uncertainty margin for a time after the Mars Hill debacle. We understand this is a technical field of contention, yet, this is not rocket science. Wind turbines can be much louder than predicted. It is up to the acoustic consultant to ensure for their clients that the facility can meet regulatory limits with a reliable safety margin, and prevent widespread complaints.

Tech Environmental appears to have confidence in RSG's computer noise model, yet they may not be aware that RSG recently completed an acoustic survey at the Hoosac Wind Facility in Massachusetts. In its survey report, RSG elected to run a computer model of Hoosac and compare its sophisticated noise model predictions to the actual noise data acquired at locations near the Hoosac facility. RSG concluded in its report that there is good agreement. We bring this to the Board's attention because the Hoosac wind turbine noise data were obtained during partial power, not full power. In effect, RSG appears to have inadvertently confirmed in writing that their noise model is deficient. Examination of the report indicates data hand picked by RSG for its comparisons differed from data in the report where the turbines noise levels are several dB above the model.

For SRW, RSG is using the uncertainty of 3 dB currently requested (but not constrained to) by the DEP. With the 3 dB uncertainty factor, RSG's noise predictions are within about 2 dB of the State night noise limit at nearest locations. RSG's (inadvertent) confirmation for Hoosac that its acoustic model is accurate at partial power conditions should be evidence to the reader that RSG does not have a sufficient safety margin in its model to assure compliance with the State night noise limit at all times.

A review of prediction accuracy at several facilities was performed recently for another project. Actual wind turbine sound levels were 3-12 dB above predictions based on the manufacturer's sound power levels with no uncertainty factor. The results indicate that RSG chose an uncertainty factor associated with the very bottom of the range of actual wind turbine noise levels. RSG stated in their report that the model does not account for sustained maximums, only long term averages. Despite this deficiency, RSG did not use a safety margin consistent with maximums seen at other sites. Does the Board understand?

2. Caution recommended on relying on independent reviews by Tech Environmental

The Board was previously advised that Tech Environmental provided noise predictions and approved several industrial wind turbine projects that have resulted in excessive noise levels, strong appeals to stop the noise, and legal action, including Fairhaven, Kingston, and Scituate, Massachusetts. Actual noise levels have been registered at these facilities at much higher levels than predicted by Tech Environmental.

In Michigan, the Mason County Planning Commission recently reviewed the post-construction noise compliance test results for Consumer's Energy's Lakewinds Industrial Wind plant in Riverton Township near Ludington. This is a Tech Environmental project; they worked hard to ensure the project went forward, despite strong cautions received about the likelihood of exceeding the Mason County noise limits and generating widespread complaints. The PC just voted unanimously 7-0 to approve a resolution declaring the plant out of compliance. How much confidence is the Board willing to continue to invest?

The Draft Order says, "*Based on its review of the record, including particularly the independent review performed by Tech Environmental, the Board is satisfied that the proposed development will comply with applicable noise standards, including Chapter 375's 42 dBA limit.*" [underlined emphasis by Ambrose/Rand.] We respectfully submit that the Board should revisit the record. Tech Environmental may have been selected as 3rd party reviewer for the DEP, but multiple wind turbine project code violations, widespread complaints, and legal action as the results of their work indicate that Tech Environmental may be unskilled or unwilling to properly assess wind turbine noise for their clients.

3. Relying on noise measurements and "mitigation" later on may be fraught with hazard.

Relying on Tech Environmental's approval may place the neighbors, SRW and the BEP in a difficult situation later. Why? All sober indications are that the facility can exceed the night noise limits and produce complaints. Neither RSG nor Tech Environmental assessed for community reaction. RSG is embroiled in hard questioning by regulators in Vermont where the GMP facility has exceeded limits and generated complaints. Does the Board want to create another Mars Hill, another GMP, Fairhaven, Scituate, Kingston or Lakewinds? Let's say the Board is willing to risk it. If the facility does exceed the limits, what then? Does the Board look forward to the unwelcome choice of allowing the turbines to keep running, deepening complaints and legal action from neighbors, or shutting them down, inviting financial impacts and legal action for the owners? All based primarily on assurances from Tech Environmental?

The strongest noise is produced from the noise produced by the aerodynamic forces on the blades, which must remain exposed to the open environment. Distance is the best means to control noise levels from wind turbines. Once the turbines are installed, distances are fixed. There are no reliable means to meet

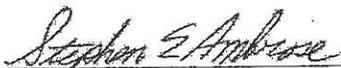
noise limits if the turbines are too close, except shutdown. So-called ALC or NRO options have not been verified to work at this site or any other in New England to our knowledge. The only remaining option is to turn off the turbines at night, as has been done in Falmouth and Fairhaven, Massachusetts, severely affecting the owner's finances. Does the Board really want to risk invoking that eventuality?

4. Impacts on neighbors and children

During the very generous time periods allowed for complaint response, noise studies and reporting, the neighbors will be exposed to the same noise levels that will have driven them to complaints. These are avoidable adverse noise impacts which can and should be prevented by not permitting the facility in the first place. The Board was silent as to the potential impacts on children in the leased areas, stating simply, "The applicant responded in the July 3, 2013 letter, stating that "[e]xemption from noise limits by sound easement is specifically provided for by Chapter 375(10)(C)(5)(s)." We find this quoted statement by Ken Kaliski, a Board Certified Member of INCE, to be truly astonishing and disturbing. INCE does not authorize its members to invoke a legality as a means to sidestep protection of the health and wellbeing of neighbors and children. The Board's simple quote of RSG's response without further elaboration or dissent is also disturbing. We must question the Board's silence on impacts on children. The Board is surely aware of the impacts on neighbors and children in Freedom, on Vinalhaven, and at Mars Hill, at Fairhaven, Massachusetts and in Mason County, Michigan. Does the Board choose to risk adverse impacts on the health of neighbors and children near the SRW, armed with pre-existing knowledge that neighbors and children are harmed at other wind turbine facilities?

With these points listed, we stand by our peer review and maintain our strong advisory cautions to be protective of public safety, health, and welfare and, to advise the Board that the facility is unlikely to meet regulatory limits with no effective remedy for that condition except shutdown at night. Because of the deficiencies in the application, now carried through into the draft order, it is our professional opinion that the draft order should be withdrawn and the applicant should not be granted a permit.

Respectfully Submitted,


Stephen E. Ambrose, INCE (Brd. Cert.)


Robert W. Rand, INCE

Tel: 207-892-6691

S.E. Ambrose & Associates
15 Great Falls Road, Windham, ME 04062
Acoustics, Environmental Sound & Industrial Noise

Email: seaa@myfairpoint.net

August 19, 2013

Michael Fairney
Moore's Road
Florida, MA 01247

Ref: Hoosac Wind Sound Level Monitoring

Dear Michael;

I reviewed Resource Systems Group (RSG), *Hoosac Wind Sound Level Monitoring* report (June 2013). This report was at first glance impressive and carefully written by presenting too many misleading details and not enough specifics to confirm that the test was performed properly. The report omitted the most important requirement, "were the turbines operating at full-power output?" Hub height wind speed does not confirm full-power output. Turbines were curtailed (stopped) and the remaining (operating) were not documented for operating at full-power output. Therefore, the data presented in this report is not representative of full-power output operations. Compliance test measurements must represent worst case conditions that neighbors hear.

The MassDEP wind turbine noise policy is easy to understand. Wind turbine maximum noise level (repeating Lmax) at full-power output versus quietest background ambient (L90 w/ no turbine). MassDEP excludes contributions from natural sounds; flowing water, insects, tree frogs and wind in trees.

Measure wind turbine noise levels during full-power output with documentation from turbine SCADA (Supervisory Control And Data Acquisition). Nighttime measurements should be performed after midnight and before dawn (early light).

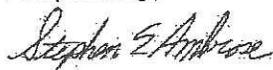
Quietest nighttime background ambient noise levels (L90) shall be measured during nights with cool temperatures (< 45°F) without insects and tree frog activity, light to calm wind speed to allow for high wind shear (winds aloft), and out in the open away from trees and potential wind rustle.

Noise measurement locations were under or too close to trees. This means that the background ambient noise levels were contaminated with tree and wind rustle, which can increase noise measurements by more than 10 dB. One would expect background ambient L90 noise levels to be less than 30 dBA, and during calm wind nights during fall, winter and early spring months less than 20 dBA.

The report presents strong evidence that the wind turbines were not operating at full-power output and some of the turbines were not operating. Ambient background L90's were contaminated with wind noise with microphones positioned too close to trees. These are not representative of actual ground level conditions for higher wind shear conditions when hub height wind speeds are strong and ground level wind is light to calm. A new sound test should be performed with an independent noise consult using a simpler method with SCADA documentation confirming full-power output.

Please feel free to call with any questions. Thank you.

Respectfully,



Stephen E. Ambrose, INCE, Board Certified
Principal Consultant

Robert W. Rand, INCE
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August 19, 2013

Attention: Michael Fairney
Subject: Hoosac Wind Sound Level Monitoring, report dated June 2013
Prepared by Resource Systems Group, Inc. for New England Wind, LLC

Dear Mr. Fairney:

Per your request, I reviewed "Hoosac Wind Sound Level Monitoring, June 2013", a report prepared under the direction of Kenneth Kaliski, P.E. of RSG, Inc. for a 28.5MW industrial wind turbine facility operated by New England Wind, LLC, in Hoosac and Florida, Massachusetts.

In my professional opinion, the RSG report of June 2013 demonstrates the following:

1. The operating facility probably exceeds the Massachusetts State noise limits in 310 CMR 7.10. The reported range of increase was up to 10 dB. Uncorrected contamination of background levels during the RSG testing obscures the full range of increase over background which was not properly identified.

2. The operating facility produced tones as defined by the Mass DEP in 310 CMR 7.10.

The RSG report was found to be misleading in its methods and conclusions as the following points suggest 1) the facility could be more strongly exceeding the Mass DEP regulations than measured during the RSG testing, and 2) questions arise on report content.

3. The power data strongly indicate that the facility was operated *below rated output* (see this letter's Appendix 1). One might have assumed that RSG would have required and documented that the facility was operated according to standard power curves. However this does not seem to have been done. Since wind turbine noise level increases with power output, it appears quite likely that the test did not acquire the highest sound levels from the Hoosac facility.

4. Each wind turbine make and model has a distinctive "signature". The GE 1.5sle normally exhibits a gearing tone in the 160 Hz one-third octave band. Yet the tonal section in the RSG report shows that tones were found in the 100-125 Hz one-third octave bands. The lowered frequency data suggest that the turbines were running below normal rotation speed.

5. The facility is required to meet Mass DEP tone regulations. The report concluded that the facility creates tonal noise per Mass DEP at multiple times and locations. It then attempted to disqualify its own findings by confounding the conclusions with discussions of ANSI S12.9 (RSG report conclusion 11). No satisfactory explanation is given. The owner is obligated to meet the law. As registered engineers and INCE members, the authors are obligated to observe existing law. Especially, the tone analysis method reviewed at length and advocated by RSG was found to be less protective, with higher thresholds than State law. Why did RSG attempt to weaken protections for neighbors?

Rand Acoustics to M. Fairmeny re Hoosac Wind Facility
August 19, 2013
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6. In Section 4, the report states that "Determining the "ambient" sound levels without wind turbine sound in the vicinity of a wind power project can be challenging." This is misleading. It is entirely possible; multiple parties have accomplished this, including personnel in the Mass DEP. The tests are conducted when winds at the microphone and in trees are light or absent (to avoid wind on microphone and to exclude noise from wind in trees), and the wind turbines are turning at power. The turbines are then turned off, the ambient background measured, and turbines are turned back on.

This method is straightforward. Under higher wind shears, ambient winds can be low or absent in trees and on the ground when winds are strong aloft at hub height several hundred feet higher. This condition can be and has been forecast. At five other wind facilities in Massachusetts, the ambient background was measured at 27-29 dBA (see Attachment 2).

Microphone placement under trees by RSG should be considered inappropriate and leading to contamination by wind noise in nearby vegetation, skewing background sound levels up. Insect and frog noise was not excluded from sound measurements although there are well-known and accepted one-third octave band analysis procedures for doing this. Noises apparently contaminated "background" levels measured in the high 30s, 40s, and even 50s dB(A) and were not identified nor corrected.

RSG inappropriately compared the background only (non-turbine) Lmax and L90. Not only does this serve to mislead the reader, the *range* of sound levels in the ambient background has no meaning for assessing compliance with the Mass DEP; only the background L90 matters.

7. The owner was fully aware of and participated with RSG during the noise measurements. At other wind turbine sites where the owner was aware of noise measurements, it was found that power was dropped during the tests. The data furnished by RSG for Hoosac show significant drops in power output and apparent reduced frequency rotation during testing. Why did RSG not ensure standard power curves were used during testing?

8. RSG was clearly aware in 2009 of the low frequency annoyance potential of large industrial wind turbines (see Attachment 3). However, rather than perform assessments of low frequency impacts and amplitude modulations, which would be of real value to all interested parties, they apparently spent considerable time on theoretical "modeling" of long term average noise levels of the wind facility at Hoosac. Yet, they failed to recognize or reconcile the lower power output during the testing. In effect, their model-to-operating comparisons confirm their noise model under-predicts facility noise levels, as it was equated to lower power output. Was that their intent?

9. RSG complained at length about various technical difficulties they experienced during the testing. Many were related to unattended monitoring. Yet the Mass DEP attended measurement protocols have been used without complaint by DEP and noise control engineering consultants for decades; they work. RSG actually advocated for unattended monitoring; which 1) defies common sense, and, 2) begs the question: why did RSG use so much of the report making complaints and urgings to modify the State protocols with unsatisfactory changes?

Rand Acoustics to M. Fairney re Hoosac Wind Facility
August 19, 2013
Page 3

Recommendations

-- **The operating data during the test appear to be below standard power curves and should be reviewed independently.** Supervisory Control And Data Acquisition (SCADA) data should be furnished for independent analytical review, for the test periods covered in the report as well as at least five days each side of the test period, including, for each turbine, at 10-minute intervals.

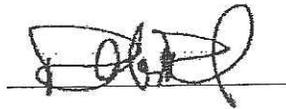
- a. Power output, kw.
- b. Wind speed at hub, m/s.
- c. Wind speed at ground, as available, m/s.
- d. Rotational speed, rpm.
- e. Yaw error, turbine generator to actual wind direction, degrees.
- f. If turbine off, error code or status to clarify reason turbine off.

These data should be provided in csv/excel format. Additionally, recordings made during tonal noise should be furnished with calibration and time information for independent review.

-- **Attended testing should be conducted by other independent investigators.** 1) RSG was clear in their report that they had problems conducting this type of survey and find it challenging. 2) They were unable to establish the normally occurring quiet background in the area, substituting uncorrected and contaminated background levels in the high 30s, 40s and 50s dB(A) which are much higher than background levels found at five other wind turbine sites in Massachusetts. 3) They advocated weakened tonal assessments compared to State law. 4) They did not address the reduced power output during testing.

Thank you for your consideration of these findings. Please contact me if you have any questions.

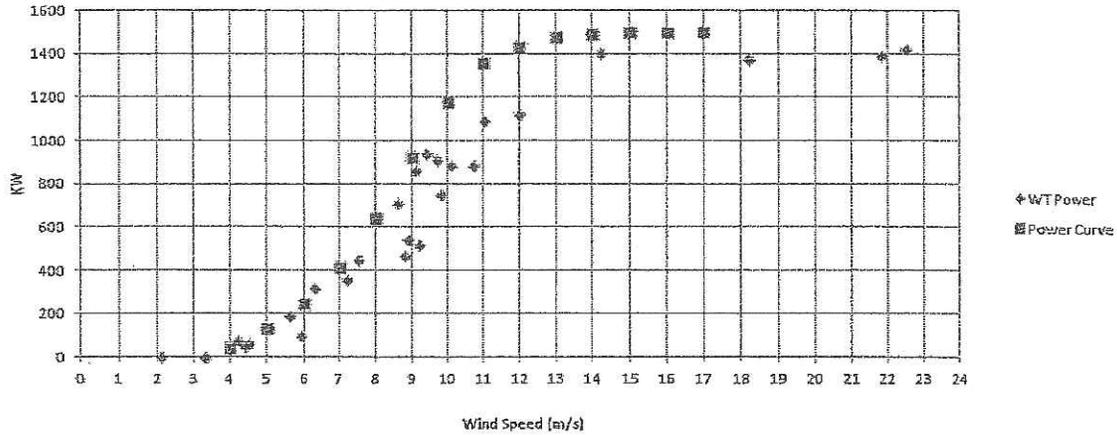
Sincerely Yours,

A handwritten signature in black ink, appearing to be "J. [unclear]", written over a horizontal line.

Rand Acoustics to M. Fairmeny re Hoosac Wind Facility
 August 19, 2013
 Page 4

Attachment 1. Power output below rated power curve. Data compiled from RSG report by Chris Kapsambelis. Posted at <http://windwisema.org/hoosac-wind-turbine-sound-monitoring/>.

Power/Noise discrepancy



This graph shows blue diamonds highlighting values from the Hoosac noise testing report (plotted from the table on the left below) to represent the power output during testing. The red boxes come from the published power curve of the GE 1.5 sle wind turbine. The expected power output related to wind speed is shown in the table on the right below.

Power Curve	
Wind Speed	Power
4	43
5	131
6	250
7	416
8	640
9	924
10	1181
11	1359
12	1436
13	1481
14	1494
15	1500
16	1500
17	1500

In comparing the recorded power output to the published power curve data, it is clear that the wind turbines were not operating normally. The power output was as much as 33% less than normal which would mean that the sound power level was also substantially reduced.

This casts a shadow on the integrity of the sound study and needs a plausible explanation.

Rand Acoustics to M. Faimeny re Hoosac Wind Facility
 August 19, 2013
 Page 5

BS/AS	WD	Wind Speed	WT Power	Date
BS	257	14.2	1406	4/3/2013 13:20
AS	257	18.2	1378	4/3/2013 13:20
BS	274	21.5	1423	4/3/2013 22:00
AS	272	21.8	1399	4/3/2013 22:00
BS	262	7.2	360	4/4/2013 10:30
AS	271	7.5	484	4/4/2013 10:30
BS	275	12	1123	4/5/2013 23:43
AS	297	11	1057	4/5/2013 23:43
BS	284	4.7	64	4/8/2013 14:13
AS	276	2.1	0	4/8/2013 14:13
BS	258	5.6	192	4/10/2013 13:35
AS	275	6.2	319	4/10/2013 13:35
BS	311	4.4	55	4/11/2013 7:33
AS	7	3.3	0	4/11/2013 7:33
BS	121	5.8	162	4/15/2013 17:00
AS	143	4.5	66	4/15/2013 17:00
BS	298	9.8	751	4/17/2013 7:21
AS	297	2.9	548	4/17/2013 7:21
BS	301	8.6	712	4/18/2013 2:04
AS	301	9.1	867	4/18/2013 2:04
BS	132	9.4	945	4/18/2013 11:00
AS	141	9.7	917	4/18/2013 11:00
BS	84	9.2	521	4/22/2013 7:00
AS	88	8.8	469	4/22/2013 7:00
BS	117	10.7	862	4/22/2013 13:00
AS	115	10.1	887	4/22/2013 13:00

Attention is called to the data points inside the box between 8 and 12 meters/second. This is the range where the noise level is most likely to be in violation. At wind speeds less than 8 m/s the noise level is too low to overcome the 10 dB(A) above ambient limit. And above 12 m/s the sound power from the wind turbine flattens out while the wind is creating excessive ambient noise.

The study contains weather data sets for 13 monitoring periods. Each data set contains wind speed data and average turbine output power per turbine.

These data* were copied into a table used to plot power output as a function of wind speed. The field labels:

- "BS/AS" Refer to the original fields "WT + Background Before Shutdown, WT + Background After Start."
- The field "WD" refers to "Met Tower 50 meter Wind Direction (degrees)."
- The field "WS" refers to "Met Tower 62 meter wind speed (m/s)."
- The field "WT Power" refers to "Average Turbine Output (kW per turbine)."
- The field "Date" is taken from the title of each Weather Data table.

*The data is contained in tables 8, 10, 12, 15, 17, 20, 22, 24, 26, 29, 31, 33, and 36 titled "Weather Data."

Rand Acoustics to M. Fairney re Hoosac Wind Facility
 August 19, 2013
 Page 6

Attachment 2. Ambient background sound level measurements made at other wind turbine sites in Massachusetts.

Ambient background sound level measurements made at other wind turbine sites in Massachusetts has found noise levels less than 30 dBA, see **Table 1** below. Save Cohasset, which is still only proposed (and in a lawsuit for potential noise impacts), all of these wind turbine facilities have created a nuisance with widespread complaints, appeals to stop the noise, and threats of legal action.

Table 1. Representative minimum L90 sound levels at wind turbine sites.

Location	Date	Context	L90, dB(A)
Cohasset	March 2012	Peer Review Noise Survey	27
Fairhaven	May 2013	Post-op MassDEP Test Report	28
Falmouth	May 2012	Post-op MassDEP Test Report	27
Kingston	April 2013	Independent Test Report	29
Scituate	April 2008	Preconstruction Report	29

Sources:

Ambrose, S., Rand, R., Advisory Letter – Noise, TTOR Project, Cohasset, MA, April 2012.
 MassDEP, Interim Test Report, Fairhaven, MA, May 2013.
 MassDEP, Attended Sampling of Sound from Wind Turbine #1, Falmouth, MA, May 2012.
 NCE, Inc., O'Donnell Wind Turbines Noise Evaluation, Kingston, MA, 23 April 2013.
 Guldberg, P., Acoustic Study of Three Wind Turbines, Scituate, MA, April 2008.

Rand Acoustics to M. Fairney re Hoosac Wind Facility
August 19, 2013
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Attachment 3. Allegheny Ridge Wind Farm Sound Monitoring Study, RSG, May 2009.

Excerpt illustrating RSG's knowledge in 2009 of the highly annoying character of wind turbine noise. Investigations were voluntary according to the report as shown below. No similar acknowledgement or analysis was found in the RSG 2013 Hoosac report, which is also understood to be a voluntary study by the Hoosac owner to investigate noise levels.

To investigate the low frequency component of the swooshing further, a voluntary visit was made to the Batdorf residence after the on-call visit at the Reilly residence. One second equivalent sound pressure levels were around 40 dBA and 55 dBC. It was noted during the voluntary visit by the RSG representative that the low frequency component of the swooshing sound seems much louder than the sound level meter was registering and could be described as highly annoying.

To illustrate the difference between the low frequency swooshing components heard on February 16 and a more normal low frequency swooshing component, two different sound files were analyzed using a spectrogram. A spectrogram is a colored graph of the sound that was recorded that shows both the frequency and the relative level of the sound. Time is represented on the horizontal axis in seconds, frequency is represented on the vertical axis in hertz, and the relative level of the sound is represented by the color scale. Blue shades are lower levels and yellows and red shades are higher levels.

The spectrogram of a normal swooshing sound that wind turbines make is shown in Figure 28 and the spectrogram of the swooshing sound that was experienced at the Reilly residence on February 16 is shown in Figure 29. The spacing of the vertical red lines represent the beating of the swooshing sound. The lower half of the graphs represents the sound at low frequencies between 0 and 30 Hz. The upper half of the graph extends up to 200 Hz. The graphs are not calibrated to so the actual numbers on the color scale are not accurate, but it does show the relative level difference between frequencies.

BROWN & BURKE
 ATTORNEYS AT LAW
 152 Spring Street- P. O. BOX 7530
 PORTLAND, MAINE 04112
 TELEPHONE: 207-775-0265

RUFUS E. BROWN
 M. THOMASINE BURKE

EMAIL: RBROWN@BROWNBURKELAW.COM
 EMAIL: TBURKE@BROWNBURKELAW.COM

April 29, 2013

VIA Electronic and U.S. Mail

Robert Foley, Chair
 c/o Cynthia Bertocci, Executive Analyst
 Maine Board of Environmental Protection
 17 State House Station
 Augusta, ME 04333-0017

Re: *Remand Proceedings for the Saddleback Ridge Wind Project*

Dear Chair Foley and Members of the Board:

Friends of Maine's Mountains and the other appellants in the Law Court case of *Friends of Maine's Mountains v. Board of Environmental Protection*, 2013 ME 25, -- A.3d--- (the "Law Court case" or "decision") object to the "Suggested Procedure" for addressing the remand required by the Law Court case circulated by Ms. Bertocci by email dated April 19, 2013 and appended to the Board Memorandum on this subject dated May 2, 2013, on jurisdictional grounds. As pointed out in the Board Memorandum at 2, the Law Court decision "requires changes to the application" of Saddleback Wind LLC to account for the 42 dBA nighttime noise limit mandated by the Law Court decision. Under applicable statutory provisions, the Commissioner, not the Board, is the initial decisionmaker for any and all license application amendments for wind projects, including the one required by the Law Court decision.

The Law Court decision at ¶17 states that "[w]e vacate the Board's order and remand for further review using the 42 dBA nighttime sound level limit as introduced by 2 C.M.R. 06 096 375-15 § 10(I)(2)(b) (2012)." The Law Court decision did not specify who should conduct the review, but it did point out that for wind projects the Commissioner has the sole responsibility for making "expedited wind energy development decisions" as the primary siting authority with the Board's role limited to "conduct[ing] appellate review." *Id.* at ¶6.

The statutory basis for this allocation of responsibility cited by the Law Court decision is 38 M.R. S.A. §341-D(2) (removing jurisdiction from the Board for making initial licensing decision for wind projects) and §341-D(2)(D)(providing for review of the administrative record of the Commissioner on an appeal), enacted by the Wind Energy Act. *Id.* See also, 38 M.R.S.A. §344(2-A)(A)(1) (The Commissioner may not ask the board to assume jurisdiction of an application for any permit or other approval required for an expedited wind energy development....").

April 29, 2013

Pg. 2

The limitation of the Board's role to appellate review is confirmed by the *Report of the Governor's Task Force on Wind Power Development* (February 2008) at 21, which states that the Wind Energy Act proposal (adopted by the Legislature) intended to "[m]ake the Commissioner of DEP responsible for issuing all original permits for wind power projects," limiting "the BEP function [to] an appeals board."

The final leg of the statutory analysis is 38 M.R.S.A. §344, which specifies how applications for wind projects are to be processed. Section 344(2-A)(A)(1) states that only the "[C]ommissioner shall issue a decision on an application for an expedited wind energy development." Critically, Section 344(9) declares that, for purposes of Section 344, an "amendment" to an application "is considered an application that, unless specifically exempted by law, is subject to a decision by the department" meaning the Commissioner only. There is no specific exemption in the law allowing the Board to take jurisdiction from the Commissioner on application amendments.

The suggestion in Gordon Smith's letter to the Board on April 9, 2013, that the new Noise Report for the Project submitted with his letter can be considered "supplemental evidence" under the Board's procedural rules, is an invitation to ignore the mandates of the statutory scheme. "Supplemental evidence" can be taken by the Board in defined circumstances on an appeal of the Commissioner's decision, similar to the authority of the Superior Court to take "additional evidence" in an appeal under the Maine Administrative Procedure Act in defined circumstances. In this case there has been no decision yet by the Commissioner on an amended application. In fact we are not aware that the Applicant has even submitted an amended application.

Based on the foregoing, the law is clear. The Board, as an appellate body, cannot assume jurisdiction over a license amendment, any more than the Superior Court could entertain license amendments on remand from the Law Court of a reversal of decision by the Board or Commissioner on a license other than a wind project. Under the amendments enacted by the Wind Energy project, only the Commissioner can do that. The procedure mandated by the Wind Energy Act is for the Applicant to submit an amendment to its application to the Department, meaning the Commissioner, for the Department to conduct a peer review of the amendment, for the Department to then issue a draft decision, with the normal time for comment, and then for the Department to issue a final decision, which can then be appealed to the Board by the Appellants. Any departure from this mandated process in the nature of a shortcut, as urged by the Applicant, will render the license defective on jurisdictional grounds.

I would be happy to address this issue further at the Board's May 2, meeting.

Sincerely,



Rufus E. Brown

REB/

cc: Commissioner Patricia Aho
Assistant Attorney General Peggy Bensinger
Gordon Smith, Esq.
Clients

Burke, Ruth A

From: Alice Barnett <mckaybarentt@gmail.com>
Sent: Monday, September 16, 2013 9:13 AM
To: Burke, Ruth A
Subject: Comment SRW remand DEP draft
Attachments: Saddleback Ridge Wind remand DEP draft comment9162013.docx

Please read attached file. thank you

Alice McKay Barnett P.O.Box 588 Carthage, Maine 04224

Saddleback Ridge Wind Remand DEP Draft

G. Cumulative Impacts. The applicant must provide the following information: (1) Identify any wind projects proposed by the applicant or other applicants which are existing, have been approved, or for which applications have been submitted, at the state or local level that would be within eight miles of any portion of any SRSNS within eight miles of the proposed

My testimony to committee on LD 1147



The image is manipulated from a photo simulation in Saddleback Ridge Wind project application. The photographer was on Mount Blue summit in Weld Maine. The first towers are the actual locations set by Patriot Renewables in their photo. The second towers are my simulation of where I think they will be on Colonel Holman Mountain in Dixfield, Maine. The third set of towers, a viewer will

see, is on Canton Mountain looking south. Mt Blue Summit shows 3 purposed projects.....Spruce Mountain Wind is already in view, but it is outside the 8 mile limit.

Alice Mckay Barnett 22 hikers were shown a photo simulation

Alice Mckay Barnett they were not told about accumulative projects

3. Evaluation criteria.

- A. The significance of the potentially affected scenic resource.
Mt. Blue Park = 60,000 visitors annum.
- B. The existing character of the surrounding area is undulating, curvy, glacial worn, forested, sugarloaves.
- C. The expectation of the typical viewer = wilderness.

The image shows the cumulative scenic impact of three developments (Saddleback Ridge Wind, Timber Winds, Canton Mountain Wind) proposed by one WIND company: Can you imagine what the night sky will look like? Mt Blue Summit shows 3 purposed projects.....Spruce mountain is already in view, but it is outside the 8 mile limit.

LD 1147 An Act To Protect Maine's Scenic Character. Alice Mckay Barnett Carthage Maine

Thank You

Burke, Ruth A

From: Alice Barnett <mckaybarentt@gmail.com>
Sent: Monday, September 16, 2013 9:18 AM
To: Burke, Ruth A
Subject: SBR remand DEP draft comment 4
Attachments: Saddleback Ridge Wind remand DEP draft comment 4.docx

please see attachment. thank you

Saddleback Ridge Wind remand DEP draft. Comment 4

Alice McKay Barnett P.O.Box 588 Carthage, Maine 04224 9/16/2013

D. The reduction in electrical rates among all classes of Maine ratepayers, directly attributable to and expected from the proposed wind energy project;

Cupracs addressed this issue with Passadumkeag project to BEP

Who are the PPAs? Looks like Connecticut has Mandate to buy WIND power generated in Maine. List?

ONSHORE WIND.....They get a PPA at prices double what ISO-NE arranges for wholesale. They get tax equity at 30% of cost. They get REC's which fluctuate between 2 cents and 5 cents per MW produced. They get to sell their depreciation with 50% of value allowed in the first year of operations. You sucker a town to allow these and you recoup 80% of your development costs the first year alone. So you target podunk towns who need revenue. You make almost 9 to 13 cents per kWh on the electricity you do produce and you get credited for that amount even though the grid loses 20 to 28% in transmission losses.

Section 28. Tangible Benefits. The applicant must provide a plan for establishing the environmental and economic improvements or benefits to the citizens of Maine attributable to the construction, operation and maintenance of the proposed wind energy development.

Thank You

Burke, Ruth A

From: Alice Barnett <mckaybarentt@gmail.com>
Sent: Thursday, September 12, 2013 9:08 AM
To: Burke, Ruth A
Subject: comment Saddleback Ridge Wind remand
Attachments: Alice Mckay BarnettBEPcomment.docx

Hello, I hope you can open attachment. Thank You, alice McKay barnett

Alice McKay Barnett P.O.Box 588, Carthage, Maine 04224

September 12, 2013

Comment on Saddleback Ridge remand.

Because of a plumbing violation; I do not exist.

DEP has called my home a "recreational" vehicle so that the WIND developers can erect a 500 foot turbine in my back yard. Definition of a recreational vehicle is it can be towed down a highway. My home cannot move down a highway. It has a 17 foot pitched roof and a 20 x 30 foot insulated, heated addition attached to it.

We live there.

We haul water and walk to the "pit privy". We have solar panels for electricity and wood for heat.

If any folks in Maine use an outhouse, "pit privy" and you do not have an HHE-200; you do NOT exist. Do not pay taxes on your seasonal residence. It is unprotected.

Nadia Nichols "Your land is not a recreational vehicle. This is illegal taking by the wind developers. You cannot use that land once they've put up their turbines. They've stolen it from you."

September 2 at 8:19pm · Unlike · 1

Townsend, Erle <Erle.Townsend@maine.gov> Jun 20

to me

Alice –

The definition of recreational vehicle talks about a RV being “primarily designed to provide temporary living quarters” (see below). The removal of the axles and the addition of the roof are after-market modifications. Also there is nothing in the record to show that the trailer (and additions) is there legally – no building permit or other documentation from the town, and no HHE-200 for the privy.

18-A. Recreational vehicle. "Recreational vehicle" means a vehicle that is either self-propelled or towed by a consumer-owned tow vehicle, is primarily designed to provide temporary living quarters for recreational, camping or travel use, complies with all applicable federal vehicle regulations and does not require special highway movement permits to legally use the highways. "Recreational vehicle" includes motor homes, travel trailers, fifth-wheel trailers and folding camping trailers.

Erle Townsend

Environmental Specialist - Division of Land Resource Regulation

Department of Environmental Protection

17 State House Station | Augusta ME 04333

[\(207\) 991-8078](tel:2079918078) | Erle.Townsend@Maine.gov



This structure has been in place since September 2010. We have tried to have the selectmen of Carthage assess this structure for tax purposes. I traveled to the town office on assessor day, April 1, 2013, to make Carthage selectmen aware, once again, of our structure. It is roughly 20 x 30 feet living space. We supply our electricity with solar panels, our gray water is piped over the banking and we use an outhouse for human waste.

Our friends and neighbors have watched as this structure evolved over the last 3 years. One day this going to be our permanent living quarters, right now it is a seasonal home. We have used this property as an overnight destination for 10 years.

Alice and Troy Barnett Range NO. 7 LOT NO. 11 town of Carthage, Franklin County Maine

Paula Kazianian - neighbor - 4/29/13
 Dale [unclear] - neighbor - 4/29/13
 Albert Zome neighbor - 5-3-13

SUMMARY LISTING OF NOTIFICATION INFO

.....
 Notification Number:430601 Date of data entry: 12/07/2010

Land Owner Information	Designated Agent Information
Alice Barnett	Keith Howard
	P.O. Box 3
	Dryden, ME 04620
	USA
Land Owner Phone:	DA Phone: 779-7833

.....

Harvester Information	Licensed Forester Information
Keith Howard	
P.O. Box 3	
Dryden, ME	
04620	
USA	
Harvester Phone: 779-7833	Licensed Forester Phone:

.....

General Notification Information:
 Harvest Town/County: Carthage / FRANKLIN
 Town Tax Map Location: Map: Plan: Lot:
 Nearest Road: rt 3
 Harvest Begin: 07/01/2010 Harvest End: 09/20/2010
 Acres owned in Maine:57 Land Acquired Before 2 Jan 2005: yes
 Parcel Size: 57 Year Land Acquired:
 Harvest Acres: 4 Season of operation: yr
 Clear Cut over 20A.: no Within 250 ft of water: no
 Clear Cut over 75A.: no
 Converting the Land: yes Convert Acres: 3
 Convert To: house lot Have Permits needed: NE
 Land in Free growth: no Harvest Follows MGT Plan:?

END OF SUMMARY LISTING

Burke, Ruth A

From: Alice Barnett <mckaybarentt@gmail.com>
Sent: Friday, September 13, 2013 9:36 AM
To: Burke, Ruth A
Subject: comment Saddleback Ridge Wind remand draft.
Attachments: September13comment SRW draft.docx

Please find attachment...thank you alice McKay barnett

September 13, 2013

Comment Saddleback Ridge Wind draft.

Alice McKay Barnett P.O.Box 588 Carthage, Maine 04224

Two emails were received from Ms. Leola R. Ballweber on June 11, 2013, alleging that the Spruce Mountain Wind Project in Woodstock, Maine, permitted under Department Order #L-24838-24-A-N & L-24838-2G-B-N, has significantly exceeded the modeled noise levels, and also exceeded the noise levels allowed in the license. However, Department records indicate that both complaint investigations and noise monitoring at Spruce Mountain have failed to reveal any violations of the noise limits allowed under the license for that project. Page 10. Of SBW draft.

<http://woodstockwindordinance.blogspot.com/>

In this document you will read of 19 complaints from Spruce Mountain Wind in Woodstock, Maine.

Following is an article about complaint protocol.

<http://www.bethelcitizen.com/news/news/2012/07/26/spruce-mt-wind-neighbors-complain-aircraft-sound/16997>

“he was told by the Maine Department of Environmental Protection that there is little hard data available from a noise-monitoring device maintained by the wind project owners, because the wires were chewed through by mice.”

Also, the first hotline numbers given to landowners was the wrong number.

The developer is not responsible enough to handle noise complaint protocol.

It would be better if the DEP handled the initial hot line. All complaints would be recorded.

Thank You

Michael Bond
 P.O. Box 189
 Winthrop, ME 04364
 (207) 377-3000 *bondma@cs.com*

September 17, 2013

Robert Foley
 Board of Environmental Protection
 Department of Environmental Protection
 State of Maine
 17 State House Station
 Augusta, ME 04333-0017

Re: Saddleback Ridge Wind Project

Dear Mr. Foley and Board and Department Members,

With regard to the above proposed industrial wind project, please find following my comments. They are based on 30 years' experience in the utility and energy business, as the former CEO of an international energy company, as an advisor to over 70 of the world's largest utilities and energy companies, as a long-term proponent of renewable energy, and as an active Maine citizen whose family has been in our beloved State since 1698.

There are so many problems and inaccuracies in the Patriot Renewables application for this project, and in the BEP's incautious approval of it, that one could not cover them in one letter. To that end, I will simply summarize the major faults in the decision process, particularly as regards noise impacts, in the hopes that BEP will cease acting as a partner in the destruction of Maine by the out-of-state industrial wind sector and their paid-for-hire "environmental" groups, but will instead act in the interests of the people of Maine.

1. This proposed project will generate almost no usable electricity. Please note the following simple calculation, which any reasonable utility manager would utilize to determine how much the "nameplate capacity" needs to be reduced by real factors:
 - a. Nameplate capacity = 33 MW
 - b. Probable capacity factor of 24% = 7.9 MW of actual potential production
 - c. Transmission loss of 9% = 7.2 MW
 - d. Curtailment factor (at least 30%) = 5 MW
 - e. Fuel replacement for Spinning Reserve (28%) = 3.6 MW
 - f. Power purchased to run turbines when no wind (2 MW) = 1.6 MW
 Thus the entire amount of usable electricity produced by this massive project will be approximately 1.6 MW – which could easily be produced by a couple of backyard generators

without the colossal impacts of this proposed project on Maine's scenic resources, tourism, outdoors recreation, property values, tax revenues, human health, and wildlife resources.

2. Neither the Gamesa turbines or the GE 2.75 MW turbines have been correctly tested for sound impacts. The basic problem with sound issues on these turbine types (both the GE 103 series turbines as well as the Gamesa turbines), is that inaccurate sound data has been used. A primary factor in establishing the extent of wind turbine noise has not included sufficient analysis of wind direction. Given the prevailing winds atop Saddleback, and their downwind destinations, the 42 dBA sound maximums will be exceeded on a frequent level. Thus neither of the proposed turbine types will meet the 42 dBA limit.
3. Noise impacts: RSG is closely allied with the wind industry, and its Noise Impact Study of 2010 is severely biased in favor of the project. The sound level prediction model developed by RSG is similarly biased, particularly as regards downwind propagation and the reliability of meteorological data "collected from the project site." There is no validation of this data from an independent source, nor is there for the statement, "instances of high wind shear occur approximately 2% of the time for all hours." The latter is a completely unsubstantiated statement.
4. Public comment: this public comment period is insufficient. It is notable that a United Nations tribunal in August 2013 ruled that the entire wind project industry of Great Britain is illegal because it gave insufficient weight to community concerns or environmental impacts. The same can surely be said of this proposed project.
5. Tech Environmental is not "an independent noise expert", but rather is like RSG closely allied with the wind industry. Under no circumstances could Tech Environmental's findings, with the company's pro-wind bias, be considered to be objective. Therefore its statement that "the technical information in the RSG memo and the Verrill Dana letter provide a full reply" is biased and inaccurate.
6. The post construction operation compliance testing, in the unlikely case that the proposed project is ever constructed, should be done at more than two locations.
7. Visual quality analysis: this proposed project will have a substantial negative impact on scenic quality in the region. The 2010 surveys collected by the applicant are now three years out of date. Since that time, the visual impacts of industrial wind projects, and the way they are perceived by hikers, outdoors recreationists and others has substantially changed. Industrial wind projects are now viewed by the majority of recreationists as "very ugly" and "out of context with a beautiful location." Moreover, most wind turbine towers are far larger than the standards of 2010. Thus the 2010 surveys are no longer relevant.
8. As turbine towers continue to grow larger, the 8-mile limit for impact analysis is also no longer sufficient.
9. The visual impact of this proposed project on Mount Blue State Park and the six Great Ponds located within the 8-mile radius of the project is therefore incorrectly analyzed. The Table 1

of the Draft Board Order is completely subjective in favor of the project, including the ridiculous statement that the impact of the proposed project on Mt. Blue Summit is "Low-Medium", and even worse, that its impact on Bald Mountain is "Low". These subjective judgments are out of touch with modern landscape architecture and land planning guidelines.

10. Migratory birds, bats and raptors: The fact that deaths of these species from wind turbines will possibly be lower than from mountains closer to the coast is not a quantitative statement, nor is the totally unsubstantiated statement that such impacts "are likely to be low." On its website, Tetra-Tech boasts of "having completed more than 600 wind projects." Tetra-Tech's findings, with the company's pro-wind bias, cannot under any circumstances be considered objective.
11. Air Quality: the statement in the Draft Board Order that "the project is not expected to have an adverse effect on air quality" is completely wrong. Because wind is so erratic, every wind project must have a backup fossil fuel or other "fixed" generation source operating full time to balance out fluctuations in any power it might provide to the grid (this requirement is called Spinning Reserve). In many cases, industrial wind projects actually INCREASE fossil fuel use and greenhouse gas emissions because of this issue. Germany recently announced that its fossil fuel use increased in 2012 over 2011 because more wind projects were brought on line. The same has been found in numerous areas of the US and worldwide. In addition, industrial wind projects take an enormous amount of power FROM the grid, to keep blades turning when the wind is not blowing. For example, the three largest power CONSUMERS in Maine are industrial wind projects. Each consumes more power than the large pulp mill in our state.
12. Shadow flicker: the entire section 23 of the Draft Board Order is inaccurate with regard to shadow flicker. The WindPRO software has been challenged in many areas as being completely insufficient, leading to many pro-project decisions that would not hold up in court.
13. Decommissioning: this section of the Order is also very misleading. It is well known that turbine efficiency declines 8-12% per year. Salvage values are substantially overestimated. For example, in Massachusetts earlier this year, the cost to dismantle one turbine tower was \$14 million.
14. Tangible benefits: these do not come close to matching the long-term destruction of the area's tourism resources, including those as far away as Mount Blue State Park. Recent studies indicate an average drop of 43% in tourism within sight distance of industrial wind projects.
15. The Board's conclusions (based on so-called "findings of fact", many of which are erroneous and biased strongly in favor of the proposed project) are not correct. The project will have "an unreasonable adverse effect on scenic character and existing uses related to scenic character". It will cause "unreasonable erosion of soil and sediment." It will "unreasonably harm" wildlife habitat, by slaughtering birds and bats and rendering their habitat and migration habitat unlivable.

These are just a few comments about a very unwise decision by the Board which, if maintained, will have a long-term, permanent impact on the people of Maine and the resources the Board is sworn to protect.

Sincerely yours,

Michael Bond

Burke, Ruth A

From: Nadianichols <nadianichols@aol.com>
Sent: Tuesday, September 17, 2013 8:35 PM
To: Burke, Ruth A
Subject: Attn: Robert Foley, Saddleback Ridge Wind project

Dear Robert Foley,

I wasn't going to bother to write again regarding the Saddleback Ridge Wind project, figuring there was no point in it, and there probably isn't, but in all this wind turbine madness there must be a shred of sanity existing somewhere. I've lived off grid for nearly 30 years and it's hard to believe how naive most people are about renewables, and how easily they are brainwashed or how cheaply they are bought off by the wind industry. I've seen the town of Carthage ripped apart by this wind project. This same thing has happened to every other town that these wind developers target. I witnessed the passionate and emotional public "meeting" in Dixfield, held by the DEP, which didn't grant a hearing because...I have no idea why. Because we're just dumb Mainers?

Rural Maine residents are being told they must live within 1500 feet of these massive machines per order of former Gov. Baldacci's so-called emergency legislation to expedite wind power on our mountains, while coastal residents are being promised 20 mile set backs from off shore wind "farms" in order to preserve their quality of life. This is nothing less than blatant discrimination. Also, no logical explanation of this emergency legislation has ever been given. Are we to sacrifice our quality of life in order that Connecticut can meet their renewables mandate?

Allowing the wind developers, in this case Patriot Renewables, to be in charge of monitoring noise output of their turbines is something I just cannot comprehend. How will these sound levels be enforced? It is well documented that turbine noise increases as the turbines age. Has this been figured into the sound modeling? I didn't notice that it was. It is also well documented that sound modeling itself is far from a perfect science.

Tom Carrol, PR's public relations man, stood in front of Carthage town folk almost four years ago and announced that Saddleback Mountain had average wind speeds of 45 miles an hour, a statement that brought loud laughter from the residents. Then Tom Carrol stated there was a MET tower up on Saddleback that had been and was continuing to monitor wind speeds 24/7. What he didn't know was that the MET tower had been collapsed on the ground for at least a month, yet he told us they were receiving data on a daily basis. Everything, all their data, is "proprietary" information, to be given out only when it suits them. As taxpayers, we're ponying up 80% of their construction costs. We deserve to know the truth, and the truth is really, really hard to ferret out in the wind industry.

As I understand from reading their new proposal, Patriot Renewables has bought off the receptors with bribe money in order to allow their project to be built. I hope no children are living in these dwellings. I also hope a miracle occurs and the project doesn't get built, and Saddleback Mountain stands as God created it, not exploited and industrialized for the financial benefit of one company. I also hope Mount Blue State Park remains one of Maine's crown jewels, a beautiful natural treasure for the people of this grand state to enjoy for many generations to come.

Sincerely,

Penelope Reed Gray
Registered Maine Master Guide
270 River Road
Carthage, Maine
Harraseeket Inn
162 Main Street
Freeport Maine

Peggy Lucas
96 Loon Cove Lane
Winthrop, ME 04364
peggy@bondcarr.com

September 17, 2013

Maine Department of Environmental Protection
Maine Board of Environmental Protection
17 State House Station
Augusta, Maine 04333

Dear Board and Department,

I would like to state my concerns about the unfortunate possible utilization of Saddleback Mountain for an industrial wind project. My family has known and recreated in that area for generations, and out-of-state investment banks and wind companies, with the Board's and Department's approval, now plan to turn it into an industrial site. This is disgusting, and not in the tradition of Maine.

Therefore I request going forward that as a least step in the direction of protecting Maine (that is your responsibility, is it not?), that you institute the recent new application requirements adopted September 9, 2013 by DEP regarding wind projects. As the courts decided that the dBA requirements should be applied retroactively, these DEP requirements should be applied to the proposed Saddleback project as well.

Specifically this would include "projected impact on electrical rates in the host community" and "the reduction of electrical rates among all classes of Maine ratepayers" resulting from the project. Other requirements to be applied to Saddleback include the decommissioning costs and funding, scenic impacts not just on SNRS but also other places that "have the potential to be defined as SRSNS, such as conservation easements and outstanding natural and cultural resources". This would also include assessment of the "visibility of the generating facilities and associated facilities from each SRSNS identified based on the topographic viewshed for the highest point of each major project element."

This would include the viewshed from Mount Blue State Park and Bald Mountain. It would require analysis not only of the turbine hub visual impacts but also tip of the fully extended blade, in both winter (no leaves) and summer conditions.

Please also exclude commercial logging of Saddleback as a development. It is not. Please also include user surveys from other industrial wind developments, testimony from

other users of the proposed project area, and photo simulations not prepared by the developer (they minimize the height of the towers and blades).

Please also consider and analyze the cumulative effects of this proposed project and other proposed and actual projects, as well as their lack of transmission access. In addition, according to the new DEP regulations, please insure that "the applicant has the burden of proof of demonstrating that the proposed project will not cause an unreasonable adverse effect on scenic character or existing uses related to scenic character."

Please keep in mind that you work for the people of Maine, not for out-of-state billionaire wind companies, investment banks, and their local paid lobbyists like the Sierra Club, Maine Audubon and Natural Resource Council of Maine.

Thank you,

Peggy Lucas