

July 5, 2016

Vermont Public Service Board  
112 State Street  
Montpelier, VT 05620

**Re: Comment response to Department of Public Service regarding Temporary Sound-Level Standard**

Dear Public Service Board Members,

On Page 2 of the Department of Public Service (DPS) letter they state: "Although the Department's understanding is that infrasound and low frequency noise are components of wind turbine sound, and its understanding of these two components continues to evolve, at this time the Department concludes the levels are not significant enough to conclude that they pose a risk to public health and safety."

How does the DPS make this conclusion? What are they basing their statement on?

In response to a Motion for Relief by Melodie and Scott McLane, neighbors of GMCW project they state: "The Department has no reason to think that the sleep disturbances and other health impacts cited by the McLanes are fabricated or exaggerated. Nor does the Department have cause to question the veracity of the McLanes description of the range or severity of their health symptoms. The same can be said of the complaints the Department has received from other residents living near the GMCW and other commercial wind sites. In short, the limited number of GMCW complainants contacting the Department does not support a finding of a public health impact. It is, however, indicative of a significant impairment of the quality of life for some nearby residents."

Think about the irony of these statements. The sheer contradiction of the statement regarding the McLane's motion for relief is very disturbing. The DPS knows very well and freely acknowledges that people are suffering from industrial wind noise. Why haven't they requested safety measures to be put in place?

The McLane's live 3800' from the GMCW project and they are experiencing a significant impairment of their quality of life. The models by GMCW prior to construction showed that the project levels at the McLane's house would be 40 dBA or less averaged over an hour. Based on what we now know from the McLane's own monitoring the sound is often above 40 dBA. We can see that the modeling was wrong. The McLane's and other neighbors have found that the existing level of 45 dBA most commonly used in Vermont is not protective to neighbors of a wind project. Swanton Wind project is proposed using even larger turbines that will be as close as 1,800 to 2,000 feet from homes. It is time to apply the lessons learned on Georgia Mountain, Lowell, Sheffield, and elsewhere. It is irresponsible to allow the same mistakes to be made given the evidence at hand. The Comprehensive Energy Plan emphasizes the importance of learning from our experience and making the necessary adjustments in standards based on that experience. Now is the time to make those adjustments.

On page 4, section (b) and page 7, section (a) the Department proposes to not include indoor sound monitoring as part of the temporary rule. Again, look at the contradiction to the above acknowledged

suffering by the McLanes and others while trying to rest in the comfort of their homes to deal with the daily stresses of life. The Department states further on page 7(a) that their experience with enforcement of an indoor limit raises questions as to the limit's effectiveness and overall enforceability. What does that even mean? If they were serious about protecting Vermonters health and welfare an indoor limit could easily be accommodated by proper decibel limits and/or setbacks from homes and businesses.

That is why we propose 35 dBA LMax outside, and 30 dBA LMax interior. If the technology cannot meet these standards on existing and proposed sites, given the proximity to residences, the only other option for protecting public health is to follow other states in setting much safer setbacks. Of course, you would have to determine what setback distance would equal the recommended decibel setting above. Other areas such as: Umatilia County, Oregon, and Riverside, California have setback ordinances of 10,561 ft. Catarunk, Maine and Moscow, Maine have setback ordinances of 8,000 ft. , and Montville, Maine and Buckfield, Maine have 13 times the turbine height, which is 6,500 ft. for 500 ft. turbines.

On page 5 the Department states monitoring shall be conducted under the direct supervision and control of a State of Vermont agency or agencies designated by the Board. It's pretty clear why we've arrived at this point. There are enough people angry, disillusioned and fed up with how the State has been (or not been) "supervising" industrial wind and even solar development. Monitoring needs to be done by an outside, independent third party that reports to all parties involved, i.e., the State, the CPG holder and the affected residents. Everything moving forward must be clear and transparent.

**Re: Comment response to Renewable Energy Vermont regarding Temporary Sound-Level Standard**

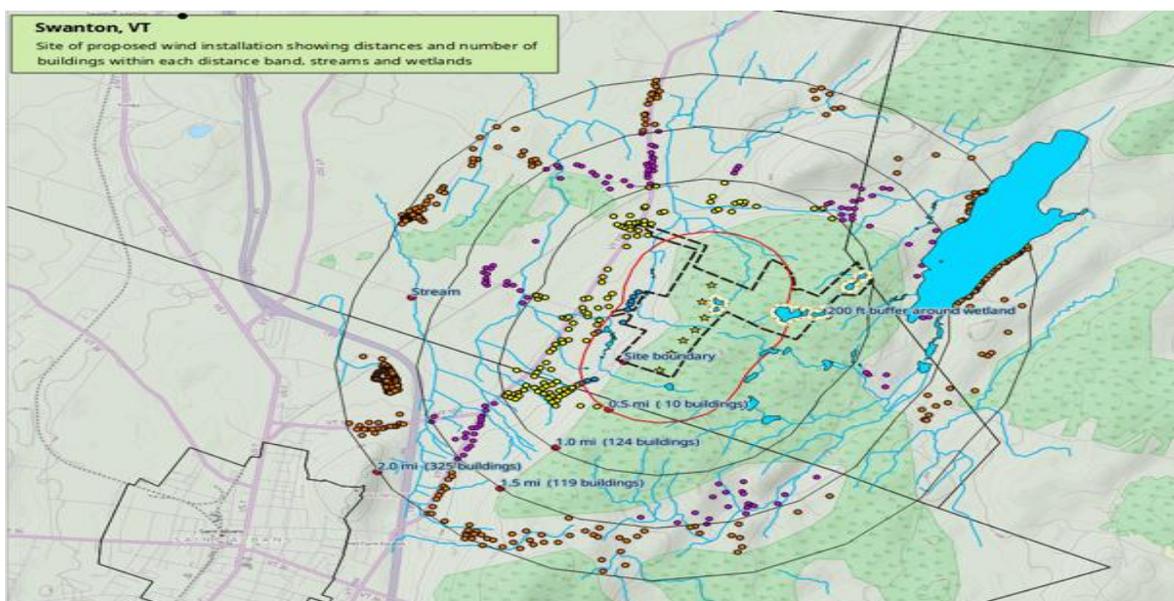
Renewable Energy Vermont's (REV) recommendations are not protective of public health as they claim on page 1, nor are they consistent with the evidence from Acentech's analysis of the Brouha residence, docket 8653.

On page 3(c) REV presumes a residence provides a minimum of 15 dB sound attenuation with the windows closed. We know for a fact from Acentech's analysis of the Brouha residence that, *"For the indoor locations in the second floor west bedroom of the Brouha residence (center of room and around the room), the estimated project-only sound did not exceed 30 dBA with the windows fully closed during any survey, but did exceed 30 dBA with the windows partially or fully open during most of the other surveys. During the summer, a time when windows are most likely to be open, the percentage of time exceeding 30 dBA ranged from 0% (windows partially open) to less than 1% (windows fully open). During the winter, when windows are more likely to be closed, the percentage of time exceeding 30 dBA ranged from less than 6 to 8% (windows partially open) to about 10 to 12% (windows fully open). And during the shoulder seasons of spring and fall, when windows are likely to be open at times, the percentage of time exceeding 30 dBA ranged from about 2 to 6% (windows partially open) and about 10 to 14% (windows fully open)."*

So, is REV proposing to meet the standards by imposing the burden on homeowners of never opening their windows again whenever the wind is blowing? Instead are we to use air conditioning, an unhealthy, costly form of wasteful energy use? And what about having a home buttoned up tight all year long? It's widely known the health benefits of fresh air and air flow in your home.

On page 3(d) REV states, "The standards in subsection (B) shall not apply to any Residence that is owned or controlled by the CPG holder..." What does it mean that a Residence is "owned or controlled" by a CPG holder? Does control include gag orders? Are there different standards for collateral damage Vermonters than Vermont or out-of-state developers? Or does it imply that developers love industrial wind so much that they don't mind if the dBA readings at their homes spike to 50, or 60, or 70? May I suggest that each developer and State officials stay in the Nelson or Therrien homes for up to two weeks with the turbines running at full speed to get the full effects of what victims either live with or ran away from. If a property is bought out by a developer, like the Nelson's, does that mean that the CPG holder no longer has to meet the requirement at that property? If buyouts are the only way to meet the standards established by the PSB, then developments such as Rocky Ridge where Swanton Wind is proposed and the standard will not be able to be met would need to be bought out. Only if all residents within the "affected zone" agree to be bought out should the development move forward. And how do you know how far the affected area is, with the residents across the pond, knowing that sound travels and increases over water. The sound expert used by VERA, Ken Kaliski from Resource Systems Group (RSG), stated at the Swanton Wind Open House that since we live across water we would subtract the distance of the water for actual "feels like" distance from the turbines.

Will the PSB involve all eligible residents in negotiations to determine their willingness to sell before determining if a CPG can be issued? Or, will residents basically be forced to sell after the PSB approves a CPG? What protection will the standards provide for residents that do not want to sell or be otherwise controlled? 134 buildings will be greatly impacted within 1 mile of Swanton Wind!



As part of the approval process for issuing a CPG sound modeling needs to take place at various locations by an independent third party, over various topographically conditions up to 1.5 miles out for a period of 1 year to cover all seasons and weather conditions. If conditions cannot be met up to that range, all homeowners or businesses within the "affected zone" would have to agree to be bought out. If all agree, the project may be able to move on to the next stage of approval. If not, the project should not move forward.

On page 5(b) the complaint process proposed by REV only reinforces the status quo of putting off dealing with complaints for lengthy periods of time. How does this address the situation when a neighbor calls to state the turbines are iced over and the noise is unbearable? Two days later the CPG holder can get a letter off to the victim. So within 5 days the victim will hear a response that says the developer is investigating it. And it appears the proposal penalizes the victim if they copy and inform the PSB and DPS for the record in addition to the CPG holder. Then, as stated under (B)(3) the CPG holder has another 14 days to submit details of the complaint. Then what, the PSB opens a docket to investigate? That has not worked in the past and it won't work going forward. This is exactly the kind of delay and ineffective enforcement that is souring more and more Vermonters on the State's approach to energy transformation.

To prevent further suffering and continued complaints for future proposed projects we suggest 35 dBA LMax outside, and 30 dBA LMax interior. Sleep disturbance is a serious health issue that is of paramount concern and protecting the interior of a home needs to be a priority. The temporary standard and future permanent standard must be both stricter and enforceable. A Max standard is one that is easier to measure, therefore easier to enforce, allowing for third-party transparent continuous sound monitoring that would shift the burden of enforcement from the neighbors to the State and developers, where it belongs. Violations should be dealt with promptly, increasing the penalty for every successive violation. No standard is worth the paper it's written on unless it is enforced. The current system has allowed developers to not even return calls for up to a week and REV's proposal does not appear much different.

Page 5(C) Investigation Procedure proposed by REV is interesting. They will implement a procedure if each of the following conditions apply:

*(a) the complaint is not a result of abnormal facility operation or maintenance conditions. So, what that means is they can just blame it on some faulty, acting up piece of the turbine. Over the years there have been communities that have complained about the noise of trash truck pick-up too early in the morning, disturbing the peace of residents. Communities implemented various changes to try to accommodate these requests. They changed their order of pick-up, they started 30 to 60 minutes later. What if the trash truck had a big hole in the muffler, making it even louder. Is that an excuse the business could use repeatedly for creating more noise than necessary in the community? Another controversial noise situation that some communities have banned is the use of jake/engine brakes on trucks. I actually believe for safety purposes and by law of the MUTCD that this may be illegal to do, but nevertheless,*

communities have done so due to complaints from neighbors. Rather than strengthen protection, this proposal simply provides a loophole for developers.

*(b) the complaint is filed by the owner of a full-time occupant of a Residence located within 1.5 miles of the facility.* Although this is a positive step that REV is acknowledging that there are complaints as far as 1.5 miles away, with the bigger turbines proposed, complaints will go out even further! There should be no limit on the distance that someone may be able to complain about turbine disturbance.

*(c) Turbine Sound Pressure Levels at the Residence are within 3 dBA of a exterior sound limit set forth in these Rules, as determined under subsection (2) below.* A 3 dBA reduction does mean cutting the noise in half, but would not reduce a 45 exterior dBA to 30 interior dBA noise limit

What does that ending mean? If the monitoring is found to be in compliance during the first year and they don't receive any complaints by year 5 you can never complain? Is there any data on how these turbines perform over the years? What are the facts about break downs, motors wearing, increased noise over time? A complaint process should be valid for the life of the project, period!

There are enough people angry, disillusioned and fed up with how the State has been (or not been) "supervising" industrial wind and even solar development. Safer sound standards need to be implemented or safer setback distances as referenced in our original letter.

Continuous monitoring needs to be done by an outside, independent third party that reports to all parties involved, i.e., the State, the CPG holder and the affected residents. Everything moving forward must be clear and transparent.

**Re: Comment response to Vermont Environmental Research Associates (VERA) regarding Temporary Sound-Level Standard**

I want to thank Martha Staskus from VERA for her letter. It easily confirms our case about their complete lack of concern and utter disregard for the neighbors affected by Georgia Mountain Wind industrial turbines.

VERA's statement regarding the most common questions asked among the many visitors to the site are not unusual, one question being "Where's the noise?" On both tours I've been on the turbines were not running at their full capacity. On October 3, 2015 Georgia Mountain Community Wind held an open house. Bruce and I attended, but first stopped in at Scott & Melodie McLane's on Georgia Mountain Road. The turbines were roaring that morning and after only a few minutes standing on their porch we could feel the "whomp, whomp, whomp" in our chests. Within a very short time we felt uneasy. Several people were there, each experiencing their own symptoms of uneasiness. We do not recall the exact snapshot reading on their professionally calibrated machine, but believe it was around 40 dBA. Strangely, at the top of the mountain for the tour, the turbines were much quieter, except for the motors humming and a light whoosh of the blades which did not appear to be spinning anywhere near as fast as they were earlier that morning. Most notable on the top of the mountain was the shadow

flicker that spread out for miles across the valley. This confirmed our many readings from around the world that you suffer more at a greater distance away from them, downwind, and across open topography. It also confirmed why people who have only taken the time to learn about industrial wind from an open house are not getting a complete experience of the suffering happening for many Vermonters.

VERA states that complaints are uncommon. Do you consider 77 complaints over 3 years uncommon? If sufferers have given up there's a good reason. They realize that their complaint will not be addressed by VERA in a timely fashion and that there will be no consequences for being out of compliance from the PSB. Imagine the exhaustion and futility year after year begging for help and receiving nothing. For your own mental health and welfare, you try to accept the "writing on the wall" and deal with it.

VERA states that the sound "problem" is largely an emotional one, not a health issue. Not only is that inaccurate, it's insulting. It reminds me of Rep. Klein saying earlier this year that victims and those afraid of being the next victims are willy-nilly with emotion. To dismiss people having to abandon their homes or live many sleepless nights year in and year out is cruel and so un-Vermont.

VERA and the DPS cite the 2014 Canada health study. On June 15, 2016 Barbara Ashbee of Mulmur, Ontario, together with hundreds of other Ontarians, sent an open letter to Health Minister Jane Philpott, asking why Health Canada has not insisted wind energy corporations report citizen complaints about noise radiation. Here is an excerpt of that letter:

**"HEALTH CANADA'S WIND TURBINE NOISE AND HEALTH STUDY DESIGN**

Health Canada's wind turbine noise and health [WTNH] study Design 2012 states: "The study will be conducted on a sample of 2000 dwellings **randomly** selected from those located near 8 to 12 WT installations in Canada." [4] [Emphasis added]

Some parents and commentators have advised Health Canada about their concerns for their children. Yet Health Canada excluded children under 18 in its WTNH study. [5] This exclusion has resulted in an unassessed cluster of a vulnerable young population.

As a result of the random selection process, we also note that 93 homes where elderly members of the community lived, were coded "out of scope" because the study subject was over 79 years of age. Despite the fact that it is recognized Canada has an aging population, this vulnerable population cluster was also not assessed. [6]

In addition, it appears that Health Canada's WTNH study did not establish pre-turbine baseline objective measurements to be compared with the measurements taken during the study. Indicators such as cortisol, blood pressure and highly disruptive sleep patterns (HDS) before and after exposure to wind turbines are crucial to assessing true health outcomes. The study design could have included objective measurements in zones where wind turbines were operating, removing the individual(s) from wind turbine exposure for a period of time (30 days or more), followed by a reassessment of the complainant upon return."

Here is the link where you can read the full letter:

<http://www.windaction.org/posts/45348-open-letter-industry-compliance-with-radiation-emitting-devices-act-reda-and-wind-turbine-investigation#.V3ZkTBLrtjo>

VERA cites a 2012 independent panel of experts contracted by the Commonwealth of Massachusetts concluding there is no evidence of health effects that could be characterized as "Wind Turbine Syndrome". Like Vermont, Massachusetts is still in denial, although Falmouth, MA is taking steps to be a more responsible community. The link below is to a story titled: Falmouth wind turbine permit headed for denial. Here is an excerpt: "The Falmouth Zoning Board of Appeals is poised to deny a special-permit application for Wind 1, one of the town's wind turbines, following a Saturday morning deliberation. Four of the five members hearing the permit application needed to vote in favor of the permit and any conditions placed on the turbine's operation to achieve the needed supermajority; only one, Edward Van Keuren, appeared amenable to do so at the end of the meeting." Here is the story link from 3/6/2016 - <http://www.capecodtimes.com/article/20160306/NEWS/160309630>

This five part series discusses residents who are suffering the effects of living with the 400 foot town owned wind turbines. The title of the story is: The Falmouth Experience: The Trouble with One Town's Wind Turbine. Here is the link to learn more: <http://www.wgbh.org/wcai/turbine.cfm>

That is why we propose 35 dBA LMax outside, and 30 dBA LMax interior. If the technology cannot meet these standards on existing and proposed sites, given the proximity to residences, the only other option for protecting public health is to follow other states in setting much safer setbacks. Of course, you would have to determine what setback distance would equal the recommended decibel setting above. Other areas such as: Umatilla County, Oregon, and Riverside, California have setback ordinances of 10,561 ft. Catarunk, Maine and Moscow, Maine have setback ordinances of 8,000 ft. , and Montville, Maine and Buckfield, Maine have 13 times the turbine height, which is 6,500 ft. for 500 ft. turbines.

If people are not suffering symptoms from industrial wind why have the states above set safer setback ordinances? The reason is clear. Industrial wind is negatively impacting people's health and welfare.

Again, we want to thank Martha Staskus and VERA for the affidavits from neighbors they supply. It provides concrete data that even the Cross family at 1.17 miles away can hear the "WHOOSH, WHOOSH" from the turbines. And they state when the air is just right or they are pointed in the right direction, they are a little louder on the "whoosh" noise. What does that mean for the McLane's and their neighbors who are 3,800 ft. from them over open terrain with prevailing south/southwest winds blowing their way? It means their lives have negatively changed forever at their dream home they built with love! The Palmers incorrectly state they are 1/2 mile from the turbines, when in reality they are 2 miles away! Every one of these homeowners affidavits live from 1 to 2 miles away! It confirms the need for setback distances of at least 1 mile or more, depending on topography and terrain.

Vermont has been a positive leader in so many life changing ways. This is your chance to take steps to reverse the growing discourse regarding renewable energy. As mentioned in our original letter and

reiterated below, Vermont ranks 9th in protecting its citizens against the harmful effects of industrial wind.

Worldwide Noise Standards for Wind Turbines - A 3dBA reduction means cutting the noise in half

- 1) France - Below 25 dBA, within residences around
- 2) New South Wales, South Australia, Tasmania, Victoria, and Western Australia - maximum of 35dBA or 5dBA above existing background noise, avg. over 10 min.
- 3) Denmark - 37dBA limit in quiet areas, maximum
- 4) Germany - 35 dBA nighttime exterior
- 5) Sweden - 40dBA sound limit, environments with low background noise may be 35dBA
- 6) NH - not to exceed 40dBA or 5 dBA above background night levels and 45 dBA or 5dBA above background day levels.
- 7) Maine - not to exceed 42dBA at night, over 10 minutes
- 8) Ireland - 43dBA night limit and 45dBA day limit or 5dBA above background noise, with a 35-40 dBA, with a 35-40 dBA avg. over 10 min. in quiet rural or residential areas
- 9) **Vermont** - 45 dBA outside averaged over an hour, allowing decibels to jump to 70dBA every 5 min and still meet the standard. 30 dBA inside, open bedroom window averaged over one hour.

Typical background nighttime noise levels in rural areas of Vermont experiencing wind turbine development: 20 dBA. Complaints are well known to occur when noise levels exceed 10 dBA above background.

Sincerely,

*Bruce & Sally Collopy*

Bruce & Sally Collopy  
Fairfield, VT