BCCRWE Calls for Dismissal of Health Director Chua Xiong's Determination Concerning Shirley Wind

On 10-14-14 the Brown County Board of Health declared the 2.5 MW wind turbines at Duke Energy's *Shirley Wind* project in Brown County, Wisconsin, to be a "human health hazard". That declaration was based on the Board of Health's five years of experience, research, and review of the evidence. On 12-15-15, Chua Xiong, now-resigned director of the Brown County Health Department (a separate entity from the Board of Health) declared that the Shirley Wind turbines are *not* a human health hazard. That declaration came after being in her new position as Health Director for only ten months, and after she conducted an extremely exclusionary review of the evidence and research submitted to her.

Shirley Wind has received global attention, and as such, Chua Xiong's determination has global health consequences. Wind energy proponents are already using, and will continue to use, Chua Xiong's determination to justify the permitting of more irresponsibly sited wind projects like *Shirley Wind.* Health Director Xiong's misguided determination will be responsible for widespread harm to public health if not challenged and ultimately dismissed as lacking validity.

Brown County Citizens for Responsible Wind Energy (BCCRWE) has produced a document (provided below) for the purpose of providing evidence that demonstrates that Chua Xiong's conclusion regarding wind turbines and health concerns lacks validity and that her conclusion was based on a very flawed process by which submitted evidence was selectively reviewed and inconsistently weighed, or ignored altogether. The document demonstrates that Xiong's evidence-review process was fraught with a multitude of failures of due diligence and that her resulting conclusion is without merit.

This document was presented on May 18, 2016, to the Brown County Board of Supervisors, along with the following formal request for action by the Board. A decision is anticipated within the next several weeks:

"BCCRWE formally requests that the Brown County Board of Supervisors review the facts presented and take the necessary steps to have former Health Director Chua Xiong's determination regarding Shirley Wind officially dismissed, and to take action to protect the health of adversely affected Shirley Wind residents."

BCCRWE is requesting that you, the reader, participate in this effort. If, after reading BCCRWE's document, you agree that the evidence presented demonstrates that former Health Director Chua Xiong failed to carry out her due diligence, and that her determination was based on a very flawed process and needs to be officially dismissed, please share your thoughts via email with the following Brown County officials. Please also ask these officials to share your email with their fellow board or committee members.

Troy Streckenbach, County Executive (top county official who will hire the new Health Director, now that Chua Xiong has resigned)
Streckenbach_TJ@co.brown.wi.us

Patrick Moynihan, Chairman: Brown County Board of Supervisors
Moynihan_PW@co.brown.wi.us

Eric Hoyer, Chairman: Brown County Human Services Committee (the committee that the Health Director reports to)
Hoyer_EW@co.brown.wi.us

Dr. Jay Tibbetts, Chairman: Brown County Board of Health (the Board that declared the Shirley Wind turbines a "human health hazard")
jaytibbetts@att.net

BCCRWE
Brown County Citizens for Responsible Wind Energy

May 18, 2016

Dear Brown County Board of Supervisors,

BCCRWE is submitting this report to express their concerns regarding former Health Director Chua Xiong's decision regarding Shirley Wind, including her review of the documents submitted to her, and those who assisted her in that review. The report begins with a six-page summary of those concerns, followed by 12 exhibits of supporting evidence, and one appendix.

I wish to state up front that my statements on behalf of BCCRWE and its members are based on the best information available to us, and that they are not a personal attack against Chua Xiong or others involved. Rather, our intent is to present evidence that demonstrates that Chua Xiong's conclusion regarding wind turbines and health concerns lacks validity and that her conclusion was based on a very flawed process by which submitted evidence was selectively reviewed and inconsistently weighed, or ignored altogether.

BCCRWE was very involved in submitting documents to Chua Xiong and the Board of Health, documents which, in our opinion, provided broad and compelling evidence demonstrating the known potential for adverse human health impacts from industrial wind turbines sited in proximity to human populations.

In support of the evidence submitted prior to the Board of Health declaring the Shirley Wind turbines a "human health hazard", we submitted an abundance of additional credible evidence from world-recognized experts, including peer-reviewed papers, health impact studies of wind project residents, expert witness testimony from several recent court cases regarding health impacts from wind turbines, papers from professional acoustical conferences, and much more. Together, these documents provided a full spectrum view of the evidence necessary to make the determination that wind turbines are known to have the potential to cause adverse health effects for some residents living in their environs.

Despite all of the evidence at her disposal, Chua Xiong concluded that there is not a relationship between wind turbines and health concerns, and therefore, decided that the Shirley Wind turbines are not a human health hazard. In our opinion, in arriving at her decision, Chua Xiong failed to perform her due diligence on the following counts:

<u>Prior to making her determination, Chua Xiong:</u>

1. Failed to review the majority of the evidence submitted to her, omitting 35 peer-reviewed papers, 19 studies of residents living in wind projects (6 of which were peer-reviewed), 10 relevant conference papers, 40 papers rebutting the three governmental reports that she did accept, and much more, for a total of 175 documents she *did not* review at all, as evidenced by their absence from the SUMMARY LOG report submitted to the Human Services Committee that lists all the documents that she *did* review (See Exhibit A)
2. With regard to the balance of the submitted evidence that she *did* review, failed to consider the entire body of evidence, electing to only conduct a literature review that employed highly restrictive selection criteria, and that was not based on any Board of Health directive or any requirement imposed on her. These self-limiting criteria resulted in the exclusion of all but five documents, and excluded *all* on-the-ground evidence from Shirley Wind, including notarized adverse health impact statements from affected residents (including case crossover reports), ILFN tests conducted at Shirley Wind by the nation's leading acoustical experts that measured high levels of wind turbine-generated infrasound and low frequency noise (ILFN) emissions including frequencies in the nauseagenicity range, and all other evidence provided in the "Blue Binder"
3. Failed to apply her own self-limiting selection criteria to 3 of the 5 documents that she *did* select as *having merit*, while using those same criteria to reject *all* other documents submitted to her by expert authors from across the globe that demonstrate a relationship between wind turbines and health concerns, characterizing them as being "*without merit*" for one reason or another (See Exhibit B)
4. Failed to broaden her understanding of the issue by speaking with experts having extensive knowledge and experience regarding the potential health impacts from wind turbines (See Exhibit C)
5. Failed to accept an offer from acoustician Richard James to set up a Skype discussion with numerous global experts regarding health impacts from wind turbines, and an offer from Carmen Krogh to make a presentation, free of charge, that would include a discussion of children as a vulnerable population group
6. Failed to speak with Board of Health members regarding their five years of experience dealing with the issues at Shirley Wind that led to their human health hazard declaration, despite having publicly stated she would speak with them.
7. Failed to meet with BCCRWE, who had been working with affected residents and researchers concerning this issue for six years, although she stated publicly that she would meet with BCCRWE.
8. Failed to interview most residents who were affected - only interviewing six residents among the dozens who filed complaints or who had abandoned their homes – and only did so after repeated requests by most of these residents
9. Failed to spend any time in the abandoned homes, despite being offered the

opportunity to do so, and failed to visit the homes of residents still living in their homes who filed complaints with the Health Department and continue to feel ill

10. Failed to select an individual to assist her (with reviewing the submitted documents) who had the specific education or experience necessary for properly assessing the evidence presented (See Exhibit D)
11. Failed to conduct her ongoing review process with transparency or accountability, while declaring that her decision would be "final"
12. Failed to allow the Board of Health to review her findings or provide input on those findings before making her decision "final"
13. Failed to publicly acknowledge her own repeated personal adverse health impacts experienced at Shirley Wind, as she revealed in her November 21, 2015 email to Carolyn Harvey (See Exhibit E), while declaring on December 15, 2015, that the evidence does not support a relationship between wind turbines and health concerns
14. Failed to employ the precautionary principle to protect the health of Shirley Wind residents, when the evidence provided overwhelming reason to do so by clearly demonstrating the ***potential*** to cause acute or chronic illness in some residents (as stated in the county ordinance regarding human health hazards), choosing instead to require that the much higher standard of a *direct causal link* be proven (See Exhibit F) before *any* action would be taken, and in so doing failed to carry out the mission statement of the Brown County Health Department to ***"protect and promote individual and community health through education, regulation and leadership to empower community members to attain well-being across the lifespan"***

<u>After making her determination, Chua Xiong:</u>

1. Failed to answer written questions posed by Board of Health Vice Chairman Dr. Jay Tibbetts at the January 12, 2016, Board of Health meeting (See Exhibit G)
2. Failed to make herself available to meet with interested parties following the December 15, 2015 Special Board of Health meeting
3. Gave a PowerPoint presentation to the Human Services Committee that appears to have been prepared by Jeanne Hewitt, rather than herself, describing the process that was used to review documents and reach her conclusion
4. Failed to respond to certain questions asked of her by Chairman Patrick Evans at the January 27, 2016, Human Services Committee meeting
5. Failed to answer questions asked of her by the public at the January 27, 2016, Human Services Committee meeting (See Exhibit H)
6. Failed to appear at the February 24, 2016, Human Services Committee meeting at which she was scheduled to present a document detailing her disposition process for *each* document submitted to her for review, including

how each document either met or failed to meet each of the 8 criteria she used for selecting documents

7. Failed to appear at the March 8, 2016, Board of Health meeting at which she was scheduled to give a presentation to Board of Health members describing her document review process
8. Resigned from office, effective March 18, 2016, the same day Corporation Counsel Juliana Ruenzel resigned, and the same day that the long-overdue open records request responses for communications between Xiong and other parties of interest were finally released

Evidence from open records requests for Chua Xiong communications:

Email communications between Chua Xiong and Troy Streckenbach, Carolyn Harvey, Jeanne Hewitt, and Karen Sanchez paint the picture of a Health Director, who:

- During the time when she needed to be pouring over the evidence submitted to her, was overwhelmed with learning and carrying out the responsibilities of her new position, busy preparing her first departmental budget and incorporating the new budget cuts, planning the move of her department to a new building, and consequently having difficulty finding time to review the submitted documents.
- Delegated much of the document review to Carolyn Harvey, a 2014 biology/anatomy graduate currently attending graduate school, whose medical work experience consists primarily of working as a CNA from 2010 to present, and who had no training in acoustics and little or no prior experience or knowledge regarding health impacts from wind turbines. (See Exhibit I for more regarding Carolyn Harvey's influence on Chua Xiong)
- Relied on her former professor and self-described "mentor", Jeanne Hewitt, for direction in reaching her decision, although Ms. Hewitt had no training in acoustics and little or no prior experience or knowledge regarding health impacts from wind turbines. (See Exhibit J for more regarding Jeanne Hewitt's influence on Chua Xiong)
- May have been influenced by a much-discredited document written by pro-wind propagandist Mike Barnard, who has been censured from distributing this same document over the internet by his employer, and who has no medical or health related training or degree, or any other known technical, professional or academic qualifications with direct relevance to wind turbine noise or health. This document seeks to discredit several of the expert authors whose papers were submitted to Chua Xiong. A defamation lawsuit is currently in process by several plaintiffs who Mr. Barnard named in this and other documents he authored. His document was submitted to Chua Xiong by Karen Sanchez, a recent Board of Health appointee not present during the Board's five years of experience with Shirley Wind leading up to their human health hazard declaration. (See

Exhibit K for more regarding Mike Barnard)

- Even though Duke Energy's argument has focused on jurisdiction rather than health, and even though Brown County Corporation Counsel Juliana Ruenzel gave her opinion on 10-14-14 that Wis Stats 251.04(7) and 66.0401(1m) provide a legal basis to take action to protect public health, and even though Massachusetts superior court justice Christopher Muse ordered curtailment of wind turbine operation at Falmouth, Massachusetts in order to prevent "*irreparable harm"* to wind turbine neighbors, and even though the ILFN measured at Shirley Wind falls into the same nauseagenicity range of 0-1 Hz as was measured at Falmouth, Chua Xiong seemed to be more concerned about the cost and difficulty of winning a lawsuit than about protecting the health of Shirley Wind residents whose suffering she clearly believed was real, as indicated by the following:

From the minutes of the December 15, 2015 Special Board of Health meeting, Chua Xiong stated the following:

> *"I have also listened to the concern expressed by the citizens* ***affected*** *by the wind turbines.* ***I empathize with their expressed concerns and cannot imagine the emotional and physical stress they have experienced. I hear you, you're not crazy, it's not in your head, and you're not lying****. I want you to know that."* [emphasis added]

And, in a December 16, 2015 email, Chua Xiong wrote:

> *"I want you to know as board of health members who were at the meeting yesterday, I was choked up because I had a heart* ***for these residents suffering, but could not find enough scientific evidence base research to suffice a law suit.*** *Yes, personal testimony can be used for sympathy, but in the courts, facts and laws are what is won. We would lose and pay millions of dollars going to court for years*."[emphasis added]

BCCRWE is not alone in the opinion that Chua Xiong failed the test of due diligence and that her conclusion is without merit, and should be formally dismissed.

Several experts who have reviewed the documents and evidence that Chua Xiong had at her disposal have come to the same conclusion, and have publicly stated their positions in documents shown in Exhibit L. These experts include the following:

- **Robert Rand** - ASA, INCE, ASCAP, acoustical expert participating in both the 2012 PSCW-commissioned ILFN study at Shirley Wind, Brown County, Wisconsin, and the ILFN study at Falmouth, Massachusetts, and who suffered significant adverse

health effects while conducting each of these studies

- **Jerry Punch - PhD**, Professor Emeritus MI State University, Audiologist
- **Stephen Ambrose** - INCE Bd. Cert., acoustical expert participating in the ILFN testing performed at Falmouth, Massachusetts, where he suffered adverse health effects while conducting that study
- **Steven Cooper** - MSc, P.E., acoustical expert who conducted and authored the groundbreaking ILFN study performed at Cape Bridgewater, Australia
- **Paul Schomer – PhD**, Standards Director, Emeritus, Acoustical Society of America, and acoustical expert participating in the 2012 PSCW-commissioned ILFN study at Shirley Wind
- **Richard James** - INCE, Adjunct Professor Central Michigan University, acoustical expert who performed extensive ILFN measurements at adversely affected Shirley Wind residences
- **Dr. Robert McMurtry - M. D.,** Member of the Order of Canada.
  Fellow of Royal College of Physicians and Surgeons of Canada, Fellow of the American College of Surgeons
- **Carmen Krogh** - Pharmacist, wind turbine health effects researcher-Health Canada, peer-reviewed author, Queen Elizabeth II Medal-2002, 2014 (Public Service Award)

Perhaps for Brown County's legal consideration, one of the most important of these documents is a **Professional Caution** issued by Institute of Noise Control Engineers member Robert Rand regarding Health Director Xiong's disregard of his professional judgment regarding adverse health conditions at Shirley Wind. **(**See Exhibit L for this **Professional Caution)**

BCCRWE Request to Brown County Board of Supervisors

BCCRWE formally requests that the Brown County Board of Supervisors review the facts presented and take the necessary steps to have former Health Director Chua Xiong's determination regarding Shirley Wind officially dismissed, and to take action to protect the health of adversely affected Shirley Wind residents.

Thank you,
Jim Vanden Boogart
President: Brown County Citizens for Responsible Wind Energy

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Exhibit A – Submitted Documents Missing in Xiong Report

During the public input time at the February 17, 2016, Brown County Board of Supervisors meeting Jim Vanden Boogart requested that Health Director Chua Xiong be required to produce a full report of the documents submitted to her, including how *each* document either met or failed to meet each of the eight criteria she used to evaluate documents.

This request appeared on the February 24, 2016, Human Services Committee meeting agenda as agenda item 13bii, which states*: "Please provide the written document(s)/report(s) you used for your disposition of* ***each*** *document submitted to you, including how it met or failed to meet each of the 8 criteria you used for selecting documents."* [emphasis added]

Chua Xiong did not attend that meeting, having reported that she was sick. However, an anonymous report, titled "SUMMARY LOG", was provided (See Appendix A). This report, per the request to the County Board of Supervisors and per the Human Services Committee agenda, was supposed to provide a full accounting of *every* document that Chua Xiong received and evaluated using her selection criteria.

However, the SUMMARY LOG only includes a minority of the documents that were actually submitted to Chua Xiong, indicating that she ignored or was unaware of the majority of the evidence submitted to her and that she did not take that evidence into consideration in reaching her decision. A partial list of the submitted documents that are missing from the SUMMARY LOG include 35 peer-reviewed papers, 19 health impact studies of wind project residents, 10 papers from professional acoustical conferences, and several dozen rebuttals of the governmental reports she did accept.

Below is an Excel spreadsheet providing details of each document that was submitted to Chua Xiong. Column H indicates if the submitted document was accepted, rejected, or absent from the SUMMARY LOG. Specifically, lines showing absent peer-reviewed papers are highlighted in yellow, lines showing absent health impact studies of wind project residents are highlighted in pink, lines showing absent acoustical conference papers are highlighted in green, and lines showing absent rebuttals to her chosen governmental reports are highlighted in orange.

A comparison of the SUMMARY LOG and the Excel spreadsheet demonstrates that Chua Xiong either ignored or was not aware of a very large body of evidence that was submitted to her before making her decision.

	A	B	C	D	E	F	G	H	I
1	**Rows highlighted in yellow are submitted peer-reviewed documents that are absent from Chua Xiong's document review report**								
2	**Rows or cells highlighted in pink are submitted health impact studies conducted at wind projects that are absent from Chua Xiong's document review report**								
3	**Rows highlighted in green are submitted conference papers that are absent from Chua Xiong's document review report**								
4	**Rows highlighted in orange are submitted rebuttals, of the 3 government reports that Chua Xiong accepted, that are absent from Chua Xiong's document review report**								
5	**Column "A / R / A" indicates if a submitted document was accepted, rejected, or absent from Chua Xiong's document review report**								
6	**Submitted by:**	**Date Submitted**	**Author**	**Author Credentials**	**Author Specialty**	**Peer-Reviewed/Conference Paper /Other**	**Published by / Presented at**	**A / R / A**	**Document Name**
7	BCCRWE	06/21/15	Bernert & Joiner 2007	Assistant Professor: Psychiatry and Behavioral Sciences	Public Mental Health and Population Sciences	Peer-Reviewed	Neuropsychiatric Disease and Treatment	**ABSENT**	Sleep disturbances and suicide risk- A review of the literature
8	BCCRWE	06/21/15	Bronzaft, Prof. Arline 2011	Ph.D.	Psychologist, noise specialist	Peer-Reviewed	SAGE Publications: Bulletin of Science, Technology & Society	**ABSENT**	The Noise from Wind Turbines- Potential Adverse Impacts on Children's Well-Being
9	BCCRWE	08/03/15	Capuccio et al 2011	Professor-Univ. of Warwick	Cardiovasc Medicine & Epidemiology	Peer-Reviewed	European Heart Journal	**ABSENT**	Sleep duration predicts cardiovascular outcomes- a systematic review and meta analysis of prospective studies"
10	BCCRWE	07/15/15	Cox et al 2012	Elec Engineer-retired		Peer-Reviewed		**ABSENT**	Wind Turbine Noise Impact Assessment Where ETSU is Silent
11	BCCRWE	06/21/15	Hanning, Dr. Christopher 2012	MD, FRCA, LRCP, MRCS, BSc, MB	Sleep Disorders Medicine	Peer-Reviewed	British Medical Journal	**ABSENT**	Wind turbine noise seems to affect health adversely and an independent review of evidence is needed
12	BCCRWE	06/21/15	Harrison, Prof. John 2011	Professor-Queens University	Physics-Wind turbine noise	Peer-Reviewed	SAGE Publications: Bulletin of Science, Technology & Society	**ABSENT**	Wind Turbine Noise
13	BCCRWE	06/21/15	Havas, Magda & Colling 2011	PhD	Biological effects of environmental contaminants	Peer-Reviewed	SAGE Publications: Bulletin of Science, Technology & Society	**ABSENT**	Wind Turbines Make Waves- Why Some Residents Near Wind Turbines Become Ill
14	BCCRWE	06/21/15	Horner, et al 2011	BA CMA	IWT Health Effects Research	Peer-Reviewed	SAGE Publications: Bulletin of Science, Technology & Society	**ABSENT**	Literature Reviews on Wind Turbines and Health- Are They Enough?
15	BCCRWE	07/15/15	Hubbard, Harvey 1982	INCE		Peer-Reviewed	Noise Control Engineering Journal	**ABSENT**	Noise Induced House Vibrations and Human Perception
16	BCCRWE	06/21/15	Jeffery, Dr Roy 2014	MD, CCFP, FCFP		Peer-Reviewed	Can J Rural Med	**ABSENT**	Industrial wind turbines and adverse health effects
17	Keith Stelling	09/29/15	Kelley, N.D. et al 1982	PhD, Principal Scientist Atmospheric Physics-retired Natl. Wind Technology Center	Inflow Turbulence Research	Peer-Reviewed	Journal of Solar Energy Engineering	**ABSENT**	A Methodology for Assessment of Wind Turbine Noise Generation
18	BCCRWE	06/21/15	McMurtry & Krogh-2014	C. M., M. D., F.R.C.S.(C), F.A.C.S.	Professor of Surgery, former Dean of Medicine, University W. Ontario	Peer-Reviewed	Journal of the Royal Society of Medicine	**ABSENT**	Diagnostic criteria for adverse health effects in the environs of wind turbines
19	BCCRWE	06/21/15	McMurtry,Prof. Robert 2011	C. M., M. D., F.R.C.S.(C), F.A.C.S.	Professor of Surgery, former Dean of Medicine, University W. Ontario	Peer-Reviewed	SAGE Publications: Bulletin of Science, Technology & Society	**ABSENT**	Towards a case definition of adverse health effects in the environs of industrial wind turbines- Facilitating clinical diagnosis 2011
20	BCCRWE	06/21/15	Moller & Pedersen 2010	PhD - Acoustics	Emeritus Professor in Acoustics	Peer-Reviewed	J. Acoust. Soc. Am.	**ABSENT**	Low-frequency noise from large wind turbines
21	BCCRWE	06/21/15	Moller-Levet, Carla S et al 2013	PhD - Bioinformatics	Bioinformatics experimental officer	Peer-Reviewed	Proceedings of the National Academy of Sciences	**ABSENT**	Effects of insufficient sleep on circadian rhythmicity and expression amplitude of the human blood transcriptome
22	BCCRWE	06/21/15	Munzel et.al.2014	MD, Professor:Univ of Mainz	Cardiology and Angiology	Peer-Reviewed	European Heart Journal	**ABSENT**	Cardiovascular effects of environmental noise exposure
23	BCCRWE	08/03/15	Nobbs, et al			Peer-Reviewed	Proceedings of Acoustics	**ABSENT**	Characterisation of noise in homes
24	BCCRWE	Summer 2015	Oud, M.	PhD - Atomic Physics	Medical physicist / consultant	Peer-Reviewed		**ABSENT**	Low-frequency noise: a biophysical phenomenon
25	BCCRWE	Summer 2015	Palmer, William	BASc, P.E.,	Acoustician - CAA, ASA	Peer-Reviewed	Proceedings of Meetings on Acoustics	**ABSENT**	Wind turbine sound prediction - the consequences of getting it wrong - 2013
26	BCCRWE	06/21/15	Persinger 2013	PhD, Professor	Cognitive neuroscience researcher	Peer-Reviewed	Springer	**ABSENT**	Infrasound, human health, and adaptation- an integrative overview of recondite hazards in a complex environment
27	BCCRWE	06/21/15	Salt & Hullar 2010	PhD, Professor - WA Univ. School of Medicine	Cochlear Physiology	Peer-Reviewed	Elsevier / Hearing Research	**ABSENT**	Responses of the ear to low frequency sounds, infrasound and wind turbines
28	BCCRWE	06/21/15	Salt & Kaltenbach-2011	PhD, Professor - WA Univ. School of Medicine	Cochlear Physiology	Peer-Reviewed	SAGE Publications: Bulletin of Science, Technology & Society	**ABSENT**	Infrasound From Wind Turbines Could Affect Humans
29	BCCRWE	06/21/15	Schomer, Dr Paul 2013	Ph.D-Acoustics, Standards Director ASA, INCE	Acoustician, Noise Researsh	Peer-Reviewed	Proceedings of Meetings on Acoustics,	**ABSENT**	Can wind turbine sound that is below the threshold of hearing be heard?
30	BCCRWE	06/21/15	Shain, Dr Martin 2011	S.J.D.	Law & Social Sciences	Peer-Reviewed	SAGE Publications: Bulletin of Science, Technology & Society	**ABSENT**	Public Health Ethics, Legitimacy, and the Challenges of Industrial Wind Turbines- The Case of Ontario, Canada
31	BCCRWE	06/21/15	Shephed, Dr Daniel et.al. 2012	PhD-Psychoacoustics, Senior lecturer Auckland University	Psychologist, Psychoacoustician	Peer-Reviewed	Encyclopedia of Environmental Management	**ABSENT**	Noise- Windfarms
32	BCCRWE	06/21/15	Shepherd, Dr Daniel et al 2011	PhD-Psychoacoustics, Senior lecturer Auckland University	Psychologist, Psychoacoustician	Peer-Reviewed	SAGE Publications: Bulletin of Science, Technology & Society	**ABSENT**	Mitigating the Acoustic Impacts of Modern Technologies-
33	BCCRWE	06/21/15	Shepherd, Dr Daniel et al 2013	PhD-Psychoacoustics, Senior lecturer Auckland University	Psychologist, Psychoacoustician	Peer-Reviewed	Int. J. Environ. Res. Public Health	**ABSENT**	Do Quiet Areas Afford Greater Health-Related Quality of Life than Noisy Areas?
34	BCCRWE	06/21/15	Thorne & Shepherd 2013	PhD - Health Science	Psychoacoustics, Research	Peer-Reviewed	Int J Environ Res Public Health	**ABSENT**	Quiet as an Environmental Value- A Contrast between Two Legislative Approaches
35	BCCRWE	06/21/15	Thorne, Dr Robert 2013-(overview of)	PhD - Health Science	Psychoacoustics, Research	Peer-Reviewed		**ABSENT**	Wind Farm Noise and Human Perception/ A Review
36	Susan Ashley	10/14/14	Arra et al. 2013	MSc, MD, Epidemiologist	Public Health and Preventive Medicine	Peer-Reviewed	Cureus	**REJECTED**	Systematic Review 2013- Association Between Wind Turbines and Human Distress
37	BCCRWE	06/21/15	Bakker 2012	Ph.D.	Senior Researcher, Applied Health Research	Peer-Reviewed	Science of the Total Environment	**REJECTED**	Impact of wind turbine sound on annoyance, self-reported sleep disturbance and psychological distress
38	BCCRWE	06/21/15	Basner et al 2015	MD, PhD, MSc	Associate Professor of Sleep and Chronobiology in Psychiatry	Peer-Reviewed	Noise & Health	**REJECTED**	ICBEN review of research on the biological effects of noise 2011-2014
39	BCCRWE	08/19/15	Inagaki, T. et al			Peer-Reviewed	Int. J. Environ. Sci. Technol.	**REJECTED**	Analysis of aerodynamic sound noise generated by a large-scaled wind turbine and its physiological evaluation (Japan 2014 IWT Workers)

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40	BCCRWE	06/21/15	James, Richard 2012	INCE / Assoc. Professor	Noise Control Engineer	Peer-Reviewed	SAGE Publications: Bulletin of Science, Technology & Society	**REJECTED**	Wind Turbine Infra and Low-Frequency Sound- Warning Signs That Were Not Heard
41	BCCRWE	06/21/15	Krogh 2011	Pharmacist	Researcher	Peer-Reviewed	SAGE Publications: Bulletin of Science, Technology & Society	**REJECTED**	Industrial Wind Turbine Development and Loss of Social Justice?
42	BCCRWE	06/21/15	Krogh 2011	Pharmacist	Researcher	Peer-Reviewed	SAGE Publications: Bulletin of Science, Technology & Society	**REJECTED**	WindVOiCe, a Self-Reporting Survey
43	BCCRWE	06/21/15	Kugler 2014		Vertigo and Balance Disorders	Peer-Reviewed	The Royal Society Publishing	**REJECTED**	Low-frequency sound affects active micromechanics in the human inner ear
44	BCCRWE	07/01/15	Phillips, Dr. Carl 2011	Ph.D - Public Policy	Epidemiologist	Peer-Reviewed	SAGE Publications: Bulletin of Science, Technology & Society	**REJECTED**	Properly interpreting the epidemiologic evidence about health effects of industrial wind turbines on nearby residents
45	BCCRWE	06/21/15	Schomer, Dr Paul 2015	Ph.D-Acoustics, Standards Director ASA, INCE	Acoustician, Noise Researsh	Peer-Reviewed	J.Acoust.Soc.Am	**REJECTED**	A theory to explain some physiological effects of the infrasonic emissions at some wind farm sites
46	Robert Rand	09/30/15	Stevens & Parsons 2002	MSc	Naval Architecture, Kinesiology	Peer-Reviewed	Marine Technology	**REJECTED**	Effects of Motion at Sea
47	BCCRWE	06/21/15	Nissenbaum, Dr. Michael et.al. 2012	MD	Radiology	Peer-Reviewed **Stratified Cross-Sectional Study**	Noise & Health	**ABSENT**	Effects of industrial wind turbine noise on sleep and health
48	BCCRWE	Summer 2015	Pedersen & Waye 2004	PhD - Environmental Medicine	Medical Sociologist, Researcher	Peer-Reviewed **Cross-Sectional Study**	J. Acoust. Soc. Am.	**ABSENT**	Perception and annoyance due to wind turbine noise -a dose response relationship
49	BCCRWE	Summer 2015	Pedersen 2007	PhD - Environmental Medicine	Medical Sociologist, Researcher	Peer-Reviewed **Cross-Sectional Study**	Occupational and Environmental Medicine	**ABSENT**	Wind turbine noise, annoyance and self-reported health and well-being in different living environments.
50	BCCRWE	Summer 2015	Pedersen et.al **2009**	PhD - Environmental Medicine	Medical Sociologist, Researcher	Peer-Reviewed **Field Study**	J. Acoust. Soc. Am.	**ABSENT**	Response to noise from modern wind farms in The Netherlands
51	Robert Rand	09/30/15	Rand, Robert et al	Noise Engineer-ASA, INCE, ASCA	Acoustics Consultant	Peer-Reviewed **Case Study**	SAGE Publications: Bulletin of Science, Technology & Society	**ABSENT**	Occupational Health And Wind Turbines A Case Study
52	Robert Rand	09/30/15	Ambrose et.al 2012	INCE Bd. Cert.	Noise Engineer	Peer-Reviewed **Case Study**	SAGE Publications: Bulletin of Science, Technology & Society	**ABSENT**	Wind Turbine Acoustic Investigation-ILFN-A Case Study
53	BCCRWE	09/30/15	Harry, Dr Amanda	MD M.B.Ch.B. P.G.Dip.E.N.T.	Hospital Medical Director	**IWT Health Impact Survey**	Author report	**ABSENT**	Wind Turbines, Noise and Health (Survey)
54	BCCRWE	09/30/15	Iser, Dr David 2004	MD	Medical Officer of Health	**IWT Health Impact Survey**	Author report	**ABSENT**	Survey of Patients Living Near Wind Project
55	BCCRWE	09/30/15	Morris, M. 2012	Dip T Sc, Grad Dip Ag	Envionmental Conservation/Practices	**IWT Health Impact Survey**	Author report	**ABSENT**	Waterloo Wind Farm Survey April 2012
56	BCCRWE	09/30/15	Pierpont, Dr Nina	Ph.D, MD	Developmental, behavioral, and emotional difficulties	**Book** **Case Series Cross-Over Study**	Book	**ABSENT**	Wind Turbine Syndrome-A Report on a Natural Experiment
57	BCCRWE	09/30/15	Schafer 2013			**IWT Health Impact Survey**	Author report	**ABSENT**	MACARTHUR WIND ENERGY FACILITY PRELIMINARY SURVEY
58	BCCRWE	09/30/15	Schneider			**IWT Health Impact Survey**	Author report	**ABSENT**	Cullerin Range Wind Farm Survey
59	BCCRWE	09/30/15	Schneider 2013			**IWT Health Impact Survey**	Author report	**ABSENT**	Cullerin Range Wind Farm Survey Followup
60	BCCRWE	09/30/15	Thorne, Dr Robert 2012	PhD - Health Science	Psychoacoustics, Research	**Case Study**	Author report	**ABSENT**	"Windfarm generated noise and adverse health effects" case series
61	BCCRWE	09/30/15	Wang, Zhenhua			**Case Study**	Author report	**ABSENT**	Case Study of Waterloo Wind-Farm
62	BCCRWE	06/21/15	McBride et al 2014	PhD MB BCh BAO	Occupational and Environmental Medicine	Conference Paper **Case Study**	Inter-Noise Conference 2014	**ABSENT**	Investigating the impacts of wind turbine noise on quality of life in the Australian context- A case study approach
63	BCCRWE	06/21/15	Shepherd, Dr Daniel et al 2011	PhD-Psychoacoustics, Senior lecturer Auckland University	Psychologist, Psychoacoustician	Conference Paper **Cross-Sectional Study**	4th Intl Meeting on Wind Turbine Noise 2011	**ABSENT**	Wind turbine noise and health-related quality of life of nearby residents- a cross-sectional study in New Zealand.
64	BCCRWE	06/21/15	Krogh et.al. 2012	Pharmacist	Researcher	Conference paper **Case Study**	Inter-Noise Conference 2012	**ABSENT**	Annoyance can represent a serious degradation of health - wind turbine-noise a case study
65	BCCRWE	06/21/15	Krogh et.al. 2012	Pharmacist	Researcher	Conference paper **Case Study**	Inter-Noise Conference 2012	**ABSENT**	Wind turbine noise perception, pathways and effects- a case study
66	BCCRWE	06/21/15	Krogh et.al. 2012	Pharmacist	Researcher	Conference paper **Case Study**	Inter-Noise Conference 2012	**ABSENT**	Wind turbines can harm humans- a case study
67	BCCRWE	06/21/15	Bray 2012	Noise Engineer	Psychoacoustics	Conference paper	164th Acoustical Society of America Meeting	**ABSENT**	Relevance and Applicability of the Soundscape Concept
68	BCCRWE	06/21/15	LENCHINE & SONG 2014	PhD- acoustics and vibration	Principal Advisor-Noise & Vibration: EPA Australia	Conference paper	Inter-Noise Conference 2014	**ABSENT**	Special Noise Character in Noise from Wind Farms
69	BCCRWE	06/21/15	Salt & Lichtenhan 2012	PhD, Professor - WA Univ. School of Medicine	Cochlear Physiology	Conference Paper	Inter-Noise Conference 2012	**ABSENT**	Perception-based protection from low-frequency sounds may not be enough
70	BCCRWE	06/21/15	Salt & Lichtenhan. 2011	PhD, Professor - WA Univ. School of Medicine	Cochlear Physiology	Conference paper	4th Intl Meeting on Wind Turbine Noise 2011	**ABSENT**	Responses of the Inner Ear to Infrasound
71	BCCRWE	07/15/15	Schomer, Dr Paul 2013	Ph.D-Acoustics, Standards Director ASA, INCE	Acoustician, Noise Researsh	Conference paper	5th Intl Conf. on Wind Turbine Noise	**ABSENT**	A Proposed Theory to Explain Some Adverse Physiological Effects of the Infrasonic Emissions at Some Wind Farm Sites
72	BCCRWE	07/15/15	Styles et al 2011			Conference paper	4th Intl Meeting on Wind Turbine Noise 2011	**ABSENT**	Monitoring and Mitigation of Low Frequency Noise from Wind Turbines to Protect Comprehensive Test Ban Seismic Monitoring Stations
73	BCCRWE	06/21/15	Swinbanks, Dr M.A. 2012	PhD - Mathematics	Noise & Vibratin Control	Conference paper	Inter-Noise Conference 2012	**ABSENT**	Numerical simulation of infrasound perception, with reference to prior reported laboratory effects.

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74	BCCRWE	07/01/15	Swinbanks, Dr M.A. 2015	PhD - Mathematics	Noise & Vibratin Control	Conference paper	6th Intl Meeting on Wind Turbine Noise 2011	**ABSENT**	Direct Experience of Low Frequency Noise and Infrasound within a Windfarm Community (with personal account of ILFN effects highlighted)
75	BCCRWE	06/21/15	Thorne, Dr Robert 2014	PhD - Health Science	Psychoacoustics, Research	Conference paper	Inter-Noise Conference 2014	**ABSENT**	Propagation thresholds and measurement of infrasound to establish separation distances from wind farm turbines to residences
76	BCCRWE	06/21/15	Thorne, Dr Robert 2014	PhD - Health Science	Psychoacoustics, Research	Conference paper	Inter-Noise Conference 2014	**ABSENT**	The Relevance of the Precautionary Principle to wind farm noise planning
77	Dr. Tibbetts	Summer 2015	Branco, Dr. Nuno et al	MD	Senior Surgical Pathologist	Conference paper **Case Study**	EuroNoise 2015	**REJECTED**	Low Frequency Noise-Induced Pathology: Contributions Provided by the Portuguese Wind Turbine Case
78	BCCRWE	08/20/15	Bauer et al 2015			Conference paper	The 22nd International Congress on Sound and Vibration	**REJECTED**	INVESTIGATION OF PERCEPTION AT INFRASOUND FREQUENCIES BY FUNCTIONAL MAGNETIC RESONANCE IM- AGING (FMRI) AND MAGNETOENCEPHALOGRAPHY (MEG)
79	BCCRWE	09/30/15	Governmental Reports & Rebuttals			Conference Paper	Acoustical Society of America	**REJECTED**	Massachusetts Report-Schomer-Pamidighantam Critique of Massachusetts wind turbine health study
80	BCCRWE	07/15/15	Hansen et al 2014	Ph.D.	Fluid mechanics/aerodynamics	Conference paper	Inter-Noise Conference 2014	**REJECTED**	Comparison of the Noise Levels Measured in the Vicinity of a Wind Farm for Shutdown and Operational Conditions
81	Duke Energy	05/08/15	Leventhall, Geoff		Acoustical Consultant	Conference Paper	6th Int'l Conf. Wind Turbine Noise	**REJECTED**	On the Overlap Region Between Wind Turbine Infrasound and Infrasound from Other Sources and its Relationship to Criteria
82	Dr. Tibbetts	Summer 2015	Moorhouse, Andy et al 2015	PhD	Head of Acoustics Research Centre-University Salford	Conference paper	EuroNoise 2015	**REJECTED**	Trials of a protocol to support LFN sufferers in the UK
83	Keith Stelling	09/29/15	Kelley, N.D. 1987	PhD, Principal Scientist Atmospheric Physics-retired Natl. Wind Technology Center	Inflow Turbulence Research	Report for US DOE	Solar Energy Research Institute	**REJECTED**	A Proposed Metric for Assessing the Potential of Community Annoyance from Wind Turbine Low-Frequency Noise Emissions
84	BCCRWE	Summer 2015	Kelley, N.D. et al 1985	PhD, Principal Scientist Atmospheric Physics-retired Natl. Wind Technology Center	Inflow Turbulence Research	Report for US DOE	Solar Energy Research Institute	**ABSENT**	Acoustic Noise Associated with the MOD-1 Wind Turbine- Its Source, Impact, and Control
85	BCCRWE	Summer 2015	Kelley, N.D. et al 1988	PhD, Principal Scientist Atmospheric Physics-retired Natl. Wind Technology Center	Inflow Turbulence Research	Report for US DOE	Solar Energy Research Institute	**ABSENT**	The MOD-2 Wind Turbine Aeroacoustical Noise Sources, Emissions, and Potential Impact.pdf
86	BCCRWE	07/15/15	Hubbard & Shepherd 1984	INCE		NASA Contractor Report	NASA	**ABSENT**	Response Measurements for Two Building Structures Excited by Noise from a Large Horizontal Axis Wind Turbine Generator
87	BCCRWE	Summer 2015	Hubbard & Shepherd 1990	INCE		NASA Technical Paper	NASA	**ABSENT**	Wind Turbine Acoustics
88	BCCRWE	07/15/15	Hubbard et al 1982	INCE		NASA Technical Paper	NASA	**ABSENT**	NASA-guide to evaluating turbine noise
89	BCCRWE	08/03/15	Ambrose & Rand 2011	INCE Bd. Cert.	Noise Engineer	Acoustical Study/Report	Author publication	**ABSENT**	The Bruce McPherson Infrasound and Low Frequency Noise Study (with authors' personal accounts of ILFN effects highlighted)
90	BCCRWE	07/15/15	Hansen, Professor Colin 2010	Ph.D. (Acoustics)	Low Frequency Noise & Vibration	Acoustical consulting report	MECHANICAL ENGINEERING TESTING & CONSULTING	**ABSENT**	Assessment of Noise from the Proposed Wind Farm Development Around Mt Bryan
91	Susan Ashley	10/14/14	James, Richard 2012	INCE / Assoc. Professor	Noise Control Engineer	Acoustical consulting report	E-Coustic Solutions	**REJECTED**	Preliminary Noise Study of Enz Family Farm Located in Footprint of Shirley WindPower Project
92	Susan Ashley	10/14/14	James, Richard 2014	INCE / Assoc. Professor	Noise Control Engineer	Acoustical consulting report	E-Coustic Solutions	**REJECTED**	Sound Pressure Level Measurements of Infrasound Inside Homes in and Proximate to the Footprint of The Shirley Wind Project
93	BCCRWE	06/25/15	Bahtiarian & Beaudry 2015	INCE Bd. Cert.	Noise Engineer	Acoustical Study/Report	Author report	**REJECTED**	Infrasound Measurements of Falmouth Wind Turbines Wind #1 and Wind #2
94	BCCRWE	06/25/15	Cooper, Steven	MSc, P.E.	Acoustician-INCE, AAS, ASA	Acoustical Study/Report	The Acouscit Group	**REJECTED**	THE RESULTS OF AN ACOUSTIC TESTING PROGRAM CAPE BRIDGEWATER WIND FARM + Appendices (on CD)
95	BCCRWE	07/15/15	Nussbaum & Reinis 1985			Report of infrasound experiment on humans-1985	Univ.Toronto Inst. Aerospace Studies	**ABSENT**	Some Individual Differences in Human Response to Infrasound
96	BCCRWE	08/03/15	Qibai et al 2004	Huazhong University of Science and Technology		Report of infrasound experiment on humans-2004	JOURNAL OF LOW FREQUENCY NOISE, VIBRATION AND ACTIVE CONTROL	**ABSENT**	An investigation on the Physiological and Psychological effects of infrasound on persons
97	Susan Ashley	10/14/14	Salt, Dr. Alec 2014	PhD, Professor - WA Univ. School of Medicine	Cochlear Physiology	Author document	Author website	**REJECTED**	Wind Turbines can be Hazardouos to Human Health
98	BCCRWE	08/03/15	Cooper, Steven 2012	MSc, P.E.	Acoustician-INCE, AAS, ASA	Author paper	The Acouscit Group	**ABSENT**	Are wind farms too close to communities?
99	BCCRWE	09/30/15	Cummings J. 2011	MA	Science and Environmental Issues	Author paper	Acoustic Ecology Institute	**ABSENT**	Wind-Farm-Noise
100	BCCRWE	08/03/15	Dickinson, Professor P.	BSc, Ph.D	Acoustician	Author paper	College of Sciences, Massey University	**ABSENT**	Pragmatic view of a wind turbine noise standard
101	BCCRWE	06/21/15	Enbom & Enbom 2013	MD, Ph.D	ENT-Otoneurology	Author paper	Journal of the Swedish Medical Association	**ABSENT**	Infrasound from wind turbines - an overlooked health risk
102	Susan Ashley	10/14/14	James, Richard 2014	INCE / Assoc. Professor	Noise Control Engineer	Author paper	E-Coustic Solutions	**ABSENT**	Explanation of Terms and Concepts Related to Wind Turbine Infrasound
103	BCCRWE	08/03/15	McEwen, Dr Bruce 2006	PhD, Assoc Dean-Rockefeller University		Author paper	Dialogues in Clinical Neuroscience	**ABSENT**	Protective and Damaging Effects of Stress Mediators

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104	BCCRWE	07/10/15	James, Richard	INCE / Assoc. Professor	Noise Control Engineer	Author paper	E-Coustic Solutions	**REJECTED**	Peer Review of NCE Report "Infrasound Measurements of Falmouth Wind Turbines Wind #1 and Wind #2", and Kapsambelis, "Pressure Waves from Wind Turbines"
105	BCCRWE	09/30/15	McMurtry, Prof. Robert	C. M., M. D., F.R.C.S.(C), F.A.C.S.	Professor of Surgery, former Dean of Medicine, University W. Ontario	Author presentation		**ABSENT**	Bradford Hill Criteria PowerPoint presentation
106	BCCRWE	09/30/15	McMurtry, Prof. Robert	C. M., M. D., F.R.C.S.(C), F.A.C.S.	Professor of Surgery, former Dean of Medicine, University W. Ontario	Author research paper		**REJECTED**	McMurtry Research Document for ASA Presentation & Bradford Hill Criteria Nov 27 2014
107	BCCRWE	06/21/15	Punch, Dr. Jerry et.al. 2010	PhD, Prof. Emur. MI State Univ.	Audiologist	Article	Audiology Today	**ABSENT**	Wind Turbine Noise-What Audiologists Should Know
108	Keith Stelling	09/29/15	Stelling, Keith	MA, MNIMH, MCPP		IWT ILFN Literature Survey/Report		**REJECTED**	Infrasound / Low Frequency Noise,and Industrial Wind Turbines
109	BCCRWE	06/21/15	Krogh, Carmen	Pharmacist	Researcher	Summary of Wind Turbine Health Impacts Literature	Author document	**ABSENT**	IWT Health Impact Literature Summary Document Apr 2015
110	BCCRWE	06/21/15	Krogh, Carmen	Pharmacist	Researcher	Summary of Wind Turbine Health Impacts Literature	Author document	**ABSENT**	IWT Health Impact Literature Summary Document Dec 2014
111	Susan Ashley	10/14/14	Walker, et al, 2012	Varies -4 Acoustical Firms -5 Acousticians	Acousticians	Noise Study Report - Shirley Wind	Public Service Commission WI	**REJECTED**	A Cooperative Measurement Survey and Analysis of Low Frequency and Infrasound at the Shirley Wind Farm in Brown County, Wisconsin
112	BCCRWE	06/21/15	Salt & Lichtenhan 2014	PhD, Professor - WA Univ. School of Medicine	Cochlear Physiology	Journal Article	Acoustics Today	**ABSENT**	How Does Wind Turbine Noise Affect People
113	BCCRWE	06/21/15	Seltenrich 2014	BA, Independent Journalist	Science & Environment	Journal Article	Environmental Health Perspectives	**REJECTED**	Wind Turbines-A Different Breed of Noise?
114	BCCRWE	08/03/15	NIEHS			Literature review	Nat'l Inst. Env. Health Sciences	**ABSENT**	NIEHS - Infrasound: Brief Review of Toxicological Literature 2001
115	?	?	Moorhouse, Andy et al 2011	PhD		Research report	Acoustics Research Centre, University of Salford	**REJECTED**	Proposed Criteria for the Assessment of Low-
116	BCCRWE	06/21/15	Farboud, Dr. Amir et.al.-2013	MD, Senior Surgical ENT	ENT Specialist	Review Articls	The Journal of Laryngology & Otology	**ABSENT**	'Wind turbine syndrome'- fact or fiction?
117	BCCRWE	06/21/15	Thorne, Dr Robert 2010	PhD - Health Science	Psychoacoustics, Research	Symposium Paper	1st Intl Symposium on Adverse Health Effects	**ABSENT**	The Problems With "Noise Numbers" for Wind Farm Noise Assessment
118	BCCRWE	09/18/15	Wind Siting Council			Dissenting opinion	Public Service Commission WI	**ABSENT**	2010 Wisconsin Wind Siting Council Report -Minority Report
119	BCCRWE	09/18/15	Wind Siting Council			Dissenting opinion	Public Service Commission WI	**REJECTED**	2014 Wisconsin Wind Sitng Council Report - Minority Response
120	BCCRWE	09/30/15	Huson, L. 2013		Acoustician	Expert witness testimony	Victorian Tribunal Hearing	**ABSENT**	Extract from expert witness statement
121	BCCRWE	07/01/15	Nissenbaum, Dr. Michael	MD	Radiology	Expert witness testimony		**ABSENT**	Witness Statement of Michael A. Nissenbaum, MD in ENVIRONMENTAL REVIEW TRIBUNAL case No. 15-011
122	BCCRWE	09/30/15	Pierpont, Dr Nina	Ph.D, MD	Developmental, behavioral, and emotional difficulties	Expert witness testimony	Australia Senate	**ABSENT**	Submission to Australian Senate Inquiry
123	BCCRWE	08/03/15	Laurie, Sarah	MD (former)	IWT Health Effects Research	Expert witness testimony		**REJECTED**	Statement-Appeals Tribunal, Victoria, Australia
124	BCCRWE	09/28/15	Laurie, Sarah	MD (former)	IWT Health Effects Research	Expert witness testimony		**REJECTED**	Stony-Gap - Provision of Expert Opinion concerning the Adverse Impacts of Wind Turbine Noise
125	BCCRWE	08/17/15	Laurie, Sarah	MD (former)	IWT Health Effects Research	Expert witness testimony		**REJECTED**	Submission to Australia Senate Select Committee on Wind Turbines / 29/06/2015
126	BCCRWE	08/17/15	McMurtry, Prof. Robert	C. M., M. D., F.R.C.S.(C), F.A.C.S.	Professor of Surgery, former Dean of Medicine, University W. Ontario	Expert witness testimony	Australia Senate	**REJECTED**	Submission to Australia Senate Select Committee on Wind Turbines / 29/06/2015
127	BCCRWE	08/17/15	Hanning, Dr. Christopher	MD, FRCA, LRCP, MRCS, BSc, M	Sleep Disorders Medicine	Author submission	Australia Senate	**REJECTED**	Submission to Australia Senate Select Committee on Wind Turbines Feb 2015
128	BCCRWE	08/03/15	Wang, Zhenhua			Briefing summary		**ABSENT**	Briefing summary
129	BCCRWE	08/03/15	Iser, Dr David	MD		Submission to NHMRC		**ABSENT**	Submission to NHMRC
130	BCCRWE	08/03/15	Parkville residents			Testimony re LFN exposure effects	Senate inquiry re wind turbines	**ABSENT**	Submission by the Parkville Residents association to the Federal Senate inquiry
131	Susan Ashley	10/14/14	Ashley, Susan (Binder-Part 1)					**REJECTED**	Shirley Wind Project-1 REQUEST 8-2014
132	Susan Ashley	10/14/14	Ashley, Susan (Binder-Part 2)					**REJECTED**	Shirley Wind Project-2 EXPERT 8-2014
133	Susan Ashley	10/14/14	Ashley, Susan (Binder-Part 3)					**REJECTED**	Shirley Wind Project-3 ARTICLES 8-2014
134	Susan Ashley	10/14/14	Ashley, Susan (Binder-Part 4-1)					**REJECTED**	Shirley Wind Project-4 PERSONAL ACCOUNTS redacted 1
135	Susan Ashley	10/14/14	Ashley, Susan (Binder-Part 4-2)					**REJECTED**	Shirley Wind Project-4 PERSONAL ACCOUNTS redacted 2
136	Susan Ashley	10/14/14	Ashley, Susan (Binder-Part 5)					**REJECTED**	Shirley Wind Project-5 SHIRLEY STUDIES 8-2014
137	BCCRWE	02/04/15	Hartman, Raymond PhD	PhD (MIT)	Mathematical Economics	Author critique	Massachusetts Joint Committee on Public Health	**ABSENT**	Critique of the Massachusetts Report "Wind Turbine Health Impact Study, Report of Independent Expert Panel," January 2012.
138	Keith Stelling	09/29/15	Dr. Hazen Lynne	MD, FCFP, MHSc		Author critique		**ABSENT**	On Health Canada Study
139	Keith Stelling	09/29/15	Krogh, Carmen	Pharmacist	Researcher	Author critique		**ABSENT**	Letter regarding Health Canada study
140	BCCRWE	07/01/15	McMurtry, Prof. Robert	C. M., M. D., F.R.C.S.(C), F.A.C.S.	Professor of Surgery, former Dean of Medicine, University W. Ontario	Author critique		**ABSENT**	Commentary on Chapman "nocebo" paper
141	Keith Stelling	09/29/15	Morris, Joan			Author critique		**ABSENT**	Notes on the Health Canada Wind Turbine Noise and Health Study
142	BCCRWE	07/01/15	Punch, Dr. Jerry	PhD, Prof. Emur. MI State Univ.	Audiologist	Author critique		**ABSENT**	Critique of Crichton et al "Can expectations produce symptoms from infrasound associated with wind turbines?"
143	Keith Stelling	09/29/15	Harrison, Prof. John	Professor-Queens University	Physics-Wind turbine noise	Author critique		**REJECTED**	On Heath Canada Study
144	BCCRWE	07/01/15	Hartman, Raymond PhD	PhD (MIT)	Mathematical Economics	Author critique	Zoning Board of Charlestown, Rhode Island	**REJECTED**	The Adverse Health Impacts of Industrial Wind Turbines: A Scientific Response to "It's all in your head" (Nocebo rebuttal)

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145	Keith Stelling	09/29/15	McMurtry, Prof. Robert	C. M., M. D., F.R.C.S.(C), F.A.C.S.	Professor of Surgery, former Dean of Medicine, University W. Ontario	Author critique		REJECTED	Statement on Health Canada Study
146	Keith Stelling	09/29/15	MULTI-MUNICIPAL WIND TURBINE WORKING GROUP			Author critique		REJECTED	Multi letter re Health Canada Study
147	Keith Stelling	09/29/15	MULTI-MUNICIPAL WIND TURBINE WORKING GROUP			Author critique		REJECTED	Multi Letter to Federal Minister of Health
148	Keith Stelling	09/29/15	Wolfe, Denise			Author critique		REJECTED	Health Canada IWT Noise Study comments
149	BCCRWE	08/03/15	Black, Owen MD,	MD, FACS	Neuro-otology	Affidavit		ABSENT	Neurotologist Affidavit 2009
150	BCCRWE	06/25/15	Schomer, Dr. Paul	Ph.D-Acoustics, Standards Director ASA, INCE	Acoustician, Noise Researsh	Endorsement		ABSENT	Endorsements of Steven Cooper Cape Bridgewater Study
151	BCCRWE	06/25/15	Thorne, Dr Robert	PhD - Health Science	Psychoacoustics, Research	Endorsement		ABSENT	Endorsements of Steven Cooper Cape Bridgewater Study
152	BCCRWE	06/25/15	Ambrose, Stephen	INCE Bd. Cert.	Noise Engineer	Endorsement	Author document	ABSENT	Endorsements of Steven Cooper Cape Bridgewater Study
153	BCCRWE	06/25/15	Huson, Less			Endorsement		ABSENT	Endorsements of Steven Cooper Cape Bridgewater Study
154	BCCRWE	06/25/15	Krogh, Carmen	Pharmacist	Researcher	Endorsement		ABSENT	Endorsements of Steven Cooper Cape Bridgewater Study
155	BCCRWE	06/25/15	Mann, Professor Richard	Assoc. Professor-Univ Waterloo	Research	Endorsement		ABSENT	Endorsements of Steven Cooper Cape Bridgewater Study
156	BCCRWE	06/25/15	Rand, Robert	Noise Engineer-ASA, INCE, ASCAI	Acoustics Consultant	Endorsement		ABSENT	Endorsements of Steven Cooper Cape Bridgewater Study
157	BCCRWE	07/15/15				Correspondence-EPA Australia		REJECTED	Letter Confirming Wind Developers Worked with EPA to Increase 35dBAto 40dBA
158	Robert Rand	09/30/15	Rand, Robert	Noise Engineer-ASA, INCE, ASCAI	Acoustics Consultant	Corresponsence with Chua Xiong		REJECTED	Email to Chua Xiong
159	Keith Stelling	09/29/15	Stelling, Keith	MA, MNIMH, MCPP		Corresponsence with Chua Xiong		REJECTED	Email to Chua Xiong-Summary of Research Submitted
160	BCCRWE	07/01/15	Hartman, Raymond PhD	PhD (MIT)	Mathematical Economics	Curriculum Vitae		ABSENT	Curriculum Vitae
161	BCCRWE	07/01/15	Laurie, Sarah	MD (former)	IWT Health Effects Research	Curriculum Vitae		ABSENT	Curriculum Vitae
162	BCCRWE	07/01/15	McMurtry, Prof. Robert	C. M., M. D., F.R.C.S.(C), F.A.C.S.	Professor of Surgery, former Dean of Medicine, University W. Ontario	Curriculum Vitae		ABSENT	Curriculum Vitae
163	BCCRWE	07/01/15	Nissenbaum, Dr. Michael	MD	Radiology	Curriculum Vitae		ABSENT	Curriculum Vitae
164	BCCRWE	07/01/15	Phillips, Prof. Carl	Ph.D - Public Policy	Epidemiologist	Curriculum Vitae		ABSENT	Curriculum Vitae
165	BCCRWE	07/01/15	Punch, Dr. Jerry	PhD, Prof. Emur. MI State Univ.	Audiologist	Curriculum Vitae		ABSENT	Curriculum Vitae
166	BCCRWE	07/01/15	Swinbanks, Dr M.A.	PhD - Mathematics	Noise & Vibratin Control	Curriculum Vitae		ABSENT	Curriculum Vitae
167	BCCRWE	07/15/15	Ontario			Gov't regulation of infrasound	Town of Plympton-Wyoming, Ontario	ABSENT	Ontario Council Enacts New By-Law Including Infrasound from Wind Farms October 2014
168	BCCRWE	07/15/15	New South Wales			Governmnet policy document		ABSENT	New South Wales 2011 Draft Guidelines for Wind Farms
169	BCCRWE	07/15/15	South Australia			Governmnet policy document		ABSENT	South Australia EPA 2003-Environmental Noise Guidelines- Wind Farms
170	BCCRWE	07/15/15	South Australia			Governmnet policy document		ABSENT	South Australia EPA 2009-Wind Farms Environmental Noise Guidelines
171	BCCRWE	07/15/15	Vestas			Turbine mfg correspondence		ABSENT	Vestas June 2011 Letter to Danish Environment Minister
172	BCCRWE	07/15/15	Vestas			Turbine mfg correspondence		ABSENT	Vestas March 2012 Letter-Attempt to Avoid LFN Measurement
173	BCCRWE	07/15/15	Vestas			Turbine mfg internal document		ABSENT	Vestas-Problems related to the use of the existing noise measurement standards when predicting noise from wind turbines and wind farms
174	BCCRWE	07/23/15	Krogh, Carmen	Pharmacist	Researcher	Video of author presentation		ABSENT	Wind Turbines Can Harm Humans -video presentation at Toronto "ideacity" conference
175	BCCRWE	07/15/15	World Health Organization			WHO noise guidelines		ABSENT	WHO 2009-Night Noise Guidelines for Europe
176	BCCRWE	07/23/15	World Health Organization			WHO noise pathways schema		ABSENT	WHO Noise Schema flowchart (referenced in and submitted with Krogh Toronto "ideacity" presentation)
177	BCCRWE	09/30/15				WI Municipality Resolutions		REJECTED	Resolutions from Wisconsin Municipalities Regarding Wisconsin Wind Siting Rules
178	BCCRWE	09/30/15	Hetherington, Janet			Wind facility resident testimony		ABSENT	Describes "Torture" of Living 3 km from Macarthur Wind Farm
179	BCCRWE	09/30/15	Linke, Maria			Wind facility resident testimony	Victorian Appeals Tribunal	ABSENT	Witness Statement re Macarthur Wind Farm
180	BCCRWE	09/30/15	Gardner, Andrew			Witness statement/Personal Testimony	Victorian Appeals Tribunal	ABSENT	Witness Statement about "pressure bolt" sensations at Macarthur Wind Farm
181	BCCRWE	07/15/15	Bowdler 2005	BSc CEng CPhys	Wind Farm Noise Specialist		New Acoustics	ABSENT	ETSU-R-97 Why it is Wrong
182	Dr. Tibbetts	Summer 2015	Branco, Dr. Nuno et al	MD	Senior Surgical Pathologist			ABSENT	Clinical Protocol for Evaluating Pathology Induced by LFN Exposure
183	BCCRWE	06/21/15	Howell, et al 2015	Faculty of Education-Western University			Western University	ABSENT	Autism and the effect of introducing a new noise source into quiet rural communities- risk factor from industrial wind power generation
184	BCCRWE	06/21/15	Jeffery, Dr Roy - Sep 2013	MD, CCFP, FCFP			Canadian Family Physician	ABSENT	Adverse health effects of industrial wind turbines
185	BCCRWE	06/21/15	Krogh & McMurtry	Pharmacist	Researcher			ABSENT	CMAJ Blog-Health Canada and Wind Turbines- Too little too late?
186	BCCRWE	08/03/15	Leventhall et al, 2003					ABSENT	Report for UK Department of Environment, Food and Rural Affairs (DEFRA)
187	BCCRWE	06/21/15	Thorne, Dr Robert 2013-(full report)	PhD - Health Science	Psychoacoustics, Research			ABSENT	Wind Farm Noise and Human Perception A Review
188	Duke Energy	05/08/15	Tonin & Brett					ABSENT	Response to Simulated Wind Farm Infrasound Including Effect of Expectation
189	BCCRWE	08/03/15	Waubra Foundation				Waubra Foundation	ABSENT	Acoustic Pollution Assessment Requirements, May 2012
190	BCCRWE	07/01/15	Waubra Foundation				Waubra Foundation	ABSENT	Critical-analysis-of-Chapman-complaints-data-from-Nocebo-research-paper
191	BCCRWE	08/03/15	Waubra Foundation				Waubra Foundation	ABSENT	Explicit Cautionary Notice, June 2011
192	BCCRWE	08/03/15	Waubra Foundation				Waubra Foundation	ABSENT	Waubra Foundation Objectives January 2015
193	Susan Ashley	10/14/14	World Council for Nature					ABSENT	Windfarms, vertebrates, and reproduction - open letter to Australia AMA

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6	**Submitted by:**	**Date Submitted**	**Author**	**Author Credentials**	**Author Specialty**	**Peer-Reviewed/Conference Paper /Other**	**Published by / Presented at**	**A / R / A**	**Document Name**
194	Duke Energy	05/08/15	Chapman et al					**ACCEPTED**	The Pattern of Complaints about Australian Wind Farms Does Not Match the Established and Distribution of Turbines- Support for the Psychogenic, "Communicated Disease" Hypothesis
195	?	?	Ellenbogen et al (MA Report)					**ACCEPTED**	Wind Turbine Health Impact Study: Report of Independent Expert Panel
196	Duke Energy	09/29/15	Feder, et al					**ACCEPTED**	An assessment of quality of life using WHOQOL-BREF among participants living in the vicinity of wind turbines
197	?	?	Merlin et al (NHMRC)					**ACCEPTED**	Systematic Review of the Human Health Effects of Wind Farms
198	?	?	Wind Siting Council				Public Service Commission of Wisconsin	**ACCEPTED**	2014 Wisconsin Wind Sitng Council Report
199	?	?	Amsler, et al					**REJECTED**	Wind Turbine Options Analysis Process Final Report to the Falmouth Board of Selectmen, Falmouth, MA
200	?	?	Anderson, John M. 2015					**REJECTED**	Letter received 9-30-15: RE: Shirley Wind Farm7Public Comment Process
201	Duke Energy	09/29/15	Berger, Robert et al					**REJECTED**	Health-based audible noise guidelines account for infrasound and low-frequency noise produced by wind turbines
202	Duke Energy	05/08/15	Chapman et al					**REJECTED**	Fomenting Sickness- Nocebo Priming of Residents About Expected Wind Turbine Health Harms PDF
203	Duke Energy	05/08/15	Crichton et al					**REJECTED**	Can Expectations Produce Symptoms From Infrasound Associated With Wind Turbines?
204	Duke Energy	05/08/15	Crichton et al					**REJECTED**	The Link Between Health Complaints and Wind Turbines- Support for the Nocebo Expectations Hypothesis PDF
205	Duke Energy	05/08/15	Crichton et al					**REJECTED**	The Power of Positive and Negative Expectations to Influence Reported Symptoms and Mood During Exposure to Wind Farm Sound
206	Duke Energy	05/08/15	Dobie, Robert					**REJECTED**	Acoustics Today Letter to Editor Regarding Salt & Lichtenhan
207	Duke Energy	09/29/15	Engel, A.M.					**REJECTED**	Legal requireents for human-health based appeals of wind energy projects in Onatrio
208	?	?	Frey & Hadden 2012					**REJECTED**	Wind Turbines and Proximity to Homes: The impact of Wind Turbine Noise on Health
209	?	?	Horner & Schnare					**REJECTED**	improper Collusion Between Environmental Pressure Groups and the EPA as Revealed by Freedom of Information Act Requests, Interim Report
210	Susan Ashley	10/14/14	James, Richard 2011					**REJECTED**	Ehrfurth Residence Sound Study, A Report on Complaints of Adverse Health Effects From infra and Low-frequency Sounds
211	?	?	Knopper & Ollson					**REJECTED**	Health Effects and Wind Turbines: A Review of the Literature
212	?	?	Leventhall, H.G.					**REJECTED**	Low Frequency Noise and Annoyance
213	Duke Energy	05/08/15	Michaud, David					**REJECTED**	Wind Turbine Noise and Health Study- Summary of Results
214	Duke Energy	05/08/15	Rubin et al					**REJECTED**	Possible Psychological Mechanisms for "Wind Turbine Syndrome". On the Windmills of Your Mind
215	?	?	Standler, Ronald B.					**REJECTED**	Legal Liability for Electricity in the USA: Products Liability
216	Duke Energy	05/08/15	Tachibana, Hideki					**REJECTED**	Outcome of Systematic Research On Wind Turbine Noise In Japan PDF
217	?	?	Turnbull, Chris et al 2012					**REJECTED**	Measurement and Level of infrasound From Wind Farms and Other Sources
218	?	?	Vasudevan R.N. & Leventhall, H.G.					**REJECTED**	A Study of Annoyance Due to Low Frequency Noise in the Home
219	BCCRWE	06/25/15	Waubra Foundation				Waubra Foundation	**REJECTED**	Overview of Steven Cooper's Cape-Bridgewater Study
220	Duke Energy	05/08/15	Yokoyama et al					**REJECTED**	Perception of Low Frequency Components in Wind Turbine Noise
221	BCCRWE	07/15/15						**REJECTED**	Wind Turbine Infrasound and Low Frequency Noise Timeline
222	BCCRWE	09/30/15	Australian Environment Foundation			Rebuttal of Australia AMA Posision Statement		**ABSENT**	Australian AMA Position Statement-Australian Environment Foundation letter to Australia AMA
223	BCCRWE	09/30/15	Concerned Professionals, Citizens, & Impacted Residents			Rebuttal of Australia AMA Posision Statement		**ABSENT**	Australian AMA Position Statement-Links to 50 Responses of Concerned Professionals, Citizens, & Impacted Residents
224	BCCRWE	09/30/15	**Brett Horner**	BA CMA	IWT Health Effects Research	Rebuttal of CCA Report		**ABSENT**	Canadian Council of Academics Report-Industry Government Academia and Canada's Wind Technology Road Map 2015
225	BCCRWE	09/30/15	Joan Morris			Rebuttal of CCA Report		**ABSENT**	Canadian Council of Academics Report-Press Release Criticizing CCA Report
226	BCCRWE	09/30/15	Sherri Lange			Rebuttal of CCA Report		**ABSENT**	Canadian Council of Academics Report-Sherri Lange Rebuttal to CCA Study
227	BCCRWE	09/30/15	Stephen Ambrose	INCE Bd. Cert.	Noise Engineer	Rebuttal of CCA Report		**ABSENT**	Canadian Council of Academics Report-Stephen Ambrose Rebuttal to CCA/Health Canada Study
228	BCCRWE	09/30/15	Carmen Krogh Dr. Robert McMurtry	Pharmacist C. M., M. D., F.R.C.S.(C), F.A.C.S.	Researcher Professor of Surgery	Rebuttal of Health Canada Report		**ABSENT**	Health Canada IWT Study--Health Canada and Wind Turbines/ Too little too late?
229	BCCRWE	09/30/15	Mark Davis, chair, Multi-municipal Wind Turbine Working Group			Rebuttal of Health Canada Report		**ABSENT**	Health Canada IWT Study-Davis, M. To/ Canadian Prime Minister & Minsiter of Health re Health Canada Wind Turbine Study
230	BCCRWE	09/30/15	Dr. Robert McMurtry	C. M., M. D., F.R.C.S.(C), F.A.C.S.	Professor of Surgery, former Dean of Medicine, University W. Ontario	Rebuttal of Health Canada Report		**ABSENT**	Health Canada IWT Study-Dr Robert McMurtry Statement on Health Canada's Flawed Wind Turbine Study

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231	BCCRWE	09/30/15	Dr. Hazel Lynn	MD, FCFP, MHSc		Rebuttal of Health Canada Report		**ABSENT**	Health Canada IWT Study-Dr. claims Health Canada Study ignored the real victims-Those who move away not part of turbine study
232	BCCRWE	09/30/15	National Wind Watch website			Rebuttal of Health Canada Report		**ABSENT**	Health Canada IWT Study-Health Canada sought private meeting with Canadian Wind Energy Assn before announcing health study
233	BCCRWE	09/30/15	Carmen Krogh Brett Horner	Pharmacist BA, CMA	Researcher IWT Health Effects Research	Rebuttal of Health Canada Report		**ABSENT**	Health Canada IWT Study-Krogh-Horner-Industry Led Government Supported_November-10-2014
234	BCCRWE	09/30/15	Carmen Krogh	Pharmacist	Researcher	Rebuttal of Health Canada Report		**ABSENT**	Health Canada IWT Study-Krogh-Letter Health Canada Pamphlet and Preliminary Results March 6 2015 FINAL
235	BCCRWE	09/30/15	MULTI-MUNICIPAL WIND TURBINE WORKING GROUP			Rebuttal of Health Canada Report		**ABSENT**	Health Canada IWT Study-MULTI-MUNICIPAL WIND TURBINE WORKING GROUP Rebuttal of Health Canada Study
236	BCCRWE	09/30/15	Denise Wolfe - NAPAW			Rebuttal of Health Canada Report		**ABSENT**	Health Canada IWT Study-NAPAW Critique of Health Canada Study
237	BCCRWE	09/30/15	NAPAW			Rebuttal of Health Canada Report		**ABSENT**	Health Canada IWT Study-NAPAW-Health Canada's study further victimizes wind turbine refugees and cohabitants
238	BCCRWE	09/30/15	Professor John Harrison	Professor-Queens University	Physics-Wind turbine noise	Rebuttal of Health Canada Report		**ABSENT**	Health Canada IWT Study-Prof John Harrison Response to Health Canada Study Summary Nov 11th 2014
239	BCCRWE	09/30/15	Professor John Harrison	Professor-Queens University	Physics-Wind turbine noise	Rebuttal of Health Canada Report		**ABSENT**	Health Canada IWT Study-Queens Univ.Prof John Harris disputes wind turbine report
240	BCCRWE	09/30/15	Colette McLean			Rebuttal of Health Canada Report		**ABSENT**	Health Canada IWT Study-Study participant Colette McLean points out Study shortcomings
241	BCCRWE	09/30/15	Denise Wolfe			Rebuttal of Health Canada Report		**ABSENT**	Health Canada IWT Study-Wolfe-D.-Critique of Health Canada Study
242	BCCRWE	09/30/15	Professorf Mariana Alves-Pereira	PhD, Acoustical Engineer	Vibroacoustic Disease	Rebuttal of Massachusetts Report		**ABSENT**	Massachusetts Report-Assoc Prof Mariana Alves-Pereira Critique of Massachusetts Report
243	BCCRWE	09/30/15	Carmen Krogh	Pharmacist	Researcher	Rebuttal of Massachusetts Report		**ABSENT**	Massachusetts Report-Carmen Krogh-Critique-of-MA-DEP-Report
244	BCCRWE	09/30/15	Dr Christopher Hanning	MD, FRCA, LRCP, MRCS, BSc, MB	Sleep Disorders Medicine	Rebuttal of Massachusetts Report		**ABSENT**	Massachusetts Report-Dr CD Hanning Critique of Massachusetts Report
245	BCCRWE	09/30/15	Dr. Daniel Shepherd	Shepherd, Dr Daniel et al 2011	PhD-Psychoacoustics, Senior lecturer Auckland University	Rebuttal of Massachusetts Report		**ABSENT**	Massachusetts Report-Dr. Daniel Shepherd Critique of MA Report
246	BCCRWE	09/30/15	Dr. Raymond Hartman	PhD (MIT)	Mathematical Economics	Rebuttal of Massachusetts Report		**ABSENT**	Massachusetts Report-Dr. Raymond Hartman Critique of MA Report
247	BCCRWE	09/30/15	Dr. Raymond Hartman	PhD (MIT)	Mathematical Economics	Rebuttal of Massachusetts Report		**ABSENT**	Massachusetts Report-Dr. Raymond Hartman -The Wind Turbine Health Impact Study is Junk Science
248	BCCRWE	09/30/15	Joanne Levesque			Rebuttal of Massachusetts Report		**ABSENT**	Massachusetts Report-Joanne Levesque Rebuttal-Misleading content and use of Mass. DEP wind turbine health impact report
249	BCCRWE	09/30/15	Dr Alan C Watts	OAM H.D.A. B.Sc. M.B.Ch.B. L.R.C.P. M.R.C.S		Rebuttal of NHMRC Report		**ABSENT**	NHMRC-Dr Alan C Watts OAM-Rebuttal of NHMRC Review
250	BCCRWE	09/30/15	Dr. Andrew Bell	Visiting Fellow - John Curtin School of Medical Research	Mechanisms of hearing, Cochlea response to sound pressure.	Rebuttal of NHMRC Report		**ABSENT**	NHMRC-Dr. Andrew Bell Submission in response to NHMRC Draft Information Paper
251	BCCRWE	09/30/15	Dr. Michael Crawford	BSc, BA, Master of Admin Studies, Ph D		Rebuttal of NHMRC Report		**ABSENT**	NHMRC-Dr. Michael Crawford - Gross Defects in NHMRC Review into Wind Farms and Human Health
252	BCCRWE	09/30/15	Geoff McPherson			Rebuttal of NHMRC Report		**ABSENT**	NHMRC-Geoff McPherson Rebuttal of NHMRC & AMA Position
253	BCCRWE	09/30/15	Carmen Krogh	Pharmacist	Researcher	Rebuttal of NHMRC Report		**ABSENT**	NHMRC-Krogh-C.-NHMRC-Draft-Consultation-Report-April-7-2014-2014
254	BCCRWE	09/30/15	Professor Colin H Hansen	Ph.D. (Acoustics)	Low Frequency Noise & Vibration	Rebuttal of NHMRC Report		**ABSENT**	NHMRC-Professor Colin H Hansen Critique of NHMRC Systematic Literature Review
255	BCCRWE	09/30/15	Professor Colin H Hansen	Ph.D. (Acoustics)	Low Frequency Noise & Vibration	Rebuttal of NHMRC Report		**ABSENT**	NHMRC-Professor Colin H Hansen Submission to the Senate Select Committee on Wind Turbines regarding NHMRC Review
256	BCCRWE	09/30/15	Waubra Foundation			Rebuttal of NHMRC Report		**ABSENT**	NHMRC-Responses to NHMRC Draft Information Paper & Systematic Literature Review
257	BCCRWE	09/30/15	Senator Chris Back			Rebuttal of NHMRC Report		**ABSENT**	NHMRC-Senator Chris Back questions independence of some NHMRC members and notes "shameful" AMA Position Statement
258	BCCRWE	09/30/15	Senator John Madigan			Rebuttal of NHMRC Report		**ABSENT**	NHMRC-Senator John Madigan's exposure of Conflicts of Interest on NHMC Expert Panel
259	BCCRWE	09/30/15	Fr Sergei Shatrov			Rebuttal of NHMRC Report		**ABSENT**	NHMRC-Shatrov-Father-S.-Letter-to-NHRMC-Its-Time-to-Start-Listening
260	BCCRWE	09/30/15	Waubra Foundation			Rebuttal of NHMRC Report		**ABSENT**	NHMRC-Waubra Foundation Response to NHMRC Systematic Literature Review
261	BCCRWE	09/30/15	William Palmer	BASc, P.E.,	Acoustician - CAA, ASA	Rebuttal of NHMRC Report		**ABSENT**	NHMRC-William Palmer P. E. Rebuttal of NHMRC & AMA position

Exhibit B – Xiong Selects Documents that Violate her own Selection Criteria

Over 200 documents regarding wind turbine health impacts were submitted to Chua Xiong. She rejected all but five documents, stating at the January 27, 2015 Human Services Committee meeting that *"only 5 of the 91 submitted materials met the criteria for review."* She describes her selection criteria and her reason for deeming all other documents to be "without merit", as follows:

> *"I reviewed the journal impact factor, peer review process, author's credentials, author's publication, author's affiliation, and the research method, and the scientific rigor, and causation.*
>
> *"Characteristics of other materials were found to be without merit.*
>
> *"They were either self-published, on the Internet**, they were non-peer review sources**, they lacked appropriate credentials of authors, they lacked credible academic affiliations, they lacked credible publication on the topic, they used research methods that lacked scientific rigor."* [emphasis added]

Of the five documents Chua Xiong accepted in *her* literature review, three were simply *other* literature reviews from other governmental agencies. These represent a literature review of literature reviews rather than a review by Chua Xiong of the original research submitted to her. Each of these literature reviews were from ***non-peer review sources***, a selection criteria used to exclude other documents, yet they *were* accepted, while 40 documents exposing the reasons why these documents lacked credibility *were not* accepted. In fact, these 40 documents are not even mentioned in Chua Xiong's report.

Consider, for example, the 2014 Wisconsin Wind Siting Council Report, a literature review that was recommended to Chua Xiong by the Wisconsin Department of Health Services and one of the five documents Chua Xiong accepted. The fourteen members of the Wind Siting Council who produced this report include:

- 2 wind developers, including William Rakocy, principal partner of Emerging Energies, the company that built Shirley Wind and that is presently attempting to build a similar but much larger project in St. Croix County, WI, as well as projects at two other Wisconsin locations. He has been a member of the Wind Siting Council since 2010 and participated in developing Wisconsin's statewide wind siting rules
- 2 utilities that own and operate wind projects, including We Energies, who

owns and operates several Wisconsin wind turbine projects
- 2 environment groups who advocate for wind energy development and who receive funding from the wind industry

These Council members, who have obvious financial conflicts of interest, represent 75% of the eight "majority" members who produced the 2014 Wind Siting Council Report.

The remaining six members of the fourteen-member Council, referred to as "the minority", representing 43% of the Council, produced a dissenting opinion referred to as the "Minority Response". The Minority Response presents conclusion quite contradictory to those presented in the majority report. Council minority members were without financial conflicts of interest – their focus was on public health.

Chua Xiong's SUMMARY LOG report states that the Minority Response was not accepted because it is not a study. Yet, the report of the Council minority members represent just as much of a study as does the report of the Council majority members – both reviewed the same body of officially accepted literature, yet came to very different conclusions. Chua Xiong *included* the report of the seriously conflicted Council majority but *excluded* the report of the unconflicted Council minority.

42. Minority Response: Wind Turbine Siting-Health Review, Wind Siting Policy Update (2014) Wisconsin Wind Siting Council, Minority (2014)
• When a committee conducts a collaborative review such as this, the minority --meaning the members who were not in agreement with the committee's majority finding, may present their contrary view as a minority report. • It does not overturn, but adds to the readers understanding of the committee's function • Not a study

The other two documents Chua Xiong accepted were submitted by Duke Energy, including one by Simon Chapman. Chapman has championed the nocebo hypothesis as the *only* explanation for the adverse health effects reported at wind turbine projects across the globe. See Exhibit L for some statements from experts regarding the accepted Chapman article.

Exhibit C – Experts Xiong Failed to Contact

The Brown County Board of Health had declared the Shirley Wind turbines a "human health hazard" on October 14, 2014, following several years of experience with the adverse health effects reported there and ongoing education regarding the wind turbine/health impacts issue in general. In contrast, Chua Xiong was not faced with this issue until she became Health Director in the spring of 2015. As with most health professionals, her formal education had not provided her with training in acoustics or the unique sound energy-related health impacts that wind project residents are ascribing to the operation of wind turbines, such as those resulting from ILFN exposure.

Yet, faced with the present "human health hazard" declaration, as the county Health Officer who had the power to take action regarding Shirley Wind, Chua Xiong needed to acquire a great deal of knowledge of this issue in order to properly assess the situation and determine what action might be taken. As stated, due to the relatively recent proliferation of utility-scale wind turbines, most health professionals are not well informed regarding their potential health effects.

However, there *are* experts who have made it their business to study this issue and understand it as best as possible. A person in Chua Xiong's position, with the limited time she had available, would certainly want to avail herself to their knowledge and experience, and indeed Chua Xiong had indicated that she would do just that. Per the August 25, 2015, Board of Health minutes, she stated that she would *"speak to some of the well renowned doctors who have submitted their testimonies".*

And to help her do so, she was offered help by some of those experts. Richard James offered to set up a Skype session between Chua Xiong and several global experts, but the offer was declined. Carmen Krogh offered to make a presentation that would include children as a vulnerable population group, but the offer was declined. Chua Xiong was also provided with contact information for two dozen authors. And finally, many of the studies submitted to her included an email address for corresponding with the author.

Certainly there was ample opportunity for Chua Xiong to speak with the experts. Certainly her due diligence responsibility would suggest that she do so in order to broaden her understanding of this issue. She said she would, and interested parties believed she would.

However, following Chua Xiong's December 15, 2015 decision, an investigation was conducted to assess how many authors she actually *did* speak with. The majority of authors whose papers were submitted to Chua Xiong were contacted by BCCRWE by phone or email. The results: only **one** author, Dr. Magda Havas, confirmed that Chua Xiong *did* speak with her. One other author, Alec Salt, PhD, stated that Chua Xiong left him a voicemail. She left that voicemail just 90 minutes before the December 15, 2015, Board of Health meeting began at which she announced her decision. **Forty** (40) other authors, shown below, confirmed that Chua Xiong *did not* contact them. Each represents a missed opportunity for Chua Xiong to add to her understanding before making her decision.

- Ambrose, Stephen – INCE Bd. Cert.
- Arra, Ian - MSc, MD, Epidemiologist
- Bakker R.H. - Ph.D.
- Bauer, Martin
- Branco, Nuno Castelo - MD
- Bray, Wade – Noise Engineer
- Bronzaft, Professor Arline - PhD
- Capuccio, Professor F P – Professor, Univ. of Warwick
- Cooper, Steven - MSc, P.E.
- Cummings, Jim
- Enbom, Hakan - MD, Ph.D.
- Farboud, Amir - MD, Senior Surgical ENT
- Hanning, Christopher - MD, FRCA, LRCP, MRCS, BSc, MB, BS
- Hansen, Professor Colin - Ph.D. (Acoustics)
- Howell, Grace - Faculty of Education-Western University
- James, Richard - INCE / Assoc. Professor
- Jeffery, Roy - MD, CCFP, FCFP
- Kelly, Neil - PhD, Principal Scientist Atmospheric Physics-retired Natl. Wind Technology Center
- Krogh, Carmen - Pharmacist
- Laurie, Sarah – MD (retired)
- LENCHINE, Valeri – PhD (acoustics and vibration)
- McBride, Professor David – PhD, MB, BCh, BAO
- McMurtry, Robert - C. M., M. D., F.R.C.S.(C), F.A.C.S.
- Moller, Professor Henrik – PhD (Acoustics)
- Morris, Mary
- Nissenbaum, Michael - MD
- Oud, Mireille - PhD
- Palmer, William - BASc, P.E.,
- Persinger, Professor Michael - PhD
- Phillips, Professor Carl - Ph.D., Epidemiologist
- Pierpont, Nina - Ph.D., MD
- Punch, Jerry – Audiologist, PhD, Prof. Emur. MI State Univ.
- Rand, Robert - Noise Engineer-ASA, INCE, ASCAP
- Salt, Professor Alec - PhD, Professor - WA Univ School of Medicine
- Schafer, Anne
- Schomer, Paul - Ph.D. (Acoustics), Standards Director ASA, INCE
- Shepherd, Daniel – PhD (Psychoacoustics), Senior lecturer Auckland University
- Stelling, Keith
- Swinbanks, M.A. - PhD
- Thorne, Dr Robert – PhD (Health Science)

Exhibit D - Xiong's Choice of Unqualified Assistant

Per the August 12, 2015, Board of Health meeting minutes, Chua Xiong announced that she *"will also be taking on a master prepared public health student to help her in this process and assist her in this work with the wind turbines."* Apparently Chua Xiong realized that she alone would not be capable of reviewing the submitted documents and reaching a conclusion, but instead would need someone to help her with that task.

Chua Xiong never described the selection process by which she would choose this person, what minimum qualifications this person would need to have, who may have recommended this person, or what safeguards she employed to make sure that this person did not hold any bias regarding the issue of wind turbines and health effects. Chua Xiong chose the person for this pivotal position, unilaterally, with no input or oversight from the Board of Health.

The person Chua Xiong chose to take on was Carolyn Harvey, a person she describes as a *"master prepared public health student".* That description is all that was disclosed about Carolyn Harvey, until her resume was obtained through an open records request. Her resume, shown below, sheds some light on Carolyn Harvey's qualifications, or lack thereof, for assisting Chua Xiong in reaching her critically important decision.

Carolyn Harvey is a college graduate with a 2014 science degree in Biology/Anatomy and who is currently pursuing her master's degree at UW Madison. She is a CNA at St. Paul's Elder Services, Kaukauna, where she has worked in that capacity since 2010. Only 3 credits are required for a Nursing Assistant technical diploma at Fox Valley Technical College. For contrast, 70 credits are required for an Associate Degree in nursing from Fox Valley Technical College.

There is nothing in Carolyn Harvey's resume to suggest that she is even remotely qualified to judge the credibility of papers authored by MDs, PhDs, and professors, yet Chua Xiong appears to have given her that responsibility. This alone calls into question the credibility of Chua Xiong's entire document review, and the conclusion she reached.

Carolyn Harvey

Professional Background

I have been in healthcare for 12 years. My experience includes both administrative and direct patient care roles. I believe strongly in service and communities, and my research reflects these priorities. I earned my Bachelor of Science, Biology from Marian University, and am currently pursuing a Master of Public Health at the University of Wisconsin Madison.

Skills Highlights

- Familiar with Healthcare Systems, Delivery and Policy.
- Familiar with Planning and Evaluation Tools.
- Experience evaluating services and needs, developing care plans and interventions.
- Effective communicator with colleagues, clients and healthcare professionals.
- Self motivated.
- Strong collaborator.

Accomplishments

Dedicated to service and believing strongly in community:

- Self-directed project benefiting AIDS orphans; Kenya and Uganda, 2005.
- Public Health research in health seeking behaviors and waterborne illness; Kenya, 2013.
- Public Health research in health seeking behaviors and Chronic Kidney Disease; Nicaragua, 2015.

Experience

Shift Manager, Valley VNA - Neenah, WI Aug 2008 to Apr 2010

Supervise, train, evaluate and schedule CNA's. Administer and contribute to policy development. Assess changes in condition and triage to RN, emergency services, or MD. Order and receive medications. Perform wound care. Pass schedule II narcotics. Supervise medication pass.

Anatomy Instructor, Flight For Life - Fond du Lac, WI Sep 2012 to May 2014

Provide continuing education credits for EMT's, Paramedics, LPN's and RN's through presentation of gross anatomy.

Carolyn Harvey

CNA, St. Paul's Elders Services - Kaukauna, WI Apr 2010 to Current

Assess and report changes in condition, perform routine assessments, monitor vital signs, and assist with activities of daily living.

Education----------

CBRF Administration, CNA 2008, 2010

Fox Valley Technical College, Appleton, WI

Bachelor of Science, Biology/Anatomy 05-2014

Marian University - Fond du Lac, WI

Master of Science, Public Health 05-2015

University of Wisconsin, Madison - Madison, WI

Special Skills----------

Published poet and journalist, produced screenwriter, director/producer/documentarian.

References----------

Mark Edgar, PhD, MPH, Researcher UW Population Health Institute
University of Wisconsin School of Medicine-Public Health

Ann Salm, Professor of Biology, Marian University

Dr. Sheryl Ayala, Vice President of Academic Affairs, Marian University

Carol Gagnow, Registered Nurse, Supervisor St Paul's Elder's Services

Kayla Garza, Licensed Practical Nurse, Co-worker Valley VNA

Exhibit E – Xiong Admits Personal Experience of Adverse Health Effects

On December 15, 2015, Chua Xiong announced her conclusion that current evidence does not support a relationship between wind turbines and health concerns. Yet, less than a month earlier, Chua Xiong sent an email to Carolyn Harvey stating that she (Chua Xiong) gets migraine headaches when she is out by the Shirley Wind turbines. The quote, from the email shown below, is:

> *"Carolyn the times I have been out there by the Wind Turbines, I get such migraine headaches. I think I should take some preventative Tylenol before I head out there."*

The language is clear. There is no ambiguity. Chua Xiong is referring to specific points in time and to a specific place – ***"the times*** *I have been out there* ***by the Wind Turbines****, I get such migraine headaches".* This admission of first-hand experience of adverse health effects was never publicly stated by Chua Xiong, but was discovered through an open records request. This evidence contradicts and undermines the credibility of Chua Xiong's official determination.

Exhibit F – Xiong Required Evidence Proving a Direct Causal Link

The Mission Statement of the Brown County Health Department is to protect and promote individual and community health through education, regulation and leadership to empower community members to attain well being across the lifespan.

In keeping with this mission, and in light of the evidence that harm to individual and community health at Shirley Wind was likely to be caused by emissions of wind turbines, the Board of Health declared the Shirley Wind turbines a ***"human health hazard",*** based on both Wis Stat 251.04(7), which requires that ***"A local board of health shall assure that measure are taken to provide an environment in which individuals can be healthy"***, and based on the Brown County Code of Ordinances 38.01 PUBLIC HEALTH NUISANCE. (1) (b), which defines "Human health hazard" as ***"a substance, activity or condition that is known to have the potential to cause acute or chronic illness or death if exposure to the substance, activity or condition is not abated."*** The evidence and literature that the Board of Health reviewed prior to making this declaration provided more than adequate knowledge of the potential for wind turbine activity to cause acute or chronic illness if not abated.

The Board of Health properly employed *the precautionary principle* in making their declaration, which is the principle that, ***"When an activity raises threats of harm to the environment or human health, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically."***

However, Chua Xiong demanded a much higher level of proof than the precautionary principle describes, and a much higher level of proof than the Brown County Code of Ordinances describes for a determination of a human health hazard. Instead of considering whether the Shirley Wind turbines are ***"an activity that raised threats of harm"*** to human health, or whether their operation is an activity that has ***"the potential to cause acute or chronic illness",*** Chua Xiong required proof of a direct causal link. This is evident in her January 27, 2016, Human Services Committee PowerPoint presentation discussion, which she emphasized in bold letters on the slide from that presentation, shown below.

	Chapman (2013)	Feder (2015)	Merlin (2013)	Massachusetts (2012)	Wisconsin (2014)
Journal Impact Factor/ Integrative Review	PLOS One IF=3.234	Environ Res IF=3.951	Nat' l Health & Medical Res Council	Mass Dept Env Protection, MDPH Expert Panel 7 members*	Wind Siting Panel 14 members
Peer Review Process	Yes	Yes	Equivalent Scientific Adm	Equivalent Scientific Adm	Equivalent Scientific Adm BEOH/DNR
Authors' Credentials	PhD (Social Medicine)	PhD (Rehabilitative Science), PhD Epidemiology, 2 PhD (acoustics)	PhD (medicine),MPH	Public Health, Epidemiology, Toxicology, Neurology, Sleep Medicine, Neuroscience, Mechanical engineering	No credentials available as non-academic
Authors' Publications	Adequate	Adequate	Adequate	Well-published Interdisciplinary Team	Not Adequate
Authors' Institutional Affiliation	Sydney SPH, Univ. Sydney, Australia	Univ. Ottawa, Ontario & Env HD, Amsterdam	U. Adelaide, Adelaide Health Tech. Assessment	Boston Univ, Harvard Medical School,, chaired LHD Officer, Umass-Amhurst, Univ New England, Harvard SPH, Comm. & Env Mgt Consultant	No Academic Affiliations, We Energies, Landowners, Public, Development
Research Methods	Cross-Sectional WEAK	Cross-Sectional WEAK	IR	IR	IR
Scientific Rigor/ Causation	**WEAK No Causation**	**WEAK No Causation**	**WEAK No Causation**	**STRONG No Causation**	**WEAK No Causation**

Additional evidence of Chua Xiong's requirement that a direct causal link be proven is found in a November 16, 2015 email from Chua Xiong where she states:

> *"This issue is left to Brown County Health Department since our Board of Health made the declaration that Wind Turbine are Human Health Hazard.* ***This falls on me as the health officer to prove Wind Turbines are the causation of Human Health Hazard****."*

An October 19, 2015, email from Carolyn Harvey to Chua Xiong also demonstrates the extreme level of causal proof that Carolyn Harvey considered to be necessary. Regarding the potential adverse health effects of ILFN, she states:

> *"Carmen Krogh, Bill Acker, Dr. Schomer, Rick James and others, all hang on to infra-sound like proving its presence proves their case. It does not. It provides a starting point.* ***They need hundreds, a thousand would be better, rigorous studies that demonstrate how infra-sound causes illness****."* [emphasis added]

Furthermore, per minutes of the December 15, 2015, Board of Health meeting, Chua Xiong stated, ***"I've been given the responsibility of reviewing the scientific evidence-based literature and making a determination if there is a health***

hazard as it relates to the Shirley Wind turbine project". Chua Xiong never stated who it was that charged her with using only this one-dimensional, literature review approach, rather than considering *all* of the information at her disposal. It was not the Board of Health that gave her that charge. In fact, per the May 12, 2015, Board of Health minutes, Chair Audrey Murphy said to Chua Xiong regarding the information submitted to her, ***"the most important of those is the Blue Binder".*** These minutes further state, ***"Audrey recommended starting with the Blue Shirley Wind Binder as that was the critical one".*** Yet, Chua Xiong chose to conduct a purely academic literature review and to apply highly restrictive selection criteria that excluded *all* of the information in the Blue Binder, including the sworn adverse health effects testimonies of Shirley Wind residents.

Although the conclusion that Chua Xiong announced on December 15, 2015 states, *"Presently there is insufficient scientific evidence-based research to support the* ***relationship*** *between wind turbines and health concerns"* [emphasis added], the standard she applied in assessing the evidence submitted to her was that the evidence had to prove a **direct causal link** between wind turbines and health concerns. Had she applied the standard that the evidence had to prove a **relationship** between wind turbines and health concerns, her conclusion would have been that there *is* sufficient evidence to support such a relationship.

Exhibit G - Xiong Fails to Answer Question from Board of Health Vice Chair

At the January 12, 2016, Board of Health meeting, Vice Chairman Dr. Jay Tibbetts asked Chua Xiong a series of questions, as shown below from the minutes of that meeting. These were fundamental questions regarding the validity of Chua Xiong's review of the evidence submitted to her, and the credibility of the conclusion she reached. Chua Xiong has *not* answered these questions.

> ***Jay Tibbetts:*** *Uh, I want to make it clear that this is not a personal attack on the Director but a critique on the misguided and short sighted process impli, employed by her.*
>
> *Please help me understand who gave you, "the responsibility of reviewing the scientific evidence-based literature and making a determination if there is a hum, human health hazard as it relates to the Shirley Wind Turbine Project", as one dimensional determination. In the minutes of the October 13th, 2015, uh, um, meeting when you made the Power Point Presentation nothing was said about a singular approach to literature review. However, in the minutes of the May 12th, 2015, on two occasions, Audrey said, "the most important of those is the blue binder," and further Audrey said, "Audrey recommended starting with the blue Shirley Wind binder as that is the critical one." Apparently you did not think affidavits refer, repre, representing 50 citizens suffering from adverse health effects from the IWTs at Shirley Wind, which rep, which represent legal evidence, personal accounts, studies by Rick James on Shirley Wind, numerous peer reviewed articles, and the application of state and local ordinances to make the declaration by the Brown County, by the Board of Health that the IWTs at Shirley Wind are a human health hazard were worthy of your commun, worthy of your consideration. Instead, you chose along with Carolyn Harvey, to concentrate solely on, "the scientific evidence-based research." To quote Dr. Robert McMurtry, "another literature review, such as by Carolyn Har, Harvey apparently did what was a predictable waste of time and fails to address the fundamental question: are people being harmed."*
>
> *I would like to submit the following questions to the director for a timely response:*
>
> *In your announcement you say, number 1, your announcement you say I've listened to the concerns expressed by citizens affected by wind turbines. I want to emph, emphasize again, affected by wind turbines. And then you say present, "presently there is insufficient scientific evidence-based research to support the relationship between wind turbines and health issues." How do you reconcile these diametrically opposed statements?*
>
> *Number 2. You further state, and this was one of the issues I had a problem with, uh, as far as the minutes go, uh, and this was not in the minutes but it is in the transcript. You further state, "I I said the evidence was insufficient, but I didn't say it wasn't there." How about a touch of pregnancy; it's either there or it's not there. How many aff, how many*

af, "affected citizens" have you actually spoken with? There are aff, affidavits, again, representing 50 citizens with adverse health effects and in excess of 80 complaints filed with the Glenmore town clerk, Duke Energy and the Brown County Health Department, that you could use as a source.

How many homes of, aff, of, again, "affected" citizens have you visited?

Both Rick James and Dr. Sarah Lawry have offered to put you in touch with worldwide ex, experts. Many, how many have you spoken with other than Dr. Magda Havas, who said, 'knew very little about this issue," and leaving a message with Alex, Dr. Alec Salt ninety minutes before the, uh, December 15th min-ing, meeting?

How many Board of Health members have you spoken with?

Have you sought legal guidance?

How has the County Executive influenced your decision?

If it is true that you and Carolyn Harvey are considering writing a doctoral thesis on the IWTs at Shirley Wind, how has that influenced your decision and why is this not a conflict of interest?

Do you claim that you have personally, carefully read all of the studies submitted to you?

Have you provided a written response to each and every one of these studies as to why they did, why they did support the contention that there is insufficient evidence based research to support the relationship between wind turbines and health issues? Where is this document?

How did the recent addition to the ICD-10 CMT 77.23 code which addresses, uh, vertigo caused by infrasound, ah, uh, affect your decision?

Do you accept that sleep deprivation and physiologic stress can cause severe adverse health effects?

And, finally, define the per, precautionary principle and show how it was applied to the residents suffering ill health effects from the wind turbines at Shir, at Shirley Wind. If you did not use said application please defi, please define, defend your position.

In conclusion, the director used a misguided, exclusionary, self-limited effort to evaluate documents and failed to follow the advice of the Board of Health, completely ignoring the blue binder, recent changes in the ICD-10 code, pertinence of Waterloo and Cape Bridgewater studies and perhaps the most important, the application of precautionary principle as it relates to the IWTs at Shirley Wind. Hopefully the director will find the wisdom and the courage to reevaluate her position and make the correct decision. Submitted, uh, uh, 1-12-16, J.J. Tibbetts, MD

Exhibit H - Xiong Fails to Answer Question from The Public

In addition to the questions asked of Chua Xiong at the January 12, 2016, Board of Health meeting, many other questions from the public have yet to be answered by her.

Numerous questions were asked at the January 27, 2016, Human Services Committee by Barbara Vanden Boogart. A small number of those questions were answered during Chua Xiong's presentation at this meeting, but most remain unanswered. The following questions were asked, and are recorded in the meeting minutes:

> *Vanden Boogart stated that since Brown County Health Director Chua Xiong announced her decision on December 15, 2015 a lot of people had been asking questions including Shirley Wind residents, residents of other existing proposed wind projects in Wisconsin and other states, government officials and especially experts and authors from across the globe who were perplexed at how after reading their studies and findings Xiong could come to the conclusion that there was not a relationship between health effects and wind turbines located in proximity to people. She and others will be asking some of those questions tonight and she began by asking the following.*
>
> *There were affidavits representing 50 citizens suffering adverse health effects and in access of 80 complaints, five of Glenmore Town Clerk, Duke Energy and Brown County Health Department. Per the December 15, 2015 Board of Health Minutes, Chua Xiong stated, "I have also listened to the concern expressed by the citizens affected by the wind turbines." Vanden Boogart directed questions to Xiong in an effort to encourage her to answer them and she asked the board members to ask the same questions of her:*
>
> - *Have you read the affidavits and complaints of these affected citizens?*
> - *Do you believe these affidavits and complaints have merit?*
> - *Do you believe their reports that their symptoms diminish or cease when they are away from the Shirley wind turbines?*
> - *Do you know the names of those affected citizens?*
> - *How many of these affected citizens did you interview?*
> - *How many of the homes of these affected citizens did you spend time in?*
> - *How do you account for your failure of due diligence in not interviewing more of the affected residents or visiting any of their homes?*
>
> *Was it your belief that the affidavits representing 50 citizens suffering from adverse health effects from the Shirley Wind Turbines which represent legal evidence, the*

personal accounts and the extensive infrasound low frequency noise studies by Richard James at Shirley Wind are irrelevant or inconsequential evidence compared to the purely academic literature review?

Do you claim that you personally have carefully read all of the documents submitted to you before you reached that decision?

If not then,

- *Which documents did you carefully review?*
- *Which documents did you not read and why?*

Did you have Caroline Harvey read some of the documents that were submitted and rely on her assessment of those documents without reading them yourself?

Were some of the submitted documents neither read by you nor by Caroline?

What methodology and selection criteria did you use and review in the submitted documents?

- *Who determined what method and selection criteria to use?*

Did you or Caroline Harvey assess any of the submitted documents to be biased?

- *If so, which ones?*
- *If so who decided they were biased?*
- *What objective standards were used to determine biased?*

Did you carefully read Steven Cooper's groundbreaking scientific evidence based infrasound low frequency noise study at Cape Bridgewater where a clear relationship was demonstrated between wind turbine operation and adverse health symptoms and sensations?

- *If so, how did you dismiss his findings and conclude that there is no relationship between wind turbines and health impacts?*
- *If you failed to read it, why?*
- *Do you understand that the levels of infrasound and low frequency measure at the Shirley Wind Project and the distances to affected homes are equivalent to those at Cape Bridgewater?*

Did you carefully read Keith Stelling's document describing the history of the knowledge of human health impacts from wind turbines, wind turbine infrasound and low frequency emissions?

- *If so, how do you dismiss the extensive scientific decade long research by NASA and the US Department of Energy infrasound and low frequency noise*

emissions from both downwind and upwind utility scale wind turbines comparable in size to those at Shirley Wind?

Which documents did you rely upon most heavily for your decision?

What evidence-based documents did you rely upon that provides sufficient scientific evidence proving that the wind turbine emissions are not adversely affecting the health of children, adults and the elderly?

When did you decide what your decision would be? How many weeks before you made your announcement had you reached that decision?

Have you produced a report that includes a written response to each and every one of the studies submitted to you as to why they support your contention that there is insufficient scientific evidence based research to support the relationship between wind turbines and health issues?

- *If so, where is the report?*
    - *Who actually drafted the report?*
    - *What contribution did you provide?*
    - *What contribution did each draftee provide, 10%, 30%, 50%, etc.?*

I am requesting that you provide a report which includes your analysis and conclusion of each reference you personally reviewed as well as a separate report for each reference Caroline Harvey personally reviewed and the rationale for rejecting any references that were not reviewed by either of you.

Members of the public had planned to ask additional questions at the January 27, 2016, Human Services Committee meeting, but were not given the opportunity to do so, on the basis that Chua Xiong would be giving a presentation at that meeting that could potentially answer questions that the public wanted to ask. Shown below are the additional questions that the public had planned to ask and that were *not* answered by Chua Xiong during her presentation, or afterwards:

Questions Regarding Chua Xiong's Communications with Others

- **Authors of submitted documents**
    - Per 8-25-15 BOH minutes you stated that you would *"speak to some of the well renowned doctors who have submitted their testimonies".*
        - How many of the authors of the documents that were submitted to you have you spoken with and what are their names?
        - If only, one, two, or a very small number, why did you not speak with more so as to broaden your understanding of this issue?

- **Board of Health members**
  - Several Board of Health members have accumulated extensive experience with this issue over the past 5 years. Which Board of Health members did you speak with regarding this issue?
  - If not all, or most, how do you account for your failure to speak with Board of Health members so as to broaden your understanding of this issue?

- **BCCRWE**
  - At the August 25, 2015, Board of Health meeting you stated that you planned to *"start setting up meetings with various interested parties including Brown County Citizens for Responsible Wind Energy".* Why did you <u>not</u> set up a meeting with officials of BCCRWE, an organization that has been studying this issue for over six years, despite requests from BCCRWE for such a meeting?

- **Duke Energy / Wind Energy Associations**
  - Did you or Carolyn Harvey contact anyone from Duke Energy or any wind energy association about this issue?
    - If so, who, and why?
  - Did anyone from Duke Energy or any wind energy association contact you or Carolyn Harvey about this issue?
    - If so, who, and what did you discuss with them?

- **County Executive's Office**
  - Did you or Carolyn Harvey have any communications with Troy Streckenbach or Chad Weininger regarding this issue?
    - If so, what was discussed?
    - How has either of them influenced your decision?
  - Did you feel in any way that your job could be at risk or your career affected in some way based on what decision you reached regarding Shirley Wind?

- **Legal Counsel**
  - Did you seek legal guidance from anyone regarding this issue?
  - If so, from who? Please provide all names.
  - Was your decision in any way dependent upon the assessment of you or others as to the likelihood of Brown County being able to prevail in a lawsuit with Duke Energy?

- **Public Service Commission of Wisconsin (PSCW)**
  - Did you or Carolyn Harvey contact anyone at the PSCW about this issue?
    - If so, who, and why?
  - Did anyone at the PSCW contact you or Carolyn Harvey about this issue?
    - If so, who, and what did you discuss with them?

- **Wisconsin Department of Health Services (DHS)**
    - Did you or Carolyn Harvey contact anyone at the DHS about this issue?
        - If so, who, and why?
    - Did anyone at the DHS contact you or Carolyn Harvey about this issue?
        - If so, who, and what did you discuss with them?

- **Environmental organizations**
    - Did you or Carolyn Harvey contact anyone at any environmental organization about this issue?
        - If so, who, and why?
    - Did anyone from any environmental organization contact you or Carolyn Harvey about this issue?
        - If so, who, and what did you discuss with them?

- Were you or any family members offered any incentives of any kind, or pressured or threatened in any way, by any of the above listed parties or any other party, with regard to the decision you announced on 12-15-15?

Questions Regarding Carolyn Harvey

- The August 12, 2015, BOH minutes state that you *"will also be taking on a master prepared public health student to help her in this process and assist her in this work with the wind turbines."* The person you took on is Carolyn Harvey.
    - What was the selection process by which you chose Carolyn Harvey?
    - Did someone recommend her to you? If so, who?
    - Describe the questions you asked Carolyn Harvey, before taking her on, to insure that she did not hold any bias regarding this issue.
    - Is Carolyn Harvey associated with any environmental organizations?
        - If so, which ones?
    - How many hours did Carolyn Harvey spend assisting you?
    - What were her specific responsibilities?
    - Did Carolyn Harvey decide, to any degree, which documents <u>you</u> should read?
    - How specifically did her work contribute to your decision?
    - How much did you rely on Carolyn Harvey's work, assessments, or opinions in reaching your decision?
    - Was Carolyn Harvey paid any money by the county, state, or any organization, individual, or other entity for the assistance she provided to you?
        - If so, who?

        - If by the county, who authorized that she be hired and paid for her services?

Questions Regarding Jeanne B. Hewitt

- Jeanne B. Hewitt, PhD, RN, is the first person listed on the "Acknowledgements" slide in the PowerPoint presentation you gave to the Human Services Committee on January 27, 2016.
    - What role did Jeanne Hewitt play in your investigation of the human health effects of wind turbines?
    - What role did Jeanne Hewitt play, or what influence did she have, on the choice and execution of the process by which you assessed the documents that were submitted to you?
    - How much did you rely on Jeanne Hewitt's work, assessments, or opinions in reaching your decision?
    - Did Jeanne Hewitt decide, to any degree, which documents <u>you</u> should read or reject?
    - Is Jeanne Hewitt associated with any environmental organizations?
        - If so, which ones?

Additional Questions

- At the December 15, 2015, meeting you stated, *"I've gone to the wind turbine out by Shirley, and I drove by numerous times."* and, *"I was out there, on Thanksgiving, looking at those wind turbines, listening, and trying my best to look at it."*
    - Do you understand the difference between audible noise and infrasound?
    - Do you understand that infrasound is not something that one is to *"listen"* for or that one can assess by driving by, but rather, that the infrasound that has been extensively documented at Shirley Wind is something that is <u>felt</u> more than heard, and that its impact tends to be more dramatic <u>inside</u> of an enclosed structure, such as a house?
    - Do you understand that high levels of infrasound, levels high enough to adversely affect sensitive individuals, have been measured in the homes of affected residents?
    - If you understand this, why did you <u>not</u> accept the offers you had or ask permission to spend time inside the residents' homes where these impacts have been reported to be the worst?

- At the 12-15-15 BOH meeting you stated, *"I've also listened to the concerns expressed by the citizens **affected** by the wind turbines. I empathize with the expressed concerns and cannot imagine the emotional and physical stress they have experienced."* Many of these affected citizens testified of suffering sleep deprivation. Do you agree with the World Health Organization that sleep

deprivation and physiological stress can cause serious adverse health effects?

- Why did you specifically say that future decisions would be based on *"new scientific, evidence-based literature"*? Why are you basing both your current and any future decision only on literature reviews while ignoring the problems being experienced and reported by Brown County residents?
- The majority of Shirley Wind residents filing adverse health complaints report that when they leave the Shirley Wind area for periods of time their symptoms diminish or cease, and when they return to the area those symptoms return. You expressed at the December 15, 2015, Board of Health meeting that you believed these residents. How then can you conclude that their adverse health effects are not related to the operation of the Shirley Wind turbines?
- If you are concluding that the wind turbines are not the cause of the reported suffering, what is your plan to investigate and determine why there are such extensive health issues in Brown County around Shirley Wind?
- You stated you would review new information on an annual basis?
    - Do you limit all environmental issues that are affecting residents' health to only an annual review?
    - It is not the practice of the Health Department to let a toxic environmental issue continue for 365 days at a time and then only review related literature on an annual basis. Why are you treating Shirley Wind differently?
- Are you considering writing a doctoral thesis related to Shirley Wind or wind energy and health effects?
    - If so, explain why you do not consider this a conflict of interest or cause for concern regarding bias?
    - If you are considering writing a doctoral thesis, is it funded?
        - If so, what funding process is being used?
            - If a grant, where did the grant come from?
- Brown County receives over $25,000 annually in shared revenue from Shirley Wind. Why is this money not being used for the rigorous investigation of the root cause of residents' health issues at Shirley Wind?

In summary, there remain a great number of unanswered question regarding the actions that led to Chua Xiong's conclusion. Unfortunately, she has made herself unavailable since the December 15, 2015, Special Board of Health meeting, reporting in sick for both the February 24, 2016, Human Services Committee meeting and the March 8, 2016, Board of Health meeting, ultimately resigning on March 18, 2016.

Exhibit I - Influence of Carolyn Harvey on Xiong Decision

Carolyn Harvey is the person Chua Xiong chose *"to help her in this process and assist her in this work with the wind turbines"*.

Email communications between Chua Xiong and Carolyn Harvey suggest that Chua Xiong delegated much of the work of reviewing and selecting documents to Carolyn Harvey. Carolyn Harvey's email to Chua Xiong (shown on the next page), for example, indicates that the SUMMARY LOG that Chua Xiong provided for the January 27, 2015, Human Services Committee meeting was produced by Carolyn Harvey.

From: Carolyn Harvey
Sent: Monday, November 30, 2015 4:14 PM
To: Xiong, Chua L.
Subject: The next couple of weeks:

Good Afternoon, Chua,

I hope the holiday season started well for you, including a great game of Family Feud ☺

I wanted to check in with you regarding the next several Wednesdays and wrapping up the semester.

1. Schedule:

- If you have no meeting scheduled or specific plans, I'd like to work from home Wednesday 12-2. Yes, since I will not be in the office.
- My plan is to provide you with completed outputs the following Wednesday 12-9. I want you to be able to have some time to really look over the talking points, logs, etc. Can you provide drafted outputs even before 12-9 to me so, I can also review as I am putting my own talking points together as well.
- I have also done a policy brief and action plan. Part of my fieldwork has to include an evaluation like this. You can, of course, do whatever you'd like with that. Even if it is just a jumping off point for the Department. This is fine, good evaluation for me.
- 12-15 is the BOH meeting
- 12-16 is finals week, 12-23 is Christmas week. I do not plan to be in the office either of these days. This is fine.
- I'd like to return Monday 12-28 in a more full-time capacity to complete my field work hours. Yes, sounds fine.

2. Ouputs:

- Evidence Log
- Summary Log
- Citizen Accounts
- Litigation Hx.
- Policy Brief
- Action Plan
- I'm hoping to have an executive summary for you as well, but this might not be complete until the end of December.

3. Binder:

1

- Outputs
- Hours Log

Please let me know if you'd like to make any changes, or if you need me in the building Wednesday 12-2.

Thank you for all your help,
Carolyn Harvey

In the same email Carolyn Harvey lists several other documents as her "Outputs", including "Evidence Log", "Citizen Accounts", "Litigation Hx.", "Policy Brief", and "Action Plan". Apparently these were other documents pertaining to Chua Xiong's decision regarding Shirley Wind that Carolyn Harvey was given the responsibility to produce. An open records request was made for copies of these documents, but the response to that request, from Brown County, stated:

> *"It is my understanding that there never were items that you requested created. They were proposed in the e-mail. For example, the person at the health department doesn't remember that their ever was a binder created, and neither did Chua. We were working on this request while Chua was still here, as I believe your first request was in February when we sent you this log in early March, and that was the only document every created. I did not mean to suggest she took things with her, just that we are only custodian of records that we have, and even when she was here there wasn't anything else. I don't think there is anything else that exists at all."*

What information were these documents supposed to include? Where are they? Were they ever produced? As stated earlier, the Xiong/Harvey document review process was conducted without transparency and with no accountability to others, and to date no one has seen these documents.

(In the email below from Carolyn Harvey to Chua Xiong, Harvey appears to be making sarcastic comments regarding Shirley Wind residents' belief that they are being adversely affected by emissions from the wind turbines.)

> On Nov I2, 2015, at 9:30 AM, Carolyn Harvey wrote:
>
> *"Good Morning Everyone, I have been busy accumulating evidence and keeping up with all the Health Department would like me to consider. I am attaching a document to let you all know what I've been up to in the way of wind turbines."*
>
> *"It continues to be a challenging position. I feel as though I am experiencing many of the challenges of Tom's River. It is more than a little like trying to investigate a cancer cluster. Difficult scientifically, difficult public health wise, difficult in personal accounts, transparency and understanding, difficult in that there isn't enough evidence to establish causation.* ***It is hard to listen to people tell you how sick they are, and how certain they are of the 450 foot monster in their backyard, and know what I can offer will provide***

very little solace." [emphasis added]

"As always, thank you all for your guidance, Carolyn Harvey"

(In the email below from Chua Xiong to Carolyn Harvey, Xiong expresses being preoccupied by other responsibilities, and how much she appreciates Harvey's assistance and insights)

From: Xiong, Chua L. <Xion_g_CL@.co.brown.wi.us>
Sent: Monday, November I6, 2015 5:09 PM
To: Carolyn Harvey
Cc: DEBRA SUE SIEGENTHALER
Subject: RE: Grading and Deb Siegenthaler's Message

*"Hi Carolyn, since your departure last Wednesday.....**I have been chasing another fire to put out.** So, I apologize for the lateness in this reply. We can discuss further on this Wednesday. **I do greatly appreciate all the assistance you have been giving me with the literature reviews. You feedback and insights has been very insightful."*** [emphasis added]

Exhibit J - Influence of Jeanne Hewitt on Xiong Decision

Jeanne Hewitt, as we understand, is one of Chua Xiong's former teachers. Hewitt made the drive from the Milwaukee area to support Chua Xiong at a number of meetings of either the Brown County Board of Health or the Human Services Committee. Hewitt became involved in Chua Xiong's document review and decision regarding Shirley Wind as early as July, 2015.

(In the email below from Jeanne Hewitt to Chua Xiong, Hewitt offers her PowerPoint presentation to Xiong to use at an upcoming meeting)

> On Jul 29, 2015, at 10:02 AM, Jeanne Hewitt wrote:
>
> *"Hi Chua,*
>
> *Great news from you re: the BOH. If you can use the PPT to frame your discussion with them, that will be wonderful."*

(In the email below from Chua Xiong to Jeanne Hewitt, Xiong suggests presenting Hewitt's PPT presentation herself, instead of having Hewitt make the presentation,. Xiong then reveals how she feels overwhelmed, hopeless, in desperate need of Hewitt's guidance, and her belief that Hewitt was sent to Xiong by the Lord.)

> From: Xiong, Chua L. <Xiong_CL@co.brown.wi.us>
> Sent: Wednesday, July 29, 2015 12:58 AM
> To: Jeanne Hewitt
> Subject: Re: Peer Review
>
> *"Board of Health meeting went well. There is the possible change I might not need you to come all the way to present**. I am going to try to do education on creditable evidence based research myself based on your power point."***
>
> ***"You offer me the support and encouragement I so desperately need when I feel overwhelmed and hopeless. You are one of those individuals the Lord has sent my way cause he knows I will need your guidance."*** [emphasis added]

(In the email below from Jeanne Hewitt to Chua Xiong, Hewitt instructs Xiong, that if a document is not peer-reviewed, it is not to be considered)

> From: Jeanne Hewitt
> Sent: Wednesday, December 30, 2015 11:49 AM
> To: Xiong, Chua L.
> Cc: Jeanne Hewitt
> Subject: Re: Hi
>
> *"The Moorhouse 'study' does not appear to be a study, at all. It seems to be something of an abstract from a conference on noise**. If not published in a peer reviewed journal (see below),it does not meet a basic criterion for consideration."*** [emphasis added]

(In the email below from Jeanne Hewitt to Chua Xiong, Hewitt instructs Xiong to disregard, as "*ignorance"*, concerns expressed in two emails received by Xiong from concerned Brown County residents.)

> From: Jeanne Hewitt
> Sent: Wednesday, December 30, 2015 3:43 PM
> To: Xiong, Chua L.
> Cc: Jeanne Hewitt
> Subject: Re: Shirley Wind
>
> ***"Ignorance, pure ignorance.***
>
> ***Let it roll off your shoulders like rain."***

(In the email below from Jeanne Hewitt to Chua Xiong, Hewitt instructs Xiong that Dr. Tibbetts and others are not basing their decisions on scientific evidence, and indicates that there will be a complaint filed against them. Hewitt encourages Xiong that the PSC, the DHS-BEOH, and herself back Xiong in opposition to the position of Dr. Tibbetts and others. Hewitt instructs Xiong that Steven Cooper's Cape Bridgewater study [endorsed by the world's top acousticians] *"is a piece of garbage"* and accuses Steven Cooper of intent to mislead)

> On Dec 30, 2015, at 3:59 PM, Jeanne Hewitt wrote:

"People can be very hurtful. Though, I would encourage you to not shed a tear over this. ***You, Dr. Tibbetts, and I (and the other RNs) are all required to base their decisions on scientific evidence The fact that they aren't doing so will be reflected in a compliant to where it matters****."*

"You have the backing of the state (PSC, BEOH), and family, and your mentor. You are doing the right thing—and you need to have faith in yourself."

"I reviewed much of the 'non-study' from Australia that you just sent me. It is a piece of garbage. And, they went out of their way to obscure. Look at my note, which is attached. The reading level is the highest of anything I've ever examined. A number of 8 means 8th grade reading level; 16 = a college graduate; 32.5 is ludicrous. It's unintelligible for a reason—to obfuscate the message."

"As the computer geeks say, "Garbage in, garbage out." [emphasis added]

(In the email below from Chua Xiong to Jeanne Hewitt, Xiong responds to the instruction of Hewitt)

From: Xiong, Chua L.
Sent: Wednesday, December 30, 2015 4:24 PM
To: Jeanne Hewitt
Subject: Re: Concerned Firefighter Regarding Health Emergency

"Thanks, you are a great mentor! Chua"

(In the email below from Chua Xiong to Jeanne Hewitt, Hewitt instructs Xiong that the study [submitted by Dr. Tibbetts] that Xiong is looking for is *"garbage"* and to not try to get the full study)

From: Xiong, Chua L.
Sent: Wednesday, December 30, 2015 3:05 PM
To: Jeanne Hewitt
Subject: Re: Hi

"Yeah, the Portuguese Wind Turbine study has been one of those studies pointed out to me as a significant study and this is all I have. So, I am not sure

where to truly locate this full study." [emphasis added]

It has been just verbally stated to me a few times…as the Portuguese study.

From: Jeanne Hewitt
Sent: Wednesday, December 30, 2015 4:24 PM
To: Xiong, Chua L.
Cc: Jeanne Hewitt
Subject: Re: Hi

"Don't worry about trying to get the full study. It would likely not be published (again, the "Garbage in, garbage out" statement)."

(In the email below from Jeanne Hewitt to Chua Xiong, Hewitt speaks of PowerPoint slides and other notes she produced for Xiong to use, apparently those presented at the January 27, 1016 Human Services Committee meeting)

> From: Jeanne Hewitt
> Sent: Saturday, January 02, 2016 6:13 PM
> To: Xiong, Chua L.
> Cc: Jeanne Hewitt
> Subject: Re: Shirley Wind Farm Disappointment / Health Dept. Move Disappointment
>
> ***"I did the PPTs, but am having some trouble with my internet to send them. … For the Criteria for Causation, I wrote notes—so take a look at those to see if there's anything that you want to talk through."***

Exhibit K - Influence of Mike Barnard on Xiong Decision

Vicious, grossly inaccurate and sometimes defamatory attacks on professionals and researchers are relentless from the wind industry. Their targets include individuals such as Dr. Nina Pierpont, Professor Robert McMurtry, Dr. Michael Nissenbaum, Dr. Sarah Laurie, Mr. Steven Cooper, Professor Colin Hansen, Mr. Les Huson, Mr. Rick James, and numerous other who work to uncover the truth of reported acoustic emission related adverse health impacts linked to industrial wind turbines.

One of the most prolific and virulent is someone called Mike Barnard, whose efforts have been to promote wind energy as having no adverse health impacts on people, and to bully those he sees as a threat to his championing of wind energy.

Mr. Barnard is a blogger. He has no medical or health-related training or degree, or any other known technical, professional or academic qualifications with direct relevance to wind turbine noise or health. He has not been qualified to give expert evidence in any jurisdiction on wind turbine health and noise issues.

Throughout Mr. Barnard's blogging career he has concentrated on castigating, defaming, and ridiculing those who *do* have qualifications, research and/or authorships, and who are demonstrably independent of the wind industry and from those who benefit financially from its operations. A defamation lawsuit is currently in process by several plaintiffs who Mr. Barnard had named in his documents.

One such document authored by Mr. Barnard was provided to Chua Xiong by Karen Sanchez.

(In the email below from Karen Sanchez to Chua Xiong, Sanchez offers the Barnard document to Xiong, along with some of her own statements)

> On Aug 26, 2015, at 7:12 PM, ksanchez wrote:
>
> *"The following link is one that is telling in that it lays out the strategy groups have employed around select countries and states. I acknowledge the org is a "pro-clean energy" one but it is clear and stated as such. On the other hand the so-called experts brought here by the local groups are following a script by providing reams of "studies". As in other areas no health problems reported until the anti-wind activists start to propagandize. As the case here, people including Dr. Tibbetts were against the wind farm before it was built. Therefore any subsequent vague subjective symptoms are suspect.*
>
> *http://www.energyandpolicy.org/wind-health-impacts-dismissed-in-court"*

This same document by Mr. Barnard was recently submitted to the Vermont Public Service Board, which prompted a cease and desist order to be sent to the State of

Vermont from a Canadian law firm representing several of the authors whose documents were submitted to Chua Xiong. (See page 1 of cease and desist order below)

Either Karen Sanchez did not research the author of the document she promoted to Xiong, or she is willing to believe bloggers instead of the engineers, doctors, and scientists who she should be deferring to for her understanding of wind turbines and health.

Like Barnard, Sanchez makes what appear to be defamatory statements against those she does not agree with:

- Against BCCRWE members, claiming that those aiming to provide Chua Xiong with the information she needed to gain a full understanding of the wind turbine/health effects issue ***'are following a script by providing reams of "studies"'.***
- Against adversely affected residents of Shirley Wind, claiming that there were ***'no health problems reported until the anti-wind activists start to propagandize'***, implying both that Shirley Wind residents' reported health effects are imagined or "nocebo" effects, and that BCCRWE's educational efforts, which she calls '*propagandizing'*, are the cause.
- Against Board of Health Vice Chairman Dr. Tibbetts, claiming that he was '***against the wind farm before it was built'***, and that because of this view, he considers ***'any subsequent vague subjective symptoms'*** to be suspect.

How much effect did this document from Mr. Barnard have on Chua Xiong and Carolyn Harvey as they decided which documents, from which authors, to accept or reject? How much bias did this document introduce into those decisions? Chua Xiong appears to have been interested in this submission from Karen Sanchez, responding to her email the same evening.

(Email from Chua Xiong to Karen Sanchez)

> From: Xiong, Chua L.
> Sent: Wednesday, August 26, 2015 10:23 PM
> To: ksanchez
> Subject: Meeting
>
> ***"Call me Karen, I would also like to talk to you.*** *I will be around the office all day tomorrow, Thursday."* [emphasis added]

EKG
ERIC K. GILLESPIE PROFESSIONAL CORPORATION
BARRISTERS & SOLICITORS

Eric K. Gillespie, LL.B.
Direct Tel: 416.703.6362
Email: egillespie@gillespielaw.ca

December 8, 2015

Delivered by email and registered mail

Renewable Energy VT
33 Court Street
P O Box 1036 Montpelier, VT 05601
Executive Director, Gabrielle Stebbins
gabrielle@revermont.org
wil@revermont.org
JeffForward@revermont.org

Dear Ms. Stebbins:

Re: TWA - Cease and Desist

We are the solicitors for Dr. Robert McMurtry (Canada), Ms. Carmen Krogh (Canada), Dr. Michael Nissenbaum (USA), Mr. Richard James (USA), Dr. Sarah Laurie (AU), Mr. Les Huson (AU) and Dr. Daniel Shepherd (NZ).

We are aware that you have recently submitted a document to the Vermont Public Service Board entitled "Wind Health Impacts Dismissed in Court" , authored by Mr. Michael Barnard. It appears that this document contains numerous libelous statements made in relation to all of the foregoing named individuals. In our view, the statements made therein are actionable. As the publishers and disseminators of this information, it appears that Renewable Energy VT, amongst others, is liable for damages caused to our clients.

In addition, we attach correspondence from Mr. Barnard's employer IBM dated December 10, 2014. In it IBM indicates that as a result of his previous actions, Mr. Barnard has agreed amongst other steps, "to delete the "Barnardonwind" blog, terminate the energy and policy institute senior fellow role and *agree to no longer publish on wind energy*" [emphasis added]. The above-noted document also appears to be in direct contravention of one or more of these terms. As a result, should legal action be required it appears that Renewable Energy VT together with IBM and Mr. Barnard would likewise be liable for the damages caused to our clients by the breach of these terms.

10 King Street East, Suite 600, Toronto, Ontario M5C 1C3, Canada
TEL: 416.703.5400 | FAX: 416.703.9111

Exhibit L - Expert Author Critiques/Rebuttals of Xiong Decision

Several experts regarding wind turbines and potential health effects, who authored papers that were submitted to Chua Xiong, have reviewed the various documents and evidence that was submitted to Chua Xiong. These authors, who have spent countless hours investigating this issue over many years, have come to conclusions quite the opposite of that of Chua Xiong They have offered the following public statements regarding Chua Xiong's document review and her conclusion.

Robert Rand

Statement and **Professional Caution** from Robert Rand - ASA, INCE, ASCAP, acoustical expert participating in both the 2012 PSCW-commissioned ILFN study at Shirley Wind, Brown County, Wisconsin, and the ILFN study at Falmouth, Massachusetts, and who suffered significant adverse health effects while conducting each of these studies.

(See next 2 pages)

Robert W. Rand, ASA, INCE
RAND ACOUSTICS
1085 Tantra Park Circle
Boulder, CO 80305

E-mail: rrand@randacoustics.com
Telephone: 207-632-1215

Date: February 23, 2016

To: Dr. Jay Tibbetts and Mr. Patrick Evans

Re: Shirley Wind Public Health Hazard and Xiong Statement

I respectfully provide this letter in support of the many adversely impacted neighbors of Shirley Wind, and investigators and researchers including Richard James, Steven Cooper, Paul Schomer and colleagues who participated in the 2012 cooperative noise study at Shirley.

I understand that following receipt of numerous carefully submitted documents and letters of evidence, on December 15, 2015, Health Officer Chua Xiong stated:

"Presently, there is insufficient scientific evidence-based research to support the relationship between wind turbines and health concerns."

Disbelieving that someone charged with protecting public health and welfare could issue such a dismissive statement following receipt of overwhelming direct evidence from neighbors and researchers who investigated Shirley, I waited for a couple of months in the chance that she might withdraw her statement. That hadn't happened.

I am personally aware of the adverse health impacts having experienced them myself at Shirley. I had previously sent a detailed letter to Health Officer Xiong on September 30, 2015 providing an extensive summary of the health effects both observed and experienced directly during noise investigations at Shirley.

Health Officer Xiong apparently elected to completely disregard the information and professional experience obtained at personal health cost at Shirley and compiled and sent to her. She has apparently elected to disregard the enforcement powers authorized to her department, power which if exercised, could reduce or eliminate health harm. That tells me something is seriously wrong and neighbors are being endangered.

Under the INCE Rules Of Practice, I must notify appropriate authority if my professional judgment is being overruled under circumstances where the public safety, health, property or welfare are endangered. There is no question, and can be no question, that neighbors in the vicinity of the Shirley Wind Facility have reported serious adverse impacts when in proximity to the operating turbines which are alleviated when at sufficient distance.

Therefore I must provide to the Board this formal professional caution.

PROFESSIONAL CAUTION

I respectfully submit this professional caution as an interested party and Member of the Acoustical Society of America and the Institute of Noise Control Engineering, in response to the recent statement by Health Officer Xiong related to wind turbines and adverse health effects in the vicinity of the Shirley Wind Facility.

As a Member of the Institute of Noise Control Engineering (INCE), I am pledged to hold paramount the safety, health and welfare of the public. I take these words and this responsibility seriously, as anyone who has worked with me will tell you.

Based on the findings and personal experiences of motion sickness at Shirley correlated to power output, I concur with the Board determination of **Health Hazard**. As an INCE Member I can find no credible rationale for permitting continued community exposure to the potential for motion sickness evidenced by the research and actual neighbor reports when wind turbines are operated at partial power or higher.

*I hereby notify the Board that my professional judgment has been **overruled** by Brown County Health Officer Xiong with her statement of December 15, 2015.*

On behalf of the neighbors and my colleagues who have worked hard to inform all parties, and in vigorous defense of the Institute of Noise Control Engineering members, principles, and ethical practices to protect public safety, health and welfare, I object in the most strenuous terms to the statement by Health Officer Xiong.

I must warn the Board that the choice of inaction appears certain to worsen, not lessen, the health impacts being reported in the vicinity of the Shirley Wind Facility in Brown County.

In my line of work, there is no excuse for harming neighbors; most certainly no excuse available to a health officer who should be held to an even higher standard of conduct.

Thank you for your consideration of this letter. If you have any questions, please contact me.

Respectfully Submitted,

Robert W. Rand, ASA, INCE

Jerry Punch

Statement of Jerry Punch - PhD, Professor Emeritus MI State University, Audiologist

"To Whom It May Concern:

"Having just completed a comprehensive review of literature on the relationship between noise from industrial wind turbines and human health, I am familiar with the references Health Officer Chua Xiong relied upon for her conclusions that the "evidence" does not reveal a causative relationship and that the turbines at Shirley Wind do not constitute a human health hazard. The evidence provided by numerous reputable scientists and researchers supporting such a causative relationship is overwhelming, particularly when contrasted with the tenuous conclusions drawn by members of "expert panels" and others who have relied on literature reviews favorable to the industry. She has knowingly ignored the evidence of affected community members, acousticians of the caliber of Dr. Schomer, the groundbreaking research of N. D. Kelley, and medical experts. Her views of the evidence that she considers valid reflect a profound failure to appreciate how science should be applied to formulate public health policy.

"As a university professor who has worked with many graduate students over the years, I would find it appalling if a graduate from our program in audiology, under similar circumstances, were to draw a similar conclusion regarding public policy in light of all of the available evidence to the contrary. Given her credentials as a registered nurse, it is troubling that she has failed to accept first-hand testimonial evidence offered by residents of Brown County and similar communities. If those residents were to make the same complaints as medical symptoms under her care as patients, she would be forced to remove her epidemiological hat and treat those symptoms respectfully with a medical mindset.

"Furthermore, her decision that turbines are not a human health hazard seems to rest largely on literature reviews and papers by those who claim that the complaints of residents living near wind turbines are due to a nocebo reaction. In fact, she chose to include a study by Chapman, a known pro-wind activist, while ignoring contrary viewpoints. Interestingly, that article is one of only five, of a total of 50 articles listed in her Summary Log, that she reviewed. It should also be noted that two articles having the same title, with

Chapman as primary author, appeared in the Summary Log. That title was: "The Pattern of Complaints about Australian Wind Farms Does Not Match the Establishment and Distribution of Turbines: Support for the Psychogenic, 'Communicated Disease Hypothesis.'" It is logical to assume that the title alone, which stated the article's main conclusion, probably triggered her decision to include it in her review. Regarding any nocebo effect, babies and children would not be susceptible to any such effect, and neither would people who initially were positive toward wind projects.

"Health Officer Chua Xiong's conclusions are detrimental to the community, and they undermine the integrity of the Board of Health and its implicit duty to uphold the Precautionary Principle. That principle is a minimum expectation for a medical professional. Her insensitive and unfounded conclusions, in my view, are sufficient to disqualify her as an authoritative advocate for the health of Brown County residents."

Jerry L. Punch, Ph.D.
Professor Emeritus
Department of Communicative Sciences and Disorders
Michigan State University
East Lansing, MI 48824

Stephen Ambrose

Statement of Stephen Ambrose - INCE Bd. Cert., acoustical expert participating in the ILFN testing performed at Falmouth, Massachusetts, where he suffered adverse health effects while conducting that study

(See next 2 pages)

Tel: 207-892-6691 **S.E. Ambrose & Associates** Email; seaa@myfairpoint.net
15 Great Falls Road, Windham, ME 04062
Acoustics, Environmental Sound & Industrial Noise Control

February 22, 2016

To: Dr. Jay Tibbetts
Mr. Patrick Evans

Ref: Shirley Wind is a Public Health Hazzard

I respectfully write this letter in support of Richard James, Steven Cooper, Robert Rand and the many adversely impacted neighbors of Shirley Wind, as well as for too many other communities around the world. The Brown County Board of Health declared the Shirley Wind turbines a "Public Health Hazard" from evidence in Acoustic Studies and their own investigation over five years.

I have been conducting community sound assessments and industrial noise control for 40 years. My expertise comes not just from my academic credentials, but from the university of experience with first-hand encounters and hands-on involvement. I have been studying wind turbine noise and community impacts for over 6 years. I have witnessed wind turbines operating under of wind conditions, listened, conducted detailed sound level measurements, and most importantly I lived as a neighbor to understand the unpredictable complexity. This occurred over a windy spring weekend in Falmouth, Massachusetts, when a home owner abandoned their dream home to strangers, Robert Rand and myself, for acoustic measurements. Twenty minutes after entering the home we felt ill; headaches, nausea, sleep difficulties, loss of cognitive ability, and more. Those effects were real and diminished we left the area. We are experienced acousticians and give no credence to the NOCEBO effect; “no one can experience bad outcomes” promoted ingenuous promoters. After several weeks of separation from the Falmouth experience, we wrote The Bruce McPherson Infra-sound and Low Frequency Noise Study (Dec. 2011). This demonstrated the link between the wind turbine sound and its adverse physiological and psychological for neighbors.

Many years and numerous wind turbine research reports have left me dismayed. There are too many public health and acoustic professionals claiming to be experts without having witnessed wind turbine exposure and experience living in a house. In my opinion, these “researchers” have proven themselves to be 'faux' experts, who are only supported by university or government titles as they work for the wind energy businesses. A true expert should be evaluated by their knowledge derived from experience and not solely by reading, writing and attending pontificating conferences.

In my opinion, Mr. Blazer, his 'acoustic experts', and Ms. Chua Xiong are unqualified to make any decisions about wind turbines and their effects on people. They need to live as a wind turbine neighbor for an extended period of time to experience moderate to strong winds. Until this occurs, they have no credible claim to expertise. I must caution that If any are prone to motion sickness, they are likely to have a mind changing experience.

In closing, professional research done by reading with no professional experience is the same as an investigation undertaken with blind eyes and deaf ears. I support the earlier decision by the Brown County Board of Health declaring the Shirley Wind Turbines a "Public Health Hazard." This was a decision based on independent acoustic reports, including one by five members of Institute of Noise Control Engineers, two of whom work closely with the wind energy business.

The Director's decision ignored the extensive ground-breaking work of professional investigative acousticians who have more than sufficient qualifications to assess wind turbine sound and how it affects people. This shows a profound failure on her part to understand how important it is to work with true experts who hold paramount protecting public health, safety and well-being.

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

Respectfully,

Stephen E. Ambrose, *ASA, INCE Board Certified*
Principal Consultant

Stephen Cooper

Statement of Steven Cooper - MSc, P.E., acoustical expert who conducted and authored the groundbreaking ILFN study performed at Cape Bridgewater, Australia

(See next three pages)

The Acoustic Group
CONSULTING ACOUSTICAL & VIBRATION ENGINEERING

Brown County Citizens for Responsible Wind Energy 15th March 2016
PO Box 703
DENMARK WI 5208

Attention: Jim Vanden Boogart

EVIDENCE OF MS XIONG

In January 2016 I advised you that Ms Xiong had not contacted me in relation to about the issue of wind turbines and human health impacts.

Having read the material and transcript of her evidence, I am appalled at the evidence of Chua Xiong and the obvious bias.

Putting aside that she has no qualifications to actually comprehend the majority of the technical material there are obvious questions as to whether the material was actually read and comprehended. How any independent reviewer could go through the material that was submitted and come up with the conclusion that wind turbines do not cause **OR** do not have the potential to cause health harm simply defies logic.

Furthermore, a reasonable person on examining the material, her decision, and her answers could raise the question of corruption.

The questions from the panel and her answers show she should have resigned over her failure to fulfil her obligations to the community.

I am the author of the Cape Bridgewater Study and therefor understand what was required to be undertaken in that study. Ms Xiong failed to comprehend the specific brief issued by the wind farm operator. I do not agree with her interpretation of the Cape Bridgewater study.

The Cape Bridgewater study worked from the end of complaints – not predicted levels. One needs to take on board the complaints of the community (such as in Brown County) and ascertain why there are such complaints. This is what Chua Xiong failed to do for the community of Brown County.

The Cape Bridgewater study was required to start with the complaints and determine certain wind speeds and certain sound levels that related to the complaints from 6 local residents. That was the brief (only 6 residents). The contract for the study was restricted. The study did not permit various components of an investigation that we wanted to include and the project brief (or instructions) were not what others have sought to suggest by putting an entirely different spin on the study.

The study did find a relationship with the complaints versus the operation of the wind farm.

The study (as agreed by the wind farm operator) did not find any relationship with the operation of the wind farm and the multiple of standard acoustic parameters that were tested. The study found correlation between the wind speed and various acoustic parameters.

20-22 FRED STREET, LILYFIELD, 2040, NSW, AUSTRALIA A.B.N. 73 082 704 701
ph: (612) 9555 4444 fx: (612) 9555 4442 voip: (612) 8208 8881 tag1@acoustics.com.au

As such the use of dB(A) as a universal criterion for wind farms requires additional acoustic metrics.

The Cape Bridgewater study had a number of findings with the suggestion for further investigation.

Chua Xiong never contacted me to discuss the outcomes and seek further information/clarification.

What is relevant for the Brown County Board of Health and the inaction of Ms Xiong is that she refers to my 2012 paper that sets out my suggestion of moving forward with studies to investigate the specific issue of health impacts as a result of wind farm (copy attached). If she had comprehended my 2012 paper, there is an obvious answer why literature reviews and "health studies" that utilise surveys and predicted levels cannot address the health impacts as a result of turbines.

The identification of the health impacts of wind turbines cannot be done by acousticians alone, and similarly cannot be done by doctors alone. One requires a mutil-disciplinary approach by people with appropriate qualifications and experience in investigating issues within their area of expertise. No literature review can ever resolve the issue.

In 2012 I proposed that such a study be undertaken in two stages.

The first stage has been done by the acousticians and socio-acousticians. That work has been done. It has identified the infrasound signature is associated with turbines (not the dBA results) is the mechanism to show the operation of a turbine. The Shirley wind farm study and the Cape Bridgewater study identified that fact. The Cape Bridgewater study undertook the additional ON-OFF testing nominated in the Shirley wind farm study.

The infrasound signature that is based upon the blade pass frequency and harmonics of that frequency occurs only when the turbines are operational. Such a signal does not occur in the natural environment. This signature permits a simple test (for Stage 2) to identify if a turbine is operating. That is not to say that testing of people should be restricted to just infrasound. No, the testing needs to incorporate full spectrum sound (both inaudible and audible) that need to be faithfully reproduced (in the lab) or have the medical studies done in the field.

So stage 2 of my 2012 paper is the next step – Undertake the multidisciplinary medical studies (using the infrasound turbine signature that is unique to wind farms) included in the acoustic signal.

We have constructed a laboratory test chamber that reproduces the full spectrum of the actual wind farm noise (down to 1Hz) to undertake the Stage 2 work – not a synthesised signal derived from an Leq FFT and a 10- minute sample (and often limited to just infrasound) that does not reproduce what people experience in the real world.

The Xiong disposition of documents that were acceptable to her have a number of problems in those documents.

The first "accepted" document is related to a "study" by Chapman. There are issues with the material where the data was obtained from wind farm operators, no involvement with the community and resulted in outrage by many communities around wind farms in Australia by misrepresenting the facts. In the listing of documents submitted to Xiong are two documents from P Schneider that comment on the Chapman study.

For example, Schneider identifies the Chapman study refers to 0 complaints from residents in proximity to the Cullerin wind farm which is completely untrue and can be verified from documentation by the New South Wales government as a result of complaints resulting in an audit of that very wind farm. We understand a resident representative, who had lobbied the government and is still lodging complaints concerning the wind farm, contacted Chapman and confirmed that his report was incorrect with respect to that wind farm. The resident offered to have residents available so that he could undertake a proper assessment to which he declined.

Pages 18 - 23 of the final report of the Australian Senate Inquiry "Select Committee on Wind Turbines" in a subsection headed "Professor Chapman and his critics" that should be reviewed so as to ascertain that little weight should be provided to the first document accepted by Ms Xiang where is this subsection the Committee final report notes that:

> 2.21 The committee highlights the fact that Professor Chapman is not a qualified, registered nor experienced medical practitioner, psychiatrist, psychologist, acoustician, audiologist, physicist or engineer. Accordingly:
>
> - he has not medically assessed a single person suffering adverse health impacts from wind turbines;
> - his research work has been mainly—and perhaps solely—from an academic perspective without field studies;
> - his views have been heavily criticised by several independent medical and acoustic experts in the international community; and
> - many of his assertions do not withstand fact check analyses.
>
> 2.22 Professor Chapman has made several claims which are contrary to the evidence gathered by this committee. First, he argues that the majority of Australia's wind turbines have never received a single complaint.[19] There are various problems with this statement:
>
> (i) wind turbines located significant distances from residents will not generate complaints;
> (ii) many residents suffering adverse health effects were not aware of any nexus between their health and the impact of wind turbines in order to make a complaint;
> (iii) just because residents do not lodge a formal complaint does not mean they are not suffering adverse health effects;
> (iv) data obtained by Professor Chapman from wind farm operators of the numbers of complaints lodged cannot be relied upon; and
> (v) the use of non-disclosure clauses and 'good neighbour agreements' legally restricts people from making adverse public statements or complaints.

As to the Massachusetts report Ms Xiang failed to identify that whilst there was a mechanical engineer on the panel there was no identification of an acoustic expert and/or any acoustic expert with experience of wind farm noise. Dr Schomer prepared a critical review of the Massachusetts report that highlights the lack of acoustic knowledge, bias, and misrepresentation in the Massachusetts report.

Yours faithfully,

THE ACOUSTIC GROUP PTY LTD

STEVEN E COOPER

Paul Schomer

Statements of Paul Schomer – PhD, Standards Director, Emeritus, Acoustical Society of America, and acoustical expert participating in the 2012 PSCW-commissioned ILFN study at Shirley Wind

"This paper provides some of my thoughts and questions regarding the process used to analyze the potential health effects of wind turbine noise. As I understand it Chua Xiong developed very stringent criteria by which she judged nearly all of the available data. Her criteria included journal impact factor, peer review process, author's credentials, author's publications, author's affiliation, the research method, the scientific rigor, and causation. Let's examine how well her actions and the 5 papers selected by her meet her criteria.

1. *How does she judge the rigor of each paper without rigorously reading each paper?*
2. *Chapman's paper, one of two refereed papers she accepts, is almost totally lacking in rigor. He ostensibly examines complaints and suggests "As anti wind farm interest groups began to stress health problems in their advocacy, and to target new wind farm developments, complaints grew." But the analysis is for the presumed relation between information about possible effects and complaints about these effects.*
3. *The correlation between knowledge of effects in both Chapman and Health Canada do not demonstrate causation. There may be people at almost every wind farm that are experiencing low level impacts but only when these effects are publicized do they recognize that what has been affecting them is affecting other people. This is equally plausible based on the data that Chapman uses. These low level impacts are explicitly given in the applicable international standard on this topic (ISO1996-1:2016 Annex C) where it states that low-frequency sound or infra-sound is perceived as "…pulsations and fluctuations" and "…feelings of ear pressure". Many fewer may exhibit more severe symptoms.*
4. *Chapman's paper lacks rigor. He fails to show that the wind farms are comparative to one-another. Questions that he doesn't ask or answer include:*
    a. *Were there equal percents of people in difference noise zones?*
    b. *Were the highest noise zones the same in every wind farm?*
    c. *What provision was made for the people that are paid to be exposed to the noise and do not complain because of the payment and its non-complain clause?*

d. What provision was made for the people that are paid considerably for having a wind turbine on their property and do not complain because of the payment and its non-complain clause?

5. Mr. Chapman suggests that if a cross-sectional study was performed there would be proof of the nocebo effect. Apparently his correlation is causational or he is not very rigorous. But he is wrong on another key point, complaints and all the symptoms measured did not begin with the advent of "activists" spreading their message on the internet, rather complaints about these symptoms associated with low-frequency sound and infra-sound have been present in the literature since at least 1960, 56 years ago. Again a lack of rigor and thoroughness. This illustrates another "rule" asserted by this industry, the low frequency tone at 1Hz generated at a wind farm is somehow so different from the 1Hz sound generated by something else that nothing can be learned from the human response found 50 years ago, because the sources weren't wind farms. This is of course another illogical and unsubstantiated claim. It is known and documented that the same effects and same complaints occurred without the internet.

6. Ms. Xiong wants to prove causality, let's examine the reasonableness of that. It sound very reasonable but it is not. For the community to prove causality they would have to know and start a survey before anybody knows about a windfarm proposal or even the potential for a proposal, how can this be? How can the community start a survey before anyone knows about a wind farm is being considered? So the industry has set the impossible requirement that the community must shown causality, but the community cannot, the only ones that can show causality are the industry, but they have not shown any interest in doing this, just demanding that the community do it.

7. So we now find that Xiong rejected every paper that dealt with causation for lack of proof of causation except for two that she acknowledges are non-causal but goes on to use without explanation.

8. Of these two refereed papers that she accepts one is egregiously non rigorous (Chapman)

9. Rigor and causality were her reasons for rejecting every paper of this type--except these two.

10. Her criteria for choosing integrative studies is rather opaque. She lauds the Massachusetts Study for the high quality multi-disciplinary team. That seems to be a reasonable qualification of an integrative study. Unfortunately, as the attached paper shows, they did not perform up to expectations in this case. But assuming they had performed what does that say about her criteria for choosing

the Wisconsin Wind Siting council report. It is not clear that even one person on this whole council has even one published journal paper on any subject. I do not see where they have any expertise in acoustics, in medicine, in psychology, sociology or anything else that might be scientific or relevant to this topic. This "scientific" body that helped her decide whether there were health effects from wind farms includes, two realtors, two land owners, two public members, two public officials, four wind energy representatives and one engineer, with two vacancies.

11. Her third integrative study was done at the same time as another integrative study was underway in Australia by the Australian senate. The senate's select committee came to quite the opposite conclusion using what should have been much the same data and witnesses.

12. In short it is totally mystifying how Ms. Xiong performed her selection. It certainly cannot be on her stated criteria, proving causation and rigor because she ignores these in the two journal papers she accepts and she never does give her criteria for integrative studies and no logical selection pattern can be discerned from the three that she chooses. In my opinion all of her work is arbitrary and capricious.

13. There is a simple first question that can indicate if these health effects can be occurring: This is merely a study to see if people can sense when wind turbines are generating significant power or not without visual or audible clues? This is the first question because any effect requires that the people sense it and know that something is happening. This does not attempt to say what effect the wind farm operation causes, only that it is sensed. It requires no acoustical measurements and no medical procedures. The attached paper details this test which could easily be done at Shirley with industry cooperation. "

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May 6, 2016

Mr. James Vanden Boogart,

The following is my response to the declaration by Chua Xiong's mentor that the CBW study is "garbage".

The tactics being used in the case of the Bridgewater paper, is that if you repeat a lie often enough you hope that you get people to eventually believe it. That is what is happening here. I predicted that the industry would say the Cooper paper doesn't do things it was never intended to do and somehow allege that the undone and unrequired things were important. Fundamentally, the Cooper study is exactly the kind of study that should be done and the type of studies advocated by the industry are incorrect. Let me explain. The prevalence of individuals able to sense the operation of wind turbines based on other than acoustic factors does not appear to be frequent. It is certainly less than 5% of the population and it is not unlikely that it is less than 1% of the population. With a low frequency of occurrence, random attitudinal surveys are not the way to study the situation, it is a way to hide what the truth is. What the industry is advocating as correct is really a way to hide what is happening and hide the truth. With the percentages of occurrence of these individuals the only way to proceed is with case studies. The Cooper study represents case studies of six individuals. His results show that people responded to the emission when the power generation was high or when it was changing a fair percentage from one power level to another. From this Cooper rightfully concludes that the people are somehow sensing the power being generated and reports that. That is a very important and relevant finding. What the industry has attempted to do is obfuscate these simple results with calls for surveys where random people are chosen in random locations and the chance of getting any people sensitive and in a location with suitable emissions is essentially zero.

Submitted by:

Paul Schomer

Paul Schomer, Ph.D., P.E.
Member, Board Certified; Institute of Noise Control Engineering

Richard James

Statement of acoustician Richard James - INCE, Adjunct Professor Central Michigan University, acoustical expert who performed extensive ILFN measurements at adversely affected Shirley Wind residences, and has provided expert witness testimony in numerous courts.

"All,

"I concur with all of the comments from Carmen and Dr. McMurtry. I have been hesitant to respond because my review of the presentation caused much distress and I did not want that to carry into my response.

"IMO, the most egregious error in the Director's defense of her decision is that she puts weight on the opinions of non-acousticians who know nothing about acoustics or the impact of acoustic energy on people. It is my profession that is responsible for alerting medical authorities and government agencies tasked with guarding public health and welfare not literature reviews by politically appointed panels or epidemiologists and medical people working for the industry creating the problem.

"Acousticians are the source of the information that is the foundation of the WHO cautions about low frequency noise, the standards that support those cautions in ISO and ANSI. That information is not found in PubMed but in the acoustical journals and research papers she did not even bother to mention as impacting her decision. To say there is no peer reviewed literature showing a cause and effect link in medical sources like PubMed is to say that they did not look in the correct places for their information.

"She ignored that information, even to the extent of not even including the direct communications of acousticians like myself, Dr. Schomer, Steve Cooper, Rob Rand and others. We have established the foundation linking the operation of utility scale wind turbines to the sensations and health effects reported by people living in Shirley Wind's footprint. Yet, she gave that no weight. That is egregious because it shows she has ignored the true source of scientific information in favor of non-specialists who conduct literature searches focused on non-acoustical sources.

"If she is perceives herself as a public health official, she must accept that she has no expertise in acoustics and the impact of acoustic energy on people. Similarly, the authors of the documents she claims to have relied upon have no such expertise. If she willingly ignores the work of scientists and researchers in acoustics then she is not a scientist or researcher. No scientist would rely on an opinion found in a literature research that is contrary to what the specialists in the specific field have established from empirical evidence. We have established a cause and effect link between a source of toxic emissions and adverse effects on people. Like Dr. Schomer has stated about Steven Cooper's Cape Bridgewater study; all it takes is a study of

showing one person is affected by wind turbine operation to prove that the industry's talking points gleaned from white papers, the Massachusetts's Expert Panel, and the Wisconsin Wind Siting Board's decisions are wrong. That "one person" in Cape Bridgewater is supported by the complaints of people in the Shirley Wind community and the many others in similar communities that the Director chose to ignore. When the problems are seen in babies and small children there is no way to explain these away as NOCEBO's, not liking how wind turbines look or not being compensated with money.

"Thus, I would have to conclude that her decision is without scientific or medical merit. Maybe it satisfies a constituency who view wind energy as a solution to climate change or pleases those in the county who fear the costs of protecting the public's health. Maybe it is just bias or not understanding the protective duties of her job. Whatever the reason, IMO the decision shows she is not qualified to be the Director of the department. She should have to write the Precautionary Principle on the blackboard 100 times so she understands why the Brown County Board has the authority to issue a Human Health Hazard decision. Our common law incorporates the spirit of the Precautionary Principle. The enabling legislation for the Board of Health shows that in Wisconsin and elsewhere in civilized countries people are to be protected from business interests. It is the duty of Board's of Health and Departments of Public Health to act accordingly whether it is to close a restaurant infested with rodents or force an emitter of toxic acoustic energy to mitigate.

"Further, for a supposed health professional to ignore the proof of the impact of wind turbines standing in the meeting room right before her eyes is equally egregious. What if she was a nurse or doctor facing a patient? Would she rely on a literature search to diagnose the patient? Would she say to the patient, I can't find any cause for those symptoms in my literature search so they must be all in your head? Or, would she ask questions and listen to the patient with the intent of understanding what is causing the problems as did the Board of Health? It is the people who live in the Shirley community who have filed statements and affidavits regarding their symptoms and discomforts that prove the opinions of the acousticians are correct.

"What would she have said to a patient complaining about symptoms now accepted as fibromyalgia 30 or 40 years ago? While the symptoms were described in the 1800's it wasn't until the 1970's that it was given appropriate attention and 1990 for a formal case definition to be proposed. (See http://www.fibrocenter.com/fibromyalgia-disease) Today it is recognized, but there is still no medical explanation for it. Dr. McMurtry and Carmen Krogh have had a case definition for "Wind Turbine Syndrome" published five years ago.

"A medical professional cannot wait to act until someone has established a cause and effect. If that was a requirement we would have to ban most of the drugs currently on the market, starting with aspirin, and ignore people with symptoms of other illnesses where we do not know the specific cause. Do we know with the level of certainty that the Director appears to need the cause of many cancers?

"IMO, if she really understood how her decision demonstrates her failure to be intellectually honest, how she fails to work with other scientists and researchers having specific knowledge, and her duty to protect health and not the wealth of the county under the Precautionary Principle she could not have made the decision to not act.

"She never once talked to me, and from what I know she never talked to any other acousticians. The reports and studies from us were provided and the opportunities to engage us in helping her understand what they mean were open. Yet, she relied on information that is from sources that are little better than trade papers by authors aligned with the wind industry and its promoters.

"I know that information well. I am faced with it in hearings and lawsuits by attorneys representing the wind energy business. Dr. Punch and I have a manuscript that addresses them and shows they are a combination of specious arguments and outdated studies. They have no merit and should not have been given any weight. Instead the Director gives them full weight.

"IMO, a person with a medical background who is not willing to accept the scientific evidence about adverse sensations and health effects, even if it is not in concordance with one's beliefs prior to seeing the evidence, should be disqualified from any work in health fields."

Rick James, INCE

"When an activity raises threats of harm to the environment or human health, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically."

"All statements of the Precautionary Principle contain a version of this formula: When the health of humans and the environment is at stake, it may not be necessary to wait for scientific certainty to take protective action."

http://www.sehn.org/state.html

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Dr. Robert McMurtry

Statements of Dr. Robert McMurtry - MD, Member of the Order of Canada, Fellow of Royal College of Physicians and Surgeons of Canada, Fellow of the American College of Surgeons

> *"Another literature review such as Carolyn Harvey apparently did is a predictable waste of time and fails to address the fundamental question;* ***are people being harmed?*** *Once again all sides concur that the next steps must be taken with on-site evaluation promoted by those who are concerned about health. If problems are confirmed (again!) prospective cohort studies of exposed and control populations are warranted if ethical approval by ERB can be secured!"*

> *"Of the literature reviews I have seen this ranks as the weakest. Even those hired by and writing for the industry justifying IWT were more thorough and objective. Their study had many weaknesses but this Wisconsin Public Health PP stands alone as the poorest based on the information available."*

> *"She lays out the criteria and they are well-founded then proceeds to completely ignore or violate her own guidelines. I have read a lot of material coming from proponents and this effort represents the weakest I have seen."*

> *"As to this document Chuo Lo Xiong has reneged on her responsibility assuming a literature review of any kind, let alone this inferior effort, discharges her responsibility. She has the authority and the resources to dispatch field epidemiologists. In home studies of exposed people with simultaneous physiological and acoustical monitoring would then be possible. The principles of satisfying adequate investigation, patient centred care (determining the illness experience) and soundscape (exposed person as expert) could be accomplished. None of these will ever be accomplished by literature reviews."*

> *"Chuo Lo Xiong in this endeavour has shown herself to be inadequate for the position she holds. Sadly she is not alone among public health officials in many jurisdictions."*

"There are certainly grounds for challenging Chua Xiong's competence generally and in particular her ability to discharge her responsibilities as a public health official adequately."

"The resignation of Chua Xiang is excellent news and an appropriate response from an official, which appears to be a de facto acknowledgement of her failure as a public health official. In particular she acted against material facts known to her personally that clearly confirmed adverse health effect(s) in the environs of industrial wind turbines.

"Chua Xiang's further actions in overseeing and being ultimately responsible for a deeply flawed study claiming to negate adverse health effects in the environs also seems a failure in her due diligence.

"The third element of this public health official's march of folly was to base a decision on flawed research and announce it publicly thus further undermining the community confidence in her and her office.

"The most insightful decision in this most unfortunate series of events taken by Chua Xiang may be the submission of her resignation.

"It is of the utmost importance that Brown County react effectively and expeditiously to address the harm done to its public health office and restore integrity to its processes.

"The measure of success will be the restoring the original decision of declaring industrial wind turbines as hazardous to health when deployed too proximate to peoples' places of work, schools or residences.

"Shirley Wind Farm Study had highly credible acousticians who objectively demonstrated adverse health effects experienced by exposed people and demonstrated their relationship to acoustical energy from industrial wind turbines especially in the low frequency and infrasound range."

R Y McMurtry

Carmen Krogh

Statement of Carmen Krogh - Pharmacist, wind turbine health effects researcher-Health Canada, peer-reviewed author, Queen Elizabeth II Medal-2002, 2014 (Public Service Award)

Dr. Jay Tibbetts
Brown County Board of Health
Wisconsin, USA
jaytibbetts@att.net

May 7, 2016

Dear Members of the Board,

It has come to my attention that based on a Freedom of Information request, in an email message dated October 9, 2015 sent by Ms Carolyn Harvey to Ms Chua Xiong, the following statement was made. Please note that my name is misspelled:

> 5. Carmen Krough, Bill Acker, Dr. Schomer, Rick James and others, all hang on to infra-sound like proving its presence proves their case. It does not. It provides a starting point. They need hundreds, a thousand would be better, rigorous studies that demonstrate how infra-sound causes illness. I can't find even one that reports a relative risk, risk difference or odds ratio.

The comment regarding Carmen Krough (Krogh) is factually incorrect.

For example, an excerpt from a Review for which I am a co-author and published in a peer reviewed Canadian medical journal concludes:

> "There is sufficient evidence to support the hypothesis of Colby and colleagues that documented symptoms can result from annoyance to audible IWTs. Amplitude modulation of IWTs, audible LFN, and tonal, impulse and nighttime noise can contribute to annoyance and other effects on health. In addition, there is emerging evidence that suggests inaudible LFN or infrasound from IWTs may result in negative health effects."
>
> [Reference: Roy D. Jeffery, Carmen M.E. Krogh, and Brett Horner, Industrial wind turbines and adverse health effects Can J Rural Med 2014;19(1) http://www.ncbi.nlm.nih.gov/pubmed/24398354
> PMID: 24398354 [PubMed - indexed for MEDLINE]

As background, to assist readers Jeffery et al (2014) sets the stage:

> "In this review, we consider the hypothesis of Colby and colleagues that the health effects from IWTs are the result of annoyance from the noise of audible IWTs. We also discuss emerging knowledge on the effects of inaudible LFN and infrasound."

The authors of Colby et al (2009), prepared for the American Wind Energy Association and Canadian Wind Energy Association determined the documented "wind turbine syndrome"

symptoms (sleep disturbance, headache, tinnitus, ear pressure, dizziness, vertigo, nausea, visual blurring, tachycardia, irritability, problems with concentration and memory, and panic episodes associated with sensations of internal pulsation or quivering when awake or asleep)
"are not new and have been published previously in the context of "annoyance"" and are the "well-known stress effects of exposure to noise".

> [Reference: Colby WD, Dobie R, Leventhall G, et al. Wind turbine sound and health effects: an expert panel review. Washington (DC): American Wind Energy Association and Canadian Wind Energy Association; 2009 www.canwea .ca/pdf/talkwind /Wind Turbine_Sound and_Health_Effects.pdf]

Annoyance is acknowledged as a health effect. Examples include:

Niemann H, Bonnefoy X, Braubach M, Hecht K, Maschke C, Rodrigues C, Robbel N. Noise-induced annoyance and morbidity results from the pan-European LARES study. Noise Health 2006;8:63-79

> "…confirmed, on an epidemiological level, an increased health risk from chronic noise annoyance."

Niemann Dr Hildegard, Maschke Dr Christian, LARES Final Report Noise Effects and Morbidity, World Health Organization, (2004)

> "The result confirms the thesis that for chronically strong annoyance a causal chain exists between the three steps health – strong annoyance – increased morbidity."

The US EPA on Noise Pollution acknowledges sound can be considered an annoyance which can have major consequences, primarily to one's overall health.

> "Though for some, the persistent and escalating sources of sound can often be considered an annoyance. This "annoyance" can have major consequences, primarily to one's overall health." http://www.epa.gov/air/noise.html

For the interest of the Board, I have attached a summary of references for which I am an author/co-author. These include articles published in several medical journals and other peer reviewed publications, wind turbine noise conference papers and other.

I trust this will clarify that the statement contained in the FOI is factually incorrect. Thank you for your consideration of this matter.

Respectfully submitted,

Carmen Krogh
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Appendix A: SUMMARY LOG

Shirley Wind Project, Town of Glenmore
2015

Public Health
Prevent Promote Protect

Brown County Health Department

Summary Log

Title, Author	Included	Excluded
1. The Pattern of Complaints about Australian Wind Farms Does Not Match the Establishment and Distribution of Turbines: Support for the Psychogenic, 'Communicated Disease' Hypothesis Chapman, A., Waller and Cakic	X	
2. Systematic Review of the Human Health Effects of Wind Farms Merlin et.al.	X	
3. Wisconsin Wind Siting Council Wind Turbine Siting-Health Review and Wind Siting Policy Update Wisconsin Wind Siting Council	X	
4. Wind Turbine Health Impact Study: Report of Independent Expert Panel Massachusetts Department of Environmental Protection (MassDEP) and Massachusetts Department of Public Health (MDPH) independent expert panel	X	
5. An assessment of quality of life using the WHOQOL-BREF among participants living in the vicinity of wind turbines Feder et.al.	X	
1. Systematic Review 2013: Association between wind turbines and human distress. I Arra, H Lynn, K Barker, C Ogbuneke, S Regalado		X
2. Low-frequency Sound Affects Active Micromechanics in the Human Inner Ear Kathrin Kugler et.al.		X
3. Wind Turbines: A Different Breed of Noise? Nate Seltenrich		X
4. Health effects and wind turbines: A review of the literature Loren D Knopper and Christopher A Ollson		X
5. Wind Turbine Infra and Low-Frequency Sound : Warning Signs That Were Not Heard James, Richard R.		X
6. 166th Meeting of the Acoustical Society of America Schomer, P. and Pamidighantam, P.		X
7. Draft Review of Health Canada HC Wind Turbine Noise Study Wolfe, D.		X

*Included: meets the criteria for review. *Excluded: does not meet the criteria for review.

Title, Author	Included	Excluded
8. A theory to explain some physiological effects of the infrasonic emissions at some wind farm sites Schomer et.al.		X
9. WindVOiCe, a Self-Reporting Survey: Adverse Health Effects, Industrial Wind Turbines, and the Need for Vigilance Monitoring Carmen M.E. Krogh et.al.		X
10. Industrial Wind Turbine Development and Loss of Social Justice? Krogh, Carmen		X
11. Wind Turbines can be Hazardous to Human Health. Salt, Alec PhD		X
12. Health-Based Audible Noise Guidelines Account for Infrasound and Low-Frequency Noise Produced by Wind Turbines Robert G. Berger		X
13. Multi-municipal Wind Turbine Working Group Stelling, Keith, and Krogh, Carmen		X
14. Analysis of Aerodynamic Sound Noise Generated by a Large-scale Wind Turbine and its Physiological Evaluation Inagaki, T., Li, Y., Nishi, Y.		X
15. Investigation of Perception at Infrasound Frequencies by Functional Magnetic Resonance Imaging and Magnetoencephalography Bauer, M. et.al.		X
16. Properly Interpreting the Epidemiologic Evidence About the Health Effects of Industrial Wind Turbines on Nearby Residents Phillips, C.		X
17. Impact of Wind Turbine and Sound on Annoyance, Self-reported Sleep Disturbance and Psychological Distress Baker, RH, E. et.al.		X
18. ICBEN Review of Research on the Biological Effects of Noise Basner, M. et.al.		X
19. Outcome of Systematic Research on Wind Turbine Noise in Japan Tachibana, H.		X

*Included: meets the criteria for review. *Excluded: does not meet the criteria for review.

Title, Author	Included	Excluded
20. Perception of Low Frequency Components in Wind Turbine Noise Yokoyama, S. et.al.		X
21. The Link Between Health Complaints and Wind Turbines: Support for the Nacebo Expectations Hypothesis Crichton, F. et.al.		X
22. Fomenting Sickness: Nocebo Priming of Residents about Expected Wind Turbine Health Harms Chapman, S. et.al.		X
23. Possible Psychological Mechanisms for "Wind Turbine Syndrome" Rubin, G. James et.al.		X
24. The Pattern of Complaints about Australian Wind Farms Does Not Match the Establishment and Distribution of Turbines: Support for the Psychogenic, "Communicated Disease Hypothesis" Chapman, S. et.al.	X	
25. The Power of Positive and Negative Expectations to Influence Reported Symptoms and Mood During Exposure to Wind Farm Sound Crichton, F. et.al.		X
26. On the Overlap Region between Wind Turbine Infrasound and Infrasound from Other Sources and its Relation to Criteria Leventhall, Geoff		X
27. Wind Turbine Noise and Health Study Michaud, David S. (Health Canada)		X
28. Legal Requirements for Human-health based Appeals of Wind Energy Projects in Ontario Engel, Albert M. LLP		X
29a. Health-based Audible Noise Guidelines Account for Infrasound and Low-frequency Noise Produced by Wind Turbines. Berger, Robert G. et.al.		X
29b. Health-based Audible Noise Guidelines Account for Infrasound and Low-frequency Noise Produced by Wind Turbines. Berger, Robert G. et.al.		X
30. Proposed Criteria for the Assessment of Low-frequency Noise Disturbance Moorhouse, Andy PhD. et.al.		X

*Included: meets the criteria for review. *Excluded: does not meet the criteria for review.

Title, Author	Included	Excluded
31. Trials of a protocol to support LFN sufferers in the UK Moorhouse, A. et.al		X
32. Low Frequency Noise-Induced Pathology: Contributions Provided by the Portuguese Wind Turbine Case Nuno, A.A. et.al.		X
33. Wind Turbine Infrasound and Low Frequency Noise Timeline, "What the wind industry knew and when" Brown County Citizens for Responsible Wind Energy		X
34. Victorian Civil and Administrative Appeals Tribunal Statement Laurie, Sara		X
35. Acoustic Engineering Investigation into Airborne and Ground-Borne Pressure Pulses from Pacific Hydro's Wind Turbines at Cape Bridgewater A Simplified Explanation of the Findings, Previous Research and the Consequences Waubra Foundation		X
36. Wind Turbines and Proximity to Homes: The Impact of Wind Turbine Noise on Health Frey, Barbara J. and Hadden, Peter J.		X
37. Adverse Health Impacts of Industrial Wind Turbines: A Scientific Response to "it's all in your head" Hartman, Raymond S.		X
38. Low Frequency Noise and Annoyance Leventhall, H.G.		X
39. A Study of Annoyance Due to Low Frequency Noise in the Home Vasudevan R.N. and Leventhall, H.G.		X
40. Improper Collusion Between Environmental Pressure Groups and the EPA as Revealed by Freedom of Information Act Requests, Interim Report Horner, Chris and Schnare, David		X
41. Legal Liability for Electricity in the USA: Products Liability Standler, Ronald B.		X
42. Minority Response: Wind Turbine Siting-Health Review, Wind Siting Policy Update (2014) Wisconsin Wind Siting Council, Minority		X

*Included: meets the criteria for review. *Excluded: does not meet the criteria for review.

Title, Author	Included	Excluded
43. A theory to explain some physiological effects on the infrasonic emissions at some wind farm sites Schomer, Paul D. et.al		X
44. Effects of Motion at Sea on Crew Performances: A Survey Stevens, Samson C. and Parsons, Michael G.		X
45. A Proposed Metric for Assessing the Potential of Community Annoyance from Wind Turbine Kelley, N.D		X
46. Background Research for Pittsburgh ASA Presentation McMurtry, Robert Y.		X
47. Perception of low frequency components in wind turbine noise Yokoyama, S. et.al.		X
48. Can Expectations Produce Symptoms From Infrasound Associated with Wind Turbines? Crichton, F. et.al.		X
49. Possible psychological mechanisms for "wind turbine syndrome" on the windmills of your mind Rubin, James G. et.al.		X
50. Wind Turbine Options Analysis Process Final Report to the Falmouth Board of Selectmen, Falmouth, MA Amsler, et.al.		X
Title, Author	**Included**	**Excluded**
Testimonies and letters, while informative do not measure exposures and health outcomes, cannot report on risk, relative risk or odds ratios, and are not in themselves scientific evidence.		X
News articles, do not measure exposures and health outcomes, nor are they able to report risk, relative risk, odds ratios, or other relevant results. They are not scientific evidence and are designed to draw attention to a topic of interest.		X
Acoustic / Sound studies provide evidence and information on exposure relevant to the study of wind turbine noise emissions. The sound studies reviewed, however, contain only exposure data and as such cannot report on potential health outcomes. A collaborative study, with credible health outcome authorship, methods and measurement is needed.		X

*Included: meets the criteria for review. *Excluded: does not meet the criteria for review.

Brown County Health Department
Town of Glenmore,
Shirley Wind Project

Documents Presented or Cited as Research Articles

1. Systematic Review 2013: Association between wind turbines and human distress.
I. Arra, H. Lynn, K. Barker, C. Ogbuneke, S. Regalado
Cureus, 2014 - cureus.com

- **Literature Review**
- **Inclusion and Exclusion criteria clearly stated**
- **Evaluation Tool and subsequent evidence scores reported**
- **Authors conclude reasonable evidence of distress, dose-response, and consistency across studies.**
- **Author further concludes more study is needed.**
- **No available impact factor**
- **Does not follow traditional review process, not peer-reviewed**

2. Low-frequency Sound Affects Active Micromechanics in the Human Inner Ear
Kathrin Kugler, Lutz Wiegrebe, Benedikt Grothe, Manfred Kössl, Robert Gürkov, Eike Krause, Markus Drexl
Royal Society Open Science, Published 1 October 2014.DOI: 10.1098/rsos.140166

- **Article proposes a mechanism of action for low-frequency and inner ear disturbance**
- **Uses frequencies higher than those associated with Wind Turbine**
- **Appears in a pay-for-publication online journal**
- **Pay for publish journal**

3. Wind Turbines: A Different Breed of Noise?
Nate Seltenrich, Environ Health Perspect. 2014 Jan 1; 122(1): A20–A25.
Published online 2014 Jan 1. doi: 10.1289/ehp.122-A20

- **Literature Review**
- **Evidence supports and negates health impacts relevant to wind turbine emissions**
- **Authors conclude "investigators do not know the exact relationship between noise and health impacts or why noise affects some people differently than others."**
- **Lack scientific rigor**

4. Health effects and wind turbines: A review of the literature
Loren D Knopper and Christopher A Ollson, Environ Health. 2011; 10: 78
Published online 2011 Sep 14. doi: 10.1186/1476-069X-10-78

- **Literature Review**
- **Methodology clearly reported**
- **No inclusion or exclusion criteria reported**
- **Results include "no peer review articles demonstrate a direct causal link," health impacts are likely environmental stressors and exist in a "segment" of the population.**
- **Lack scientific rigor**

5. Wind Turbine Infra and Low-Frequency Sound : Warning Signs That Were Not Heard
James, Richard R.
Bulletin of Science Technology & Society 2012 32: 108 originally published online 15 December 2011.

- **Literature Review**
- **Uses both current and very old science**

*Included: meets the criteria for review. *Excluded: does not meet the criteria for review.

- Notes opposing opinions of other acousticians
- Indicates a potential mechanism of action and moves directly to causation without reporting evidence.
- Relevant finds are notable for "some people"
- Impact factor 0.23

6. 166th Meeting of the Acoustical Society of America

Schomer, P. and Pamidighantam, P. (2013)

- This is a critique of a single study referred to as "the Massachusetts study"
- Not a systematic review
- Does not meet the criteria used for this process
- Conference paper, not peer-reviewed

7. Draft Review of Health Canada HC Wind Turbine Noise Study

Wolfe, D. (2014)

- This is a draft review of the Health Canada Wind Turbine Noise Study
- Not a systematic review
- Not peer reviewed
- Not a solicited review by an independent expert
- Not a systematic review
- Not peer reviewed

8. A theory to explain some physiological effects of the infrasonic emissions at some wind farm sites

Schomer PD1, Erdreich J2, Pamidighantam PK1, Boyle JH1,
J Acoust Soc Am. 2015 Mar;137(3):1356-65. doi: 10.1121/1.4913775.

- This study uses the Shirley Windfarm Report conducted by Hessler, Hessler and Schomer to propose a possible mechanism of action.
- Schomer holds a PhD in acoustical engineering and is not a physiologist, anatomist, clinician or MD.
- Credentials of authors (field)

9. WindVOiCe, a Self-Reporting Survey: Adverse Health Effects, Industrial Wind Turbines, and the Need for Vigilance Monitoring

Carmen M.E. Krogh, Lorrie Gillis, Nicholas Kouwen, and Jeff Aramini
Bulletin of Science, Technology & Society August 2011 31: 334-345, doi:10.1177/0270467611412551

- Community based initiative in Ontario, Canada
- Cross sectional survey
- Respondents self-report, mail in survey
- Lacks scientific rigor
- Impact factor 0.23

10. Industrial Wind Turbine Development and Loss of Social Justice?

Krogh, Carmen
Bulletin of Science and Technology, 2011 31: 321

- Literature Review
- No report of Methods or Materials
- No appendices of survey/interview results
- No tables, graphs, or statistical analysis
- Lack scientific rigor
- Impact factor 0.23

*Included: meets the criteria for review. *Excluded: does not meet the criteria for review.

11. Wind Turbines can be Hazardous to Human Health.
Salt, Alec PhD.
Washington University Cochlear Fluids Research Laboratory, April 2014.

- **This article proposes a mechanism of action and points toward biologic plausibility**
- **Author concludes more study and knowledge are needed**
- **Author reports no risk, relative risk or odds ratio.**
- **Not peer-reviewed**

12. Health-Based Audible Noise Guidelines Account for Infrasound and Low-Frequency Noise Produced by Wind Turbines
Robert G. Berger,1 Payam Ashtiani,2 Christopher A. Ollson,3 Melissa Whitfield Aslund,3 Lindsay C. McCallum,3,4 Geoff Leventhall,5 and Loren D. Knopper 3
Frontiers in Public Health. 2015; 3: 31

- **Authors conclude that wind turbines produce broad-band noise including infra and low-frequency sound.**
- **There is no evidence suggesting the levels in this study effect human health**
- **Subjective variables (expectations, perceptions, etc) are a more likely etiology**
- **Impact Factor 0.00**

13. Multi-municipal Wind Turbine Working Group
Stelling, Keith, and Krogh, Carmen
Palmer, William (reviewed by)
Literature Review for the Municipal Counselors of Grey, Bruce, Huron Counties, Ontario, Canada.

- **Literature Review**
- **Keith Stelling is a Master of Arts and Certified Herbalist**
- **He draws conclusions about sound measurements, but is not an acoustician**
- **Does not report inclusion or exclusion criteria**
- **Does not report methods**
- **Not peer-reviewed**

14. Analysis of Aerodynamic Sound Noise Generated by a Large-scale Wind Turbine and its Physiological Evaluation
Inagaki, T., Li, Y., Nishi, Y.
International Journal of Environmental Science and Technology. 2015; 12:1933-1944

- **n=15**
- **subjects were exposed to varying sound frequencies**
- **neuro-stimulus as brain waves was measured using EEG**
- **Brain waves are not a health outcome**
- **Connection to sound and wind turbines is unclear**

15. Investigation of Perception at Infrasound Frequencies by Functional Magnetic Resonance Imaging and Magnetoencephalography
Bauer, M. et.al.
22nd International Congress on Sound and Vibration. 2015

- **subjects exposed to vary frequencies between 250hz and 8hz**
- **measure neuro-stimulus and brain regions using MEG and fMRI**
- **German institute of human development**
- **Conference paper**

16. Properly Interpreting the Epidemiologic Evidence About the Health Effects of Industrial Wind Turbines on Nearby Residents

Phillips, C.
Bulletin of Science, Technology & Society. 2011

- Literature Review
- Too few citations, 8 for a lit review (many we have scored low for rigor)
- No actual conclusions outside of his opinion
- Not a study
- Impact Factor 0.23

17. Impact of Wind Turbine and Sound on Annoyance, Self-reported Sleep Disturbance and Psychological Distress

Baker, RH, E. et.al.
Science of the Total Environment. 2012

- Cross sectional survey
- Respondents self-report
- Authors conclude "Wind turbine noise and psychological distress were not directly related."
- Authors conclude that "exposure to wind turbine and annoyance are positively related."
- Lacks scientific rigor

18. ICBEN Review of Research on the Biological Effects of Noise

Basner, M. et.al.
Noise Health. 2015

- Literature Review
- Focus data between 2011 and 2014
- Focus on noise and hearing loss, performance and behavior, sleep and community response
- International Commission on Biological Effects of Noise (ICBEN)
- Conclusions: more study is needed.
- Occupational exposures only

19. Outcome of Systematic Research on Wind Turbine Noise in Japan

Tachibana, H.
Proceedings of Inter-Noise. 2014, 1-10

- Reports thorough materials and methods
- Uses statistical analysis
- N=29 points for sound measurement
- Decibel levels confirmed by laboratory analysis
- Conclusions:
  - A-scale is an accurate measure of sound relating to Wind Turbine
  - Noise effects are between 25-50 decibels
  - Wind turbine should be assessed as "audible noise"
- Conference paper

20. Perception of Low Frequency Components in Wind Turbine Noise

Yokoyama, S. et.al.
Noise Control Engineering Journal 62. 2015

- S. Yokoyama is a Research Assistant at the University of Tokyo
  MS or PhD candidate, engineering and acoustics
- 3 Laboratory experiment
- Assess low frequency sound and human audible perceptions
- "Based on the results of these experimental investigations, the suitability of single-number indices for the assessment of wind turbine noise is discussed."

*Included: meets the criteria for review. *Excluded: does not meet the criteria for review.

• Exposure only
21. The Link Between Health Complaints and Wind Turbines: Support for the Nacebo Expectations Hypothesis Crichton, F. et.al. Frontiers in Public Health. 2014
• Literature Review • Includes 78 studies • Examines: Reporting, Annoyance and Distress, Positive and Negative Psychosocial Exposures, Symptomology • Conclusions: Wind turbines are not unlike other historical responses to new technology. • "increased symptom reporting has occurred in locations where there has been targeted dissemination of negative health information" • Impact factor 0.00
22. Fomenting Sickness: Nocebo Priming of Residents about Expected Wind Turbine Health Harms Chapman, S. et.al. Frontiers in Public Health. 2014
• Case Study: The effects of negative information on health and perception related to wind turbines. • Internet Search/Media Search, following a presentation by an Anti-wind Foundation. • Count of articles, websites, and statements • Resulting Impacts • Conclusions: Confirmation bias, where people "search for, interpret, prioritize information, in ways that confirm their beliefs." • Impact factor 0.00
23. Possible Psychological Mechanisms for "Wind Turbine Syndrome" Rubin, G. James et.al. Noise and Health.
• Literature Review of 69 articles • Psychosocial response as a basis for wind turbine health reports • Conclusions: "Nocebo effects, misattribution and increased symptom monitoring triggered by worry or annoyance can all help to increase symptom reports." • "These effects can be exacerbated by social context...new technology, sensationalist media reports, activist literature, interaction with others," and conflicting scientific opinion. • Not a study
24. The Pattern of Complaints about Australian Wind Farms Does Not Match the Establishment and Distribution of Turbines: Support for the Psychogenic, "Communicated Disease Hypothesis" Chapman, S. et.al. PloS One 8 (10): e76584. Doi:10.1371/journal.pone.0076584
• This is a primary, retrospective, translational research article. • Uses records of complaints for 51 Australian Windfarms, operating from 1993-2012. • Complainants lived within 3.1 miles or 5 kilometers of the windfarm. • 18/34 windfarms (53%) with turbines >1 MW have operated complaint free. -These represent 21,633 residents within 3.1 miles of operation. -These represent an accumulative 267 complaint free years.

*note the total in person years would be far greater

- For all 51 windfarms, about 1 in 254, or .004% have ever complained
- 116/129, or 89.9% of complaints were filed after 2009, which coincides with anti-windfarm groups adding health concerns to other oppositions.
- Meets Inclusion Criteria

25. The Power of Positive and Negative Expectations to Influence Reported Symptoms and Mood During Exposure to Wind Farm Sound

Crichton, F. et.al.

Health Psychology: Journal of the Division of Health Psychology, American Psychological Association

- **RCT** (the gold standard for scientific rigor)
- 60 participants were randomly selected to be in one of two groups: Negative Expectations vs Positive Expectations.
- One groups received negative messages about wind energy and health, while the other received a message about therapeutic benefit prior to noise exposures.
- **Results:** Exposure to negative expectations lead to "increase in symptoms and a significant deterioration in mood." Exposure to positive expectations leads to "significant decrease in symptoms and a significant improvement in mood."
- **Conclusions:** "Expectations can influence symptom and mood reports in both positive and negative directions."
- Not a measureable health outcome

26. On the Overlap Region between Wind Turbine Infrasound and Infrasound from Other Sources and its Relation to Criteria

Leventhall, Geoff

Sixth International Meeting on Wind Turbine Noise. 2015

- Conference paper
- Not peer-reviewed

27. Wind Turbine Noise and Health Study

Michaud, David S. (Health Canada)

Sixth International Meeting on Wind Turbine Noise. 2015

- A study commissioned by Health Canada (www.hc-sc.gc.ca)
- "1570 were found to be valid dwellings of which a total of 1238 households with similar demographics participated, resulting in an overall participation rate of 78.9%. Participation rate was similar regardless of one's proximity to wind turbines and equally high in both provinces.
- "Results of self-reported measures of sleep, that relate to aspects including, but not limited to general disturbance, use of sleep medication, diagnosed sleep disorders and scores on the PSQI, did not support an association between sleep quality and WTN levels."
- "Self-reports of having been diagnosed with a number of health conditions were not found to be associated with exposure to WTN levels. These conditions included, but were not limited to chronic pain, high blood pressure, diabetes, heart disease, dizziness, migraines, and ringing, buzzing or whistling sounds in the ear (i.e., tinnitus)."
- "Self-reported stress, as measured by scores on the Perceived Stress Scale, was not found to be related to exposure to WTN levels."
- "Exposure to WTN was not found to be associated with any significant changes in reported quality of life for any of the four domains, nor with overall quality of life and satisfaction with health."
- Conference paper

28. Legal Requirements for Human-health based Appeals of Wind Energy Projects in Ontario
Engel, Albert M. LLP
Frontiers in Public Health. 2014

- This is not a research article
- The purpose of this article is to describe the legal grounds for appeal and adjudication pertaining to windfarms and Canadian law.
- "To date, the evidence has been insufficient to support the revocation of a wind facility approval. This article reviews the legal basis for the dismissal of human-health based appeals."
- Legal paper

29a. Health-based Audible Noise Guidelines Account for Infrasound and Low-frequency Noise Produced by Wind Turbines.
Berger, Robert G. et.al.
Frontiers in Public Health. 2015

- It is considered unethical to publish the same paper in more than one journal publication
- Purpose of this study is to assess current siting regulations for safety.
- Sound measurements were conducted in three residences.
  -two at 450 m and one at 900 m from the nearest wind turbine
  -These turbines were part of an operating wind farm with over 40 turbines, each with a power of 1.5 MW.
- Low-frequency and infrasound levels were not significantly different than background or normal levels.
- Conclusions: current siting guidelines "provide an effective means to evaluate, monitor, and protect potential receptors from audible noise as well as IS and LFN."
- Exposure only

29b. Health-based Audible Noise Guidelines Account for Infrasound and Low-frequency Noise Produced by Wind Turbines.
Berger, Robert G. et.al.
Environmental Research. 2015

- It is considered unethical to publish the same paper in more than one journal publication
- Uses information gathered from the Health Canada study (D. Michaud)
- Clearly reports materials, methods and statistical analysis
- Uses multiple regression models to assess variables
- Reports, SD, Range and p values
- Uses the WHO QOL-BREF to assess quality of life
- Conclusions: "results do not support an association between exposure to WTN up to 46 dBA and QOL assessed using the WHOQOL-BREF questionnaire."
- Exposure only

30. Proposed Criteria for the Assessment of Low-frequency Noise Disturbance
Moorhouse, Andy PhD. et.al.
Acoustic Research Center, Salford University. 2005

- This is not a research article.
- It is a set of suggested guidelines to assess if low-frequency sound is present at a location.
- Its intended purpose is to give public health practitioners and engineers who may be assessing the situation guidance in their assessment.
- Not a study

31. Trials of a protocol to support LFN sufferers in the UK

Moorhouse, A. et.al (2015)
• Critique of a possible intervention for LFN • Conference paper and not peer reviewed • Uses a validated health survey but not a validated test for perception of low frequency noise • Data only
32. Low Frequency Noise-Induced Pathology: Contributions Provided by the Portuguese Wind Turbine Case Nuno, A.A. et.al. (2015)
• Conference papers are not peer reviewed • This is a case study • Sample size is one family • There is no control case presented • Lacking scientific rigor
33. Wind Turbine Infrasound and Low Frequency Noise Timeline, "What the wind industry knew and when" Brown County Citizens for Responsible Wind Energy (2015)
• Not a study • Not a systematic review • Does not measure exposures or outcomes • Cannot provide information on risk, RR, or OR
34. Victorian Civil and Administrative Appeals Tribunal Statement Laurie, Sara (2012)
• Testimony given by Sara Laurie to the Appeals Tribunal--Victoria, Australia • Testimonies / interviews do not contain: methods, results, risk, RR, or OR • It may generate questions for further review but is not itself scientific evidence • Not a study
35. Acoustic Engineering Investigation into Airborne and Ground-Borne Pressure Pulses from Pacific Hydro's Wind Turbines at Cape Bridgewater A Simplified Explanation of the Findings, Previous Research and the Consequences Waubra Foundation (2015)
• This is a synopsis of the Cape Bridgewater study • It is itself not a study
36. Wind Turbines and Proximity to Homes: The Impact of Wind Turbine Noise on Health Frey, Barbara J. and Hadden, Peter J. (2012)
• Does not report methods • Does not report inclusion / exclusion criteria • Does not meet standards of practice for a systematic review • Is inconsistent with the author's field: Master of Arts • Not a study
37. The Adverse Health Impacts of Industrial Wind Turbines: A Scientific Response to "it's all in your head" Hartman, Raymond S. (2013)
• Does not report methods • Does not report inclusion / exclusion criteria • Reviews 2 papers in an area outside his field of Economics • Not a systematic review

 *Included: meets the criteria for review. *Excluded: does not meet the criteria for review.

38. Low Frequency Noise and Annoyance Leventhall, H.G. (2004)
• Does not follow standards of practice for systematic review • This is a literature review • Not a systematic review
39. A Study of Annoyance Due to Low Frequency Noise in the Home Vasudevan R.N. and Leventhall, H.G. (1982)
• Across sectional survey of 40 individuals • Self-rate hearing sensitivity, daily variation, and noise, followed by a secondary interview • Subject to reporting bias, recall bias, investigator bias • Not a study
40. Improper Collusion Between Environmental Pressure Groups and the EPA as Revealed by Freedom of Information Act Requests, Interim Report Horner, Chris and Schnare, David (2014)
• This is a legal paper regarding possible corruption at the Environmental Protection Agency • It is not scientific evidence regarding exposures and outcomes • Not a study
41. Legal Liability for Electricity in the USA: Products Liability Standler, Ronald B. (2011)
• This is a product liability reference • This case regards electricity/stray voltage, not sound • Does not measure exposures and outcomes • Not a study
42. Minority Response: Wind Turbine Siting-Health Review, Wind Siting Policy Update (2014) Wisconsin Wind Siting Council, Minority (2014)
• When a committee conducts a collaborative review such as this, the minority --meaning the members who were not in agreement with the committee's majority finding, may present their contrary view as a minority report. • It does not overturn, but adds to the readers understanding of the committee's function • Not a study
43. A theory to explain some physiological effects on the infrasonic emissions at some wind farm sites Schomer, Paul D. et.al (2015)
• Does not follow standard scientific research process • Does not report inclusion/exclusion criteria • Does not include physiological measurements • Does not report risk, RR, or OR • does not report medical qualifications or training of those conducting health survey component • Not a study
44. Effects of Motion at Sea on Crew Performances: A Survey Stevens, Samson C. and Parsons, Michael G. (2002)
• Study explores Sopite Syndrome and other possible mechanisms of inducing motions sickness • Examines susceptibility • Does not connect motion sickness to sound/noise
45. A Proposed Metric for Assessing the Potential of Community Annoyance from Wind Turbine Kelley, N.D. (1987)

*Included: meets the criteria for review. *Excluded: does not meet the criteria for review.

- Does not report methods
- Does not report sample size
- Does not report risk, RR, or OR
- Does not follow standard scientific research process
- No measureable health outcome

46. Background Research for Pittsburgh ASA Presentation
McMurtry, Robert Y. (2015)

- Does not follow standard integrative review process
- Does not report methods
- Does not report inclusion and exclusion criteria
- Does not report integrated results
- Is not published or peer-reviewed
- Testimony

47. Perception of low frequency components in wind turbine noise
Yokoyama, S. et.al. (2014)

- 3 experiments on audible thresholds and loudness using human subjects
- No health outcomes measured
- Exposure only

48. Can Expectations Produce Symptoms From Infrasound Associated with Wind Turbines?
Crichton, F. et.al. (2013)

- Expectation is not a health outcome
- Exposure is not generalizable to the sound experienced by residing in a wind farm

49. Possible psychological mechanisms for "wind turbine syndrome" on the windmills of your mind
Rubin, James G. et.al. (2014)

- Does not report inclusion or exclusion criteria
- Does not follow the standard of systematic review
- Not a study

50. Wind Turbine Options Analysis Process Final Report to the Falmouth Board of Selectmen, Falmouth, MA
Amsler, et.al. Falmouth Board of Selectmen (2013)

- Is not a review of scientific research
- Does not report inclusion or exclusion criteria
- Testimony can be valid, but is not research and cannot report results
- Not peer-reviewed. Not a systematic review.

News/Non-Research Articles

1. Dairy cattle getting Wind Turbine Syndrome? Stray voltage? (Japan)
Tsuruta, Yuki, Jan 2010

2. States Tallest Wind turbines to be Operated Near Green Bay.
Journal Sentinel
April 8, 2014

3. Wind farms and Birth Defects.
Duchamp Mark

*Included: meets the criteria for review. *Excluded: does not meet the criteria for review.

World Council for Nature, 2014
4. **Nordex Safety Manual Summary, Turbine Classes K06, K07, K08, All Types** Submitted by Glenmore Citizens Retrieved from: www.opsh.ohio.gov
5. **Wind Health Impacts Dismissed in Court** Barnard, Mike Energy and Policy Institute, 2014
6. **Watchdog Organizations Request EPA Inspector General Investigate Collusion, Impact on GHG Rules** Retrieved from Richardson@eelegal.org, 2015
7. **Report Details Close Relationship Between EPA and Green Groups** Clabough, Raven, 2014
Noise Surveys/Acoustic Measurements
1. **A Cooperative Measurement Survey and Analysis of Low Frequency and Infrasound at the Shirley Wind Project in Brown County** Walker, Hessler, Hessler, Rand and Schomer (2012)
2. **Sound Pressure Level Measurements of Infrasound Inside Home In and Proximate to the Footprint of the Shirley Wind Project (Duke Energy)** James, Richard R. (2014)
3. **Ehrfurth Residence Sound Study, A Report on Complaints of Adverse Health Effects From Infra and Low-frequency Sounds** James, Richard R. (2011)
4. **Measurement and Level of Infrasound From Wind Farms and Other Sources** Turnbull, Chris et.al. (2012)
5. **Infrasound Measurements of Falmouth Wind Turbines Wind #1 and Wind #2** Bahtiarian, Michael and Beaudry, Allan (2015)
6. **Comparison of the noise levels measured in the vicinity of a wind farm shutdown and operational conditions** Hansen, Kristy et.al. (2014)
7. **Preliminary Noise Study of Enz Family Farm Located in Footprint of Shirley WindPower Project Near Denmark and Glenmore, WI** James, Richard R. (2012)
8. **The Results of an Acoustic Testing Program Cape Bridgewater Wind Farm** Hansen. Kristy et.al. (2014)

Civic Leaders, Letters, and Testimonies

1. **Submission of Dr. Christopher Hanning, to the Australian Senate Select Committee on Wind Turbines**

Hanning, Christopher MB, BS, MRCS, LRCP (anesthetist, sleep specialist)

2. **Letter to the Public Service Commission**

Lynne Knuth, PhD. (2010)

3. **Australian Senate Select Committee on Wind Turbines**

Laurie, Sara
Waubra Foundation, CEO

4. **Victorian Civil and Administrative Appeals Tribunal**

Laurie, Sara
Waubra Foundation, CEO (2012)

5. **Provisions of Expert Opinion Concerning the Adverse Impacts of Wind Turbine Noise TruEnergy Renewable Developments vs Goyder Regional Council, A.W. Coffrey & H. Dunn**

Laurie, Sara (2014)

6. **Rebuttal for Information Submitted by Duke Energy to the BCHD (letter)**

Vanden Boogart, Jim (2015)

7. **Letter Regarding Salt and Lichtenhan**

Dobie, Robert (2014)

8. **Letter to Prime Minister Stephen Harper, Hon. Ron Amberose: Contradictions and biases affect the credibility of the Health Canada Wind Turbine Noise Study**

Multi-Municipal Wind Turbine Working Group (2014)

9. **RE: Your Letter of 24, June, 2015 to Ms. Virginia Stewart-Love**

Multi-Municipal Wind Turbine Working Group (2015)

10. **Letter to Brown County Board of Health and Health Officer**

Brown County Citizens for Responsible Wind Energy (2015)

11. **Statement related to Health Canada's flawed wind turbine and health study summary, Dr. Robert Y. McMurtry**

McMurtry, Robert (2014)

12. **Summary of Research Submitted, Received 9-29-2015**

Stelling, Keith (2015)

13. **Notes on the Health Canada Wind Turbine Noise and Health Study**

Morris, Joan (2014)

*Included: meets the criteria for review. *Excluded: does not meet the criteria for review.

14. In a letter received 9-30-15: Resolutions from Wisconsin Municipalities Regarding Wisconsin Wind Siting Rules Brown County Citizens for Responsible Wind Energy (2015)
15. Letter received 9-30-15: RE: Shirley Wind Farm Public Comment Process Anderson, John M. (2015)
16. Senate Select Committee on Wind Turbines 29/06/2015 Laurie, Sara (2015)
17. Letter received 7-1-2015: Rebuttal for information submitted by Duke Energy Brown County Citizens for Responsible Wind Energy (2015)
18. Peer Review of NCE Report "Infrasound Measurements of Falmouth Wind Turbines Wind #1 and Wind #2, and Kapsambelis, "Pressure Wave from Wind Turbines" James, Richard R. (2015)
19. Letter received 9-30-15: Rand, Robert W. (2015)
20. Senate Select Committee on Wind Turbines 29/06/2015 Mc Murtry, Robert (2015
21. Response to the Health Canada Wind Turbine Noise and Health Study Harrison, John (2014)
22. Abstracts and References Letter received 5-5-2015, Duke Energy
PDF submission of Documents, Reports, Presentations: **Additional copies of materials submitted on cd.**

*Included: meets the criteria for review. *Excluded: does not meet the criteria for review.