

SUBMISSION ON MIGHTY RIVER POWER LTD APPLICATIONS FOR RESOURCE CONSENT

Section 145 of the Resource Management Act 1991

To: Freepost Call In Ministry for the Environment PO Box 10362 The Terrace Wellington 6143

OR

Email: turiteacallin@mfe.govt.nz
Fax: 04 439 7705

[Note: If you are emailing or faxing your submission, please mark in the subject line: 'Turitea Call In']

RECEIVED

23 FEB 2009

This submission relates to the applications for resource consent lodged by Mighty River Power Ltd for the Turitea Wind Farm proposal as identified on the next page.

CLOSING DATE AND TIME FOR SUBMISSIONS: 5.00 PM MONDAY 23 FEBRUARY 2009

Title: Mr Mrs Miss Ms (Please circle the appropriate title(s) or print clearly below)

My/Our Full Name(s): MARTYN PAUL NAIL

Postal Address: 2 GUYLANDS DRIVE, RDA, PALMERSTON NORTH 4474

Work Ph: _____ Home Ph: 06 353 7188 Cell: 021 296 2946

Work Fax: _____ Home Fax: _____ Email: mpnail@hotmail.co.uk

Please tick the relevant boxes on the next page to identify whether you are making a submission on all applications for resource consent or just some of them (please identify).

Please also indicate on the back of this form (✓) whether you support, oppose, or are neutral in relation to the applications. If you are making a submission only on parts of an application for resource consent, please note this when specifying the reasons for your submission.

The reasons for my/our submission are: _____ If you are attaching further information tick for yes

To oppose the siting of the proposed wind farm due to many considerations detailed in the attached letter.

Please use more pages if you need to.

I/we seek the following decision from the Board of Inquiry (provide precise details including the nature of any conditions sought):

Please use more pages if you need to.

Use a clear tick in the appropriate box below (✓)

I/we wish to be heard in respect of my/our submission (to speak at the public hearing).

I/we DO NOT wish to be heard and hereby make my/our submission in writing only.

Signature(s): [Signature] Date: 16/02/09

(Signature of submitter, or person authorised to sign on their behalf is required. Note signature is not required for electronic (email) submissions. If this is a joint submission by two or more individuals, each individual's signature is required.)

Use the tick boxes below to indicate the called-in applications for resource consent that your submission concerns. Use a clear tick in the appropriate box or boxes (✓).

I/we make my/our submission concerning all applications for resource consent below

OR
My/our submission only concerns the applications for resource consent that I/we have ticked below:

Support Oppose Neutral

	Support	Oppose	Neutral
Manawatu-Wanganui (Horizons) Regional Council – Land-use Consents			
104553: for vegetation clearance and land disturbance in rare or threatened habitats, near streams and on highly erodible land throughout the general wind farm site.		✓	
104554: for the construction of a double culvert in an un-named tributary of the Kahuterawa Stream as shown on the included map.		✓	
Manawatu-Wanganui (Horizons) Regional Council – Discharge Permits			
104555: for the discharge of dust to air from the concrete batching plants to be located as generally shown on the included map.		✓	
104556: for the discharge of dust to air from the mobile crushing plant throughout the general wind farm site.		✓	
104557: for the discharge of wastewater from two operations and maintenance facilities to land to be located as generally shown on the included map.		✓	
104558: for the discharge of stormwater from substations to land to be located as generally shown on the included map.		✓	
104559: for the discharge of cleanfill to land in the form of spoil disposal sites throughout the general wind farm site.		✓	
104560: for the discharge of stormwater from roads, turbine platforms and other areas to land.		✓	
Palmerston North City Council – Land-use Consents			
RC0068: <ul style="list-style-type: none"> to establish and operate a wind farm in the areas within the Palmerston North city jurisdiction as generally shown on the included map to undertake earthworks associated with tracking and roading, turbine construction and associated buildings in the areas within the Palmerston North city jurisdiction as generally shown on the included map for the western side of Pahiatua Aokautere Road not meeting access requirements at the location shown on the included map for the storage of diesel (10,000 L) in bunded areas outside the Turitea water supply catchment, generally located at the two substation laydown areas shown on the included map, that exceeds the 0.2 effects ratio maximum in the rural zone for the construction of a 220 kV electricity transmission line and substations as shown on the included map. 		✓ ✓ ✓ ✓ ✓	
Tararua District Council – Land-use Consents			
1448: <ul style="list-style-type: none"> for a wind farm (which is not listed as a permitted or controlled activity) in the areas within the Tararua District as generally shown on the included map for land disturbance of more than 200 m³ of soil and cleanfill material associated with tracking and roading, turbine construction, spoil disposal and other associated works in the areas within the Tararua District as generally shown on the included map for upgrades to South Range Road and the construction of new site access at the location shown on the included map for turbine and wind monitoring mast structures not meeting height requirements within the Tararua District for the modification of a Significant Natural Feature in Schedule 3.3 (ie, Tararua Ranges Ridgeline) for not meeting noise requirements for clearance of indigenous vegetation in the areas within the Tararua District as generally shown on the included map. 		✓ ✓ ✓ ✓ ✓ ✓ ✓	

NOTE: A copy of this submission form MUST also be sent to Mighty River Power Ltd at:

Freepost – MRP
Mighty River Power Ltd
PO Box 445
Hamilton 3240
Attention: Stephanie Froggatt

Or email turitea@mightyriver.co.nz or fax (07) 857 0192

I/we have sent a copy of my/our submission to Mighty River Power Ltd as per Section 96(4) of the RMA.



Ministry for the
Environment
Manatū Mō Te Taiao

New Zealand Government

Attachment to Mr M.P Nail's submission:

I am opposed to the proposed new wind farm at Turitea, near Palmerston North due to the following considerations:

1. Potential Threat to Human Health:

Globally, there has been significant 'independent' study on the health effects in relation to the proximity to wind turbines. There are various recommendations regarding turbine proximity to residential areas due to the effects of noise including those published by the World Health Organisation. Other global studies and recommendations come from the USA and Europe, please find enclosed one very 'balanced' report quoting Nina Pierpont MD PhD. She is not opposed to wind farm technology but actually refers to New Zealand's topography and recommends a minimum safety distance or 'set -back' of 3.04km (1.9 miles) from residential areas. The proposal includes many turbines (notably No's 074-090 inclusive) that will be with-in 2.5km from the residential area of Ngahere Park and Turitea Road.

The impact on human health from wind turbine technology has many unanswered questions. Some of the studied effects include:

Strobing
Shadow Flicker
Chronic sleep disturbance
Wind Turbine Syndrome

Therefore, it would be unwise not to consider the potential risk to human health and consider a greater degree of set-back or safety distance for this proposed development. Will MRP be liable for future health implications, treatment and compensation claims from local residents?

2. Environmental Aesthetics:

The natural beauty of the Turitea Reserve will be lost forever in what amounts to a full scale industrial electric generation site. The natural landscape that can only be NZ, is something to cherish and one of the reasons why my wife and I decided to move and settle here.

This proposal will blight the landscape may influence many peoples decision to move to and stay in the Palmerston North area.

3. Land and Residential Housing Values:

The close proximity and sheer scale of the proposed wind farm will have a detrimental effect to land and housing prices, particularly ones in close proximity. Global studies have indicated 20%-37% reduction in the valuation of housing adjacent to a wind farm. Would MRP be willing to financially compensate each and every local land/home owner to this effect?

Martyn Paul Nail
2 Guyland Drive
RD4
Palmerston North
4474

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Wind Turbine Syndrome

Testimony before the New York State Legislature Energy Committee

March 7, 2006

Nina Pierpont, MD, PhD

MD, The Johns Hopkins University School of Medicine, 1991
PhD, Population Biology, Princeton University, 1985
BA, Biology, Yale University, 1977
Fellow of the American Academy of Pediatrics

www.ninapierpont.com

I am here to talk to you today as a physician-scientist about a clinical phenomenon called Wind Turbine Syndrome. This is relevant to today's hearing because it critically affects implementation of the RPS (Renewable Portfolio Standard) in terms of the siting of industrial wind turbines. Current siting practices (which are solely industry-driven) disregard public health. The supervision of the legislature—of this committee—is needed to create siting standards to protect the citizenry, all the citizenry, including citizens who are rural, old, ill, impaired, and very young.

Federal agencies are trying to put the brakes on willy-nilly wind turbine construction, citing, for instance, wildlife issues. The GAO (Government Accountability Office) last fall told US Fish and Wildlife to get involved. The National Academy of Sciences in April 2005 initiated a 20-month study on environmental impacts whose final report is due in December this year. There also needs to be a focus on human health, and the state needs to step up to the plate in terms of regulation.

I live in Franklin County, the poorest in NY State. Two years ago, after passage of the RPS, wind energy companies showed up there in force, as they have in all the poor, rural parts of the state. They showed up with no controls whatsoever, unregulated by either the legislature or NYSERDA (New York State Energy Research & Development Authority). Our town boards, made up of farmers, teachers, corrections officers, etc., were told, "You guys handle this," by our state representatives. I got involved as a responsible citizen and physician. Over the last 1½ years I have done a lot of reading, research, and interviews. I have spoken at town board meetings and before the St. Lawrence County Legislature, and published alone or with my husband (a retired university professor) numerous editorials and letters to the editor in local newspapers. My focus has been health issues and to some degree wildlife, in which I also have credentials in my PhD.

I get a lot of slander and abuse from the wind salesmen. Their favorites are saying that my abundantly referenced and footnoted articles, like the one before you (note: a separate handout), have "no evidence," or that I think wind turbines cause mad cow disease. The latter smear came from a town meeting in Ellenburg, NY, in October 2004, when I presented information culled from the medical literature on possible effects of low frequency noise. This included a paper out of the UK linking low frequency sound to prion diseases by a complex and highly speculative mechanism. I was very clear how speculative it was, but apparently the concept of something being speculative was over their heads, including over the heads of wind salesmen in the room.

Dr. Pierpont on Wind Turbine Syndrome March 7, 2006 Page 2

I am not for or against the RPS. I'm an intelligent person and I support renewable energy. I am not here to shoot down wind energy, which probably has its place, though that place is not near people's homes or near schools, hospitals, or other locations where people have to sleep or learn.

I would like to stress that these are not “farms.” One doesn’t “farm” wind any more than one “farms” water in a hydroelectric dam or “farms” neutrons in an atomic plant. These are large, industrial installations. They make large-scale, industrial noise. “Jet engines” is the most common description I hear in surveying people—a jet engine that doesn’t go away and which you can’t get used to.

A syndrome in medicine is a constellation of symptoms and findings which is consistent from person to person. Defining a syndrome is the first step in investigating any new disease. The symptom cluster has to make sense in terms of pathophysiology—there has to be a plausible mechanism in terms of how the body and brain work. Defining a syndrome, and making that knowledge available to the medical community, lets other doctors go from scratching their heads over weird presentations of illness which are coming through their offices, to being able to validate and name what is going on and start to do something about it. It also opens the door to epidemiologic studies to define prevalence and risk factors, which will guide prevention and treatment.

Describing and documenting symptoms is the province of physicians. So is research on the causes of diseases. Deciding whether people have significant symptoms is not within the expertise of engineers or specialists in acoustics, even when the symptoms appear to be caused by noise. We physicians appreciate the noise data which engineers provide, but this data has nothing to do with whether people have symptoms or not. One British acoustics expert, Dr. Geoff Leventhall, is especially outrageous in this regard, insisting that people “can’t” have symptoms because turbines “don’t,” he says, produce low frequency noise. His fallback, for which he is well paid by the industry, is that people make up their complaints. But he’s not trained to distinguish whether people are making up their complaints, or to know about the range of physical, psychiatric, and neurological symptoms people might have. A related point: the hallmark of a good doctor is one who takes symptoms seriously and pursues them until they are understood (and ameliorated). This includes symptoms related to the brain, our most complex organ—symptoms which may be neurologic, psychiatric, or physical.

Three doctors that I know of are studying the Wind Turbine Syndrome: myself, one in England, and one in Australia. We note the same sets of symptoms. The symptoms start when local turbines go into operation and resolve when the turbines are off or when the person is out of the area. The symptoms include:

- 1) Sleep problems: noise or physical sensations of pulsation or pressure make it hard to go to sleep and cause frequent awakening.
- 2) Headaches which are increased in frequency or severity.
- 3) Dizziness, unsteadiness, and nausea.
- 4) Exhaustion, anxiety, anger, irritability, and depression.
- 5) Problems with concentration and learning.
- 6) Tinnitus (ringing in the ears).

Not everyone near turbines has these symptoms. This does not mean people are making them up; it means there are differences among people in susceptibility. These differences are known as risk factors. Defining risk factors and the proportion of people who get symptoms is the role of epidemiologic studies. These studies are under way. Chronic sleep disturbance is the most common symptom. Exhaustion, mood problems, and problems with concentration and learning are natural outcomes of poor sleep.

Dr. Pierpont on Wind Turbine Syndrome March 7, 2006 Page 3

Sensitivity to low frequency vibration is a risk factor. Contrary to assertions of the wind industry, some people feel disturbing amounts of vibration or pulsation from wind turbines, and can count in their bodies, especially their chests, the beats of the blades passing the towers, even when they can’t hear or see them. Sensitivity to low frequency vibration in the body or ears is highly variable in people, and hence poorly understood and the subject of much debate.

Another risk factor is a preexisting migraine disorder. Migraine is not just a bad headache; it’s a complex neurologic phenomenon which affects the visual, hearing, and balance systems, and can even affect motor control and consciousness itself. Many people with migraine disorder have increased sensitivity to noise and to motion—they get carsick as youngsters, and seasick, and very sick on carnival rides. Migraine-associated vertigo (which is the spinning type of dizziness, often with nausea) is a described medical entity. Migraine occurs in 12% of Americans. It is a common, familial, inherited condition.

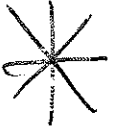
To keep our balance and feel steady in space, we use three types of input: from our eyes (seeing where we are in space), from stretch receptors in joints and muscles, and from balance organs in the inner ear. At least two of these systems have to be working, and agreeing, to maintain balance. If the systems don’t agree, as in seasickness or vertigo, one feels both ill and unsteady. Wind turbines impinge on this system

in two ways: by the visual disturbance of the moving blades and shadows, and by noise or vibration impacting the inner ear.

Other candidate risk factors for susceptibility to Wind Turbine Syndrome are age-related changes in the inner ear. Five percent (5%) of otherwise healthy people from age 57 to 91 experience dizziness, and 24% experience tinnitus or ringing. Damage to the ears or hearing from other causes, such as noise exposure, is also a potential risk factor. Inner ear organs are closely linked, by proven neurological connections, to the brain systems which control mood, anxiety, and one's sense of well-being. Disturbing the inner ear disturbs mood, not because a person is a whiner or doesn't like turbines, but because of neurology.



Data from a number of studies and individual cases document that in rolling terrain, disturbing symptoms of the Wind Turbine Syndrome occur up to 1.2 miles from the closest turbine. In long Appalachian valleys, with turbines on ridge-tops, disturbing symptoms occur up to 1.5 miles away. In New Zealand, which is more mountainous, disturbing symptoms occur up to 1.9 miles away. In New York State, with its mixed terrain, I recommend a setback of 1.5 miles (8000 ft.) between all industrial wind turbines and people's homes or schools, hospitals, or similar institutions. This setback should be imposed immediately for turbines not yet built. The legislature might want to set up a panel of clinicians to review the data and medical information I refer to here, but until this happens, and as research continues, a moratorium on all wind turbine construction within 1.5 miles of homes would be appropriate.



To recapitulate, there is in fact a consistent cluster of symptoms, the Wind Turbine Syndrome, which occurs in a significant number of people in the vicinity of industrial wind turbines. There are specific risks factors for this syndrome, and people with these risk factors include a substantial portion of the population. A setback of 1.5 miles from homes, schools, hospitals, and similar institutions will probably be adequate, in most NY State terrain, to protect people from the adverse health effects of industrial wind turbines.

See Dr. Pierpont's Credentials here.

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Nina Pierpont, MD PhD

Fellow of the American Academy of Pediatrics

February 8, 2006

Education

1991 M.D. The Johns Hopkins University School of Medicine
1985 Ph.D. Princeton University (Behavioral Ecology)
1981 M.A. Princeton University (Behavioral Ecology)
1977 B.A. Yale University, National Merit Scholar (cum laude)

Post-Doctoral Training

1992 to 94 Pediatrics Dartmouth-Hitchcock Medical Center, Lebanon, NH
1991 to 92 Pediatrics Children's National Medical Center, Washington, DC
1985 to 86 Ornithology American Museum of Natural History, New York, NY

Licensure and Certification

1997 Licensed Physician, New York
1997 Licensed Physician, New Hampshire (expired)
1995 Pediatric Advanced Life Support Instructor and Affiliate Faculty
1994 Diplomate, American Board of Pediatrics (recertified 2000, expires 2008)
1994 Licensed Physician, Alaska (expired)

Hospital or Affiliated Institution Appointments

10/00 to 12/03 Senior Attending in Pediatrics Bassett Healthcare, Cooperstown, NY
1997 to 00 Attending Pediatrician Alice Hyde Hospital, Malone, NY
1995 to 96 Chief of Pediatrics Yukon-Kuskokwim (Yup'ik Eskimo) Delta Regional Hospital, Bethel, AK
1994 to 95 Staff Pediatrician Yukon-Kuskokwim (Yup'ik Eskimo) Delta Regional Hospital, Bethel, AK

Other Professional Positions

2004 to ... Private Practice (Solo) Pediatrics (emphasizing Behavioral Peds) Malone, NY
1998 to 00 Private Practice (Solo) Pediatrics Malone, NY (poorest county in state)
1997 to 00 Staff Pediatrician St. Regis Mohawk (Iroquois) Health Services, Hogansburg, NY
1997 to 98 Staff Pediatrician North Country Children's Clinic (clinic for needy children), Malone, NY

Academic Appointments

2000 to 03 Assistant Clinical Professor of Pediatrics
Columbia University, College of Physicians and Surgeons

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