QUEEN'S BENCH FOR SASKATCHEWAN

Citation: **2010 SKQB 374**

Date: **2010 10 07**
Docket: Q.B.G. No. 1251 of 2010
Judicial Centre: Saskatoon

BETWEEN:

DAVID McKINNON

PLAINTIFF

- and -

THE RURAL MUNICIPALITY OF MARTIN NO. 122, and THE RURAL MUNICIPALITY OF MOOSOMIN NO. 121, RED LILY WIND ENERGY CORP. and 7314507 CANADA INC., operating as a general partnership known as RED LILY WIND ENERGY PARTNERSHIP

DEFENDANTS

Counsel:

Bradley D. Jamieson	for David McKinnon
Douglas C. Hodson, Q.C.	for Red Lily Wind Energy Partnership
Michael J. Morris	for the Rural Municipalities of Moosomin and Martin

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JUDGMENT
October 7, 2010

MILLS J.

INTRODUCTION

[1] The plaintiff in this proposed class action seeks an interlocutory injunction requiring the defendant Red Lily Wind Energy Partnership ("Red Lily") to cease all construction-related activity on an electrical generating wind turbine farm located in the defendant rural municipalities.

[2] The Supreme Court of Canada in *RJR-MacDonald Inc. v. Canada (Attorney General)*, [1994] 1 S.C.R. 311, set a three-stage test in determining whether an interlocutory injunction would be granted. The stages are:

1. Is there a serious issue to be tried?
2. Will the plaintiff suffer irreparable harm if the injunction is not granted?
3. Does the balance of convenience favour the granting of the injunctive relief sought by the plaintiff?

[3] The parties agree that in the factual circumstances here, the alleged nuisance or harm to the plaintiff has yet to occur and as such, the plaintiff brings a *quia timet* action meaning he fears the harm will occur. The parties agree that in the case of a *quia timet* injunction, a higher threshold of proof is required when applying the *RJR-MacDonald* principles. The parties acknowledge the comments of Robert J. Sharpe in *Injunctions and Specific Performance*, 2d ed (Toronto: Canada Law Book, 2009) (looseleaf; current to Rel. 2009-17) at para. 1.690 are applicable:

> ... the courts have adopted a cautious approach when asked to award an injunction prior to actual harm being suffered and have said that there must be a high degree of probability that the harm will in fact occur.

[4] The Supreme Court of Canada has also determined in *Operation Dismantle Inc. v. Canada*, [1985] 1 S.C.R. 441 at para. 35 that there must be a high degree of probability that the injury will result and that the occurrence is imminent.

[5] The parties disagree on when to apply that factual burden in the context of *RJR-MacDonald*. The defendants state that it moves the first issue of serious issue to be tried to a higher standard of a strong *prima facie* case. The plaintiff states that the test is to be on the second issue of irreparable harm, meaning that a high degree of probability must be shown that injury will in fact occur.

[6] I do not believe an analysis of the competing approaches is required in this case. I am required to analyze whether there is a high degree of probability that the injury will occur. That is a factual determination regardless of the test utilized. If I in fact find that there is no high degree of probability the injury will occur, that effectively ends the issue whether I apply it to requiring a strong *prima facie* case instead of serious issue to be tried in the first test, or I apply it in the determination of whether irreparable harm will occur in the second test. If the plaintiff does not overcome that hurdle, the application will be lost regardless of the approach taken in the analysis. The words used may seem to alter the basis of the approach, however the concept remains the same.

BACKGROUND INFORMATION

The Statement of Claim

[7] The plaintiff brings this action under *The Class Actions Act*, S.S. 2001, c. C-12.01. The claim is based in nuisance and negligence. The action has not yet been certified and no steps have been taken except for the applications surrounding the interlocutory injunction. The claim is very specific about the action the plaintiff is concerned about. Paragraph 12 of the claim reads:

12. The Plaintiff claims that by constructing and operating Wind Turbine Generators as part of The Project without mandatory minimum setbacks of 2000 metres from occupied homes, the Defendant, Red Lily, will create a nuisance to all class members.

...

14. Wind Turbine Generators that are built within 2000 metres of class members' homes will create serious health concerns caused by the audible and inaudible sound that is emitted during their operation, and the movement of the rotor blades which causes "shadow flicker" along the ground. These health concerns are substantial and constitute unreasonable interference with the use and enjoyment of the class members' properties.

15. The Plaintiff claims that the health concerns associated with Wind Turbine Generators constructed within 2000 metres of occupied homes include, *inter alia*:

a. sleep related issues, including:

   i. sleep disturbance; and
   ii. chronic sleep deprivation

b. health risks that result from chronic sleep disturbance, including:

   i. cardiovascular disease;
   ii. increased level of stress hormones;
   iii. unintended changes in weight; and
   iv. metabolic disturbances, including impaired glucose tolerance

c. physiological injury, including:

   i. chronic headaches;
   ii. nausea;
   iii. unintentional changes in weight;
   iv. dizziness; and
   v. auditory and vestibular system disturbances

d. psychiatric symptomatology, including:

   i. depression;
   ii. anger;
   iii. anxiety;
   iv. irritability;

v. hopelessness; and
vi. stress

16. As a result of the health concerns set out in the immediately preceding paragraph, the class members will sustain damages that cannot be compensated monetarily if the Wind Turbine Generators are constructed within 2000 meters of the class members' residences.

That completes the allegations in relation to the issue of nuisance.

[8] The plaintiff's claim in negligence against Red Lily is found in paras. 18 and 19 of the claim:

18. Further and in the alternative, the Plaintiff claims that the Defendant, Red Lily, owes a duty of care to the class members to ensure that completion of the Project will not impact the use and enjoyment of their property and cause health concerns.

19. The Plaintiff claims that Red Lily has breached the aforesaid duty of care, the particulars of Red Lily's negligence include, *inter alia*:

a. Proposing to construct Wind Turbine Generators within 2000 meters of occupied residences;

b. Failing to establish mandatory minimum setbacks of 2000 meters with respect of the construction of Wind Turbine Generators from occupied residences;

c. Failing to consider the significant health risks associated with the audible sound created by Wind Turbine Generators constructed within 2000 meters of occupied residences;

d. Failing to properly assess the health risks concerned with the inaudible noise and infrasound effects of Wind Turbine Generators constructed within 2000 meters of occupied residences;

e. Failure to consider the health risks associated with the "shadow flicker" created by Wind Turbine Generators constructed within 2000 meters of occupied

residences;

f. Failure to conduct preconstruction sound modeling with respect to the Project.

[9] It can be seen from the claim that the injury described arises from a factual statement that a construction of the wind turbine within 2000 metres of a residence will be the source of the harm. The plaintiff is not seeking to restrict construction beyond 2000 metres, but is clearly focussed on his assertions that any wind turbine within the 2000 metres creates the causes of action referred to in the claim.

[10] The interlocutory injunction application must be examined in light of the allegations in the statement of claim.

[11] The injunction seeks a halt of all construction and operation on the wind farm because it does not provide for a setback of any of the turbines from the residences involved of at least two kilometres.

AFFIDAVIT MATERIAL

[12] The plaintiff has filed a number of affidavits in support of his application. The primary affidavits are of the proposed representative plaintiff David McKinnon and his primary expert Dr. Michael A. Nissenbaum. The first affidavit of McKinnon states that he resides in the R.M. of Martin on a residence that will be less than two kilometres from a proposed wind turbine. He states that he was a member of a board created by the R.M. of Martin to conduct further research into the health effects of wind turbines, before the R.M. of Martin had decided to permit Red Lily to proceed. The majority of this board, which had acted as advisors to council and otherwise had no legal status, expressed

concerns about the health effects of wind farms on residences in the area of operation. The board recommended (1) that further study was needed; and (2) that the R.M. of Martin should deny approval of a permit for the wind farm. The R.M. council chose not to accept the advice of this board and issued development permits on March 17, 2010.

[13] Mr. McKinnon deposes that as a member of the board, he conducted a significant amount of research into health concerns associated with industrial wind turbine projects. He detailed the information that he reviewed. Attached to his affidavit is a series of articles and information obtained on wind turbine issues. It should be noted that Mr. McKinnon has no special training, knowledge or insight into the operation of wind turbine projects other than what he has been able to read up on since this project came to his attention in his area. He states in his affidavit that he has specific concern related to the minimum distance in which Red Lily ought to be permitted to construct turbines from occupied residences, but does not make any mention of the distance that he believes would be appropriate. He makes no reference in his affidavit to the necessity of a two-kilometre setback as suggested in his statement of claim. He does not depose to ever visiting an operating wind farm.

[14] One of the documents attached to the McKinnon affidavit is framed as the expert opinion of Dr. Lee Ekert. Dr. Ekert is the Chief Resident of the Division of Orthopaedic Surgery at the University of Saskatchewan and is a relative of one of the members of the R.M. board that opposed the wind farm. Dr. Lee Ekert in his report states:

> It should be clearly noted that what follows is my personal interpretation and subjective viewpoints on the current discussion involving the possible adverse health effects of wind turbine technology and safe distance of these machines from human residence. I believe the important points of this discussion and the scientific literature I have evaluated to date include:

> 1) Apparent reliable scientific evidence exists that suggests adverse health effects can occur secondary to proximity to wind turbine machines. This statement should not be mistakenly interpreted as concluding adverse health effects always occur or are common. It merely states that adverse health effects, commonly reported as sleep disturbance ... appear to be increased in populations in close proximity to wind turbines.
>
> 2) There appears to be no agreed upon, or scientifically determined distance, that is safe from a wind turbine machine that would eliminate the adverse health effects noted above.
>
> 3) The closest proposed wind turbine to human residence in the RM of Martin (583 m) is within the distance adverse health effects have been demonstrated by current scientific evidence. Specifically, the study with the highest level of evidence I have evaluated, the Maine study of Dr. Nissenbaum, demonstrated adverse health effects within 1100 m of human residence.
>
> ...
>
> 5) The current scientific literature that exists regarding adverse health effects and wind turbine technology is, in general, of low quality. ...

These comments are an accurate reflection of what the plaintiff is concerned about and the basis for that concern. Qualification of Dr. Ekert's opinion in his opening paragraph, as will be seen, applies to all the affidavits from the concerned citizens.

[15] Mr. McKinnon in his affidavit does not say he believed the proposed wind farm may cause him adverse health effects as it is configured. He does not state that to be safe, a residence must be a minimum of 2000 metres away from a wind turbine. He does not provide a comment on any distance in which he believes would be safe or unsafe in relation to the operation of a wind turbine. He does not make any mention of health or nuisance issues at all personally. The only reference to those issues is contained in some

of the research documents that he has attached. Nowhere does he adopt the comments contained in those research documents.

[16] His second affidavit is sworn in response to the affidavits filed by Red Lily. The second affidavit deals with issues raised in those affidavits and provides no further evidence regarding information that could form the basis of the injunction sought.

Affidavit of Troy Smith

[17] Mr. Smith is one of the members of the proposed class action residing within the two kilometre target zone of Red Lily. His affidavit, as do others, establishes a map showing the general location of the area, including the specific locations of the individual wind turbines and the residences in that area.

[18] The only portion of his affidavit dealing with the issues needed to be addressed in the injunction application, that is the question of nuisance and negligence, is contained in paras. 5, 6 and 7 of his affidavit and they read:

> 5. Based on the research I have conducted, it is my understanding that there are significant health concerns associated with wind turbines constructed within close proximity of occupied residences.
>
> 6. I have reviewed the Affidavit of David McKinnon and have reviewed all the documents listed at Paragraph 7 of his Affidavit in formulating my opinion.
>
> 7. Based on my research, it is my belief that a minimum setback of 2000 meters ought to be imposed with respect to the construction of a wind turbine from occupied residences.

Affidavit of Ray Donald

[19] The affidavit of Mr. Donald is virtually identical to the affidavit of Mr. Smith and in respect of the issues regarding nuisance and negligence and the adverse health effects associated with either, Mr. Donald's paras. 5, 6 and 7 are identical to Mr. Smith's.

Affidavits of Other Parties

[20] The plaintiff has filed at least 14 other affidavits of people who reside within 2000 metres of the proposed location of the wind turbine. Their affidavits all state the legal description of the property in which they reside and the distance they believe that the closest turbine will be to their home. The substantive portion of each of their affidavits is identical and is contained in paras. 4 and 5 which read:

> 4. Through the public consultations and the materials distributed by the Red Lily Wind Power Limited Partnership, I was led to believe that there were no health concerns associated with respect to them constructing wind turbines near my residence.
>
> 5. Since the public consultations ended, I have become aware that there could potentially be significant health concerns associated with industrial wind turbines being constructed near your house. As such, I am opposed to a turbine being constructed within 2000 meters of my residence.

[21] There is concern by a number of people who live within two kilometres of the proposed wind turbine farm. There is no specific allegation of a particular nuisance or health risk referred to. No basis is given for suggesting to be "safe", a wind turbine must be constructed at least two kilometres from a residence.

[22] The point of the review of the affidavit material to date is to establish clearly that the people living in the affected area are initially relying on the internet searches of McKinnon for information about adverse health effects of wind turbines, and that none of them have given any evidence to suggest that they have ever been within two kilometres of a wind turbine such as the ones proposed at Red Lily and what effects, if any, those wind turbines had on health or nuisance issues.

[23] That does not mean the application will fail. It just simply indicates that the affidavit material referred to by the parties is not sufficient to provide any support whatsoever for the allegations contained in the statement of claim and therefore is not sufficient to sustain the interlocutory application.

[24] It is essentially conceded by the plaintiff that the source of the evidence that he is relying on to obtain the injunction is found in the affidavit material provided by Dr. Michael Nissenbaum. Dr. Nissenbaum filed two affidavits. Dr. Nissenbaum's first affidavit states that he is a graduate of the University of Toronto Medical School with post-graduate training at McGill University and the University of California. He is a specialist in diagnostic imaging, whose training and work involve developing and utilizing an understanding of the effects of energy deposition, including sound on human tissues. He currently is the solo radiologist at the Northern Maine Medical Center in Fort Kent, Maine. He previously was chief of MRI Clinical Services in Fort Lauderdale and performed a similar function at Harvard Medical School. His postdoctoral training includes radiology, internal medicine and as an MRI clinical fellow. In short, he is a medical doctor with significant training on MRIs. He deposes that he developed an interest in the health effects of wind turbine projects after becoming aware of complaints related to a wind turbine installation in Mars Hill, Maine in 2007. He took it upon himself to conduct a survey of the health effects of persons living within 1100 metres of that

project and interviewed 22 people who lived within that distance of a wind turbine. In his affidavit he deposes to the results of his survey. The survey has not been published and it has not been peer reviewed. The results of his survey and the results of his review of the literature on wind turbine projects, form the basis of the opinions expressed in his affidavit.

[25] For the plaintiff to be successful in his injunction application, and given his lack of personal knowledge or involvement on any health effects of wind turbines as a nuisance or as a health risk, he has to rely on expert evidence to create the next necessary factual background to support his application.

[26] In order to support the injunction, the plaintiff must present an expert who is able to offer opinion evidence on a number of factors:

1. The type or sound of noise generated by a wind turbine which would include mechanical sound created by its moving parts like a gearbox and sound created by the operation of its blades and the wind passing over them.

2. The ability to measure the types of sound created at different distances, including what external matters will impact on that sound, i.e., topography.

3. What impact different types and levels of sound can have on the human body.

4. How those impacts are affected by distance from the turbine.

[27] In commenting on what qualifies a person as an expert witness in *Quintal v. Datta and Skochylas* (1988), 68 Sask. R. 104 (C.A.), the court stated:

> The witness offering expert evidence must have gained his special knowledge by a course of study or previous habit which secures his habitual familiarity with the matter in hand.

[28] The Supreme Court of Canada in *R. v. Mohan*, [1994] 2 S.C.R. 9 stated:

> . . . a witness who is shown to have acquired special or peculiar knowledge through study or experience in respect of the matters on which he or she undertakes to testify.

[29] In *Kozak v. Funk; Kozak v. Nutter* (1995), 136 Sask. R. 12 (Q.B.), Klebuc J. as he then was, gave a very detailed approach to examining the qualifications of experts starting at para. 14:

> (iii) **Properly Qualified Expert**
>
> [14] As previously noted, a prospective expert witness must have acquired special or peculiar skills that are beyond the knowledge of the common person. The principles relating to the skill required of an expert are outlined by Tyrwhitt-Drake, J., in *R. v. Bunniss* (1964), 50 W.W.R. (N.S.) 422 (B.C.Co.Ct.), at 424:
>
> > "From this it is clear that so long as a witness satisfies the court that he is skilled, the way in which he acquired his skill is immaterial. *The test of expertness, so far as the law of evidence is concerned, is skill, and skill alone, in the field in which it is sought to have the witness's opinion. If the court is satisfied that the witness is sufficiently skilled in this respect for his opinion to be received, then his opinion is admissible.*
> >
> > "The crux of the matter is the meaning to be attached to the word 'skilled'. The *Shorter Oxford Dictionary* defines a skilled person as 'one having practical ability ... having a good knowledge of the subject;' Partridge, in his etymological dictionary, *Origins*, defines skill as the 'ability to use one's judgment, especially in a particular

> art or science;' and Fowler, in *Modern English Usage*, ascribes to the classifying adjective 'skilled' the meaning 'having had the requisite training or practice'.
>
> "... I adopt, as a working definition of the term 'skilled person', one who has, by dint of training and practice, acquired a good knowledge of the science or art concerning which his opinion is sought, and the practical ability to use his judgment in that science.
>
> "A university degree, particularly one from a professional faculty, presupposes a certain level of knowledge in the possessor thereof. But there is no special magic in such an adornment. It is to be noted that the learned professions will not admit a graduate to practice until he has, by the acquisition of a modicum of experience, enabled himself to demonstrate a certain degree of practical efficiency in his art. It is not necessary, for a person to give opinion evidence on a question of human physiology, that he be a doctor of medicine, provided he can satisfy the court that his knowledge of the particular aspect of the subject under scrutiny is adequate. His being a graduate or not goes merely to weight, and does not affect the question of the admissibility of his evidence one way or another. ..." (Emphasis added)

The British Columbia Court of Appeal approved this definition in *R. v. Kinnie* (1989), 40 B.C.L.R. (2d) 369.

[15] Whether a person qualifies as an expert varies with the circumstances and thus no all-encompassing definition is possible. Nonetheless, principles have evolved to control the testimony of proposed experts. An expert is limited to testifying to matters within his or her area of expertise: *R. v. Kuzmack* (1954), 20 C.R. 365 (Alta. C.A.). Experts are not to consider or comment on facts that are not subject to his professional expert assessment: *R. v. Howard, supra*, at p. 1348 [S.C.R.]. If the expert lacks personal knowledge of the matters in issue, and the facts are in dispute, the expert's opinion may only be elicited through the vehicle of a hypothetical question: see *The Law of Evidence in Canada, supra,* at pp. 537-539. Also, experts are not to rely on "novel" or "experimental" scientific methods: *Bisset v. Romaine* (1989), 38 C.P.C. (2d) 10 (B.C.S.C.).

[16] In *Perricone v. Baldassarra* (1995), 7 M.V.R. (3d) 91 (Ont. Gen. Div.), at p. 99, the trial judge held that where the expert assumes the role of an advocate, he or she can no longer be viewed as an expert in the legally correct sense; instead her or his evidence "must be viewed as advocating the case of a party with the attendant diminishment in the credibility". In *Perricone*, the trial judge suggests

the guidelines laid out in *National Justice Compania Naviera S.A. v. Prudential Assurance Co. (Ship Ikarian Reefer)*, [1993] 2 Lloyd's Rep. 68, are applicable to weighing the credibility and admissibility of expert evidence. Those guidelines are paraphrased at p. 99:

> "1. Expert evidence presented to the court should be, and should be seen to be, the independent product of the expert uninfluenced as to form or content by the exigencies of litigation.
>
> "2. An expert should provide independent assistance to the court by objective unbiased opinion in relation to matters within his or her expertise. An expert witness should never assume a role of advocate.
>
> "3. An expert should state the facts or assumptions on which the opinion is based and should not omit to consider material facts which detract from that opinion.
>
> "4. An expert should make it clear when a particular question or issue falls outside of the expert's expertise.
>
> "5. If an expert's opinion is not properly researched because insufficient data is available, this must be stated with an indication that the opinion is no more than a provisional one."

Summary

[17] In order to be admissible as an exception to the rules of evidence that a witness may only testify to matters that he or she has knowledge of, the following criteria must be met:

> 1. The evidence of the expert must be "necessary" for the trier of fact in deciding the issues. It must not be regarding matters that the trier of fact can deal with independently.
>
> 2. The evidence must involve "special knowledge or skill" and not be within the general knowledge of the ordinary witness or that of the trier of fact.
>
> 3. The evidence must be based on appropriate theories or practices within the area of expertise.
>
> 4. The weight to be given in part will depend on the expert's compliance with the guidelines set out in *Ship Ikarian Reefer, supra.* Noncompliance may render the expert's testimony inadmissible if its admission runs afoul of the relevancy rule in *Mohan, supra.*

This approach has been followed in *Martin v. Inglis*, 2002 SKQB 157, 218 Sask. R. 1 and *Dun-Rite Plumbing & Heating Ltd. v. Walbaum*, 2009 SKQB 174, 338 Sask. R. 36.

[30] Dr. Nissenbaum is a medical doctor. He has not had any specialized training in any of the issues I have identified that are required in order to provide opinion evidence to support the injunction application. Although he has some limited experience as a result of his survey on the Mars Hill project, the nature, size and methodology used in that survey is of no value to the current application.

[31] His interest in the area of health effects of wind turbine noise commenced in 2007 and he has obviously been an avid reader of articles published in the area. His apparent aim is to inform regulators on the siting of wind turbines close to human habitation. The internet has provided a wonderful and ever-expanding source of information to people with an interest in just about anything. Dr. Nissenbaum has obtained a great deal of information on this subject, but information is not knowledge, and Dr. Nissenbaum does not have the type of knowledge referred to in the court cases that makes him an expert in any of the areas that I have identified as necessary.

[32] A crucial part of Dr. Nissenbaum's affidavit relied upon by McKinnon to support the injunction application is para. 17. This paragraph discloses the opinion used by the plaintiff to seek his injunction. It reads:

> 17. It is my professional opinion that there is a high probability of significant adverse health effects for those whose residence is located within 1100 meters of a 1.5 MW turbine installation based upon the experiences of the subject group of individuals living in Mars Hill, Maine. It is my professional opinion, based on the basic medical principle of having the exposure to a substance proven noxious at a given dose before risking an additional exposure, that significant risk of adverse health effects is likely to occur in a significant subset of

> people out to at least 2000 meters away from an industrial wind turbine installation. These health concerns include:
>
> a) Sleep disturbances/sleep deprivation and the multiple illnesses that cascade from chronic sleep disturbance. These include cardiovascular diseases mediated by chronically increased levels of stress hormones, weight change, and metabolic disturbances including the continuum of impaired glucose tolerance up to diabetes.
>
> b) Psychological stresses which can result in additional effects including cardiovascular disease, chronic depression, anger, and other psychiatric symptomatology.
>
> c) Increased headaches.
>
> d) Unintentional adverse changes in weight.
>
> e) Auditory and vestibular system disturbances.
>
> i) [sic] Increased requirement for and use of prescription medication.

[33] Dr. Nissenbaum refers to other literature in his affidavit in the area of wind turbine projects. The extensive review of the literature undertaken by him is referred to to support his general hypothesis that sound from wind turbines can cause adverse health effects in humans. None of the other material referred to by him however supports his assertion contained in para. 17 of his affidavit. Red Lily filed affidavits from its employees and its consulting environmental engineers to dispute the allegations made by Nissenbaum in his first affidavit and to challenge the voracity of the survey upon which his opinions were based. Dr. Nissenbaum then filed a second affidavit in response to Red Lily's material in which he defends his original opinions and challenges the statements made by Red Lily's experts.

[34] The strongest opinion in Nissenbaum's affidavit No. 2 supporting the factual basis for the granting of the interlocutory injunction is also found at para. 17

which reads:

> 17. At paragraph 23 of the Affidavit of Dr. Ollson, he states "it is pure conjecture on Dr. Nissenbaum's part to suggest that there would be significant health effects up to a distance of two kilometers without having any residents' [*sic*] distance from wind turbine - [health] effect correlation data". In this regard, I believe that the Mars Hill study does indicate that there are adverse health effects that will be sustained by a high proportion of those living downwind of an industrial wind turbine installation located within 1100 meters of their residence. However, it is my medical opinion that residences up to 2000 meters downwind from industrial wind turbines will be subjected to the same health effects as those residing within 1100 meters as demonstrated in my Mars Hill Pilot Study.

[35] He again opines that based on his Mars Hill survey, which he believes supports the proposition that there are adverse health effects of people living within 1100 metres of a wind turbine, that residences up to 2000 metres of a wind turbine will have the same health effects. He does not try to support his opinion with fact. He gives no basis on which to suggest that an almost doubling of a distance between a house and a wind turbine from 1100 to 2000 metres will have the same health effects. He points to no study which suggests that conclusion.

[36] He points to no opinion from experts in the field that point to that conclusion. I have no doubt that Dr. Nissenbaum firmly believes in his opinion. It is the belief of a passionate person who has focussed attention on the issue of wind turbine farms. The two affidavits of Dr. Nissenbaum are lengthy and have attached to them literature that he says supports his proposition contained in para. 17 of both affidavits. Reading of the material attached to his affidavits does not support those conclusions. At para. 29 of the second affidavit, he refers to a landmark paper by Dr. Alec Salt of Washington University, presumably the purpose of which to support his theory and conclusions respecting wind turbine noise and its effect on the human body. Dr. Salt is

an expert in the identification and measurement of externally created sound and its impact on the human ear. Dr. Salt refers to wind turbine noise in his paper and comments on his perception of the problem with the current methods of measuring wind turbine noise. He states that the most common approach is to document noise levels that are typically insensitive to the low frequency sound created by wind turbines. He criticizes most studies of wind turbine noise saying that a high level, low frequency noise is dismissed from such studies on the basis that it is not perceptible. Two of his final conclusions at page 23 of his report are:

> 4) A-weighting wind turbine sounds underestimates the likely influence of the sound on the ear. A greater effort should be made to document the infrasound component of wind turbine sounds under different conditions.
>
> 5) Based on our understanding of how low frequency sound is processed in the ear, and on reports indicating that wind turbine noise causes greater annoyance than other sounds of similar level and affects the quality of life in sensitive individuals, there is an urgent need for more research directly addressing the physiologic consequences of long-term, low level infrasound exposures on humans.

[37] Those comments are a long way from suggesting that there is a high degree of probability that there will be adverse health consequences to individuals who live within 2000 metres of a wind turbine.

[38] If Dr. Nissenbaum could be considered an expert to provide opinion evidence on the issue surrounding the granting of the injunction, there are two further reasons to reject his evidence. The first is that he has assumed the role of advocate. A review of his affidavit No. 2 especially shows that he does not take an objective approach to the issues at hand. He passionately believes in the harmful health effects of wind turbines from his own survey on the Mars Hill project and has made that the basis for his

foray into an area that he has little real knowledge of. It is clear from the content and tone of his second affidavit that he has no objectivity in respect of the issues. Secondly, in addition to the leaps of logic that were contained in para. 17 of both affidavits, he makes bold, unsupported statements on issues critical to the injunction. For example, at para. 36 he opines:

> 36. ... My research reveals that many communities have required setbacks of 2000 feet of [*sic*] more to account for debirs [*sic*] scatter during failure. In the USA, I am aware that some communities have established setbacks of one mile.

He does not provide in his research or comments which communities have required setbacks of 2000 feet or more or which ones have established setbacks of one mile. Of course, neither one of these setbacks is equal to the distance of two kilometres requested in the injunction.

[39] In para. 40 he opines:

> 40. ... My opinions in this regard have been garnered through discussions with acoustical consultants who have advised me that turbine noise modulates slowly over periods of a minute to periods of several minutes between a point where coherence is high and where coherence is low. This can last for hours or days at a time and not brief moments as suggested by Mr. Coulson.

He again does not provide the names, qualifications or papers on which he relies to form that opinion.

[40] In para. 31 of affidavit No. 1 he opines:

> 31. It is also important to consider the climate in Saskatchewan. In the

> winter, these wind turbines will be prone to icing which will increase the sound coming off the turbines by up to 6 dBA. As the icing occurs symmetrically on all blades, imbalance detectors do not kick on, and the blades keep turning, contrary to claims in the Environmental Assessment at Page 77.

Again, there is no basis for his statement.

[41] As I have indicated previously, Dr. Nissenbaum's Mars Hill survey formed the basis of his initial beliefs with respect to adverse health effects of wind turbine noise. Intuitively, one would have to agree that the closer a wind turbine is to a residence, the greater likelihood that there would be a nuisance or with adverse health effects.

[42] In Dr. Nissenbaum's Mars Hill survey, he makes the following comment when dealing with the question of distance and health effects:

> ... No attempt was made to correlate symptoms with distance from turbines as the numbers studied were inadequate to determine a dose-response relationship.

To me it is very clear this admission of the scope of his survey, even if it could be considered valid, did not include the very issue that the injunction is aimed at obtaining, yet the survey forms the basis of his opinions and the application.

[43] The defendants provided significant affidavit evidence to counter the claim of nuisance and adverse health effects alleged by the plaintiff. Given the view I have taken of the plaintiff's evidence, the defendants' response was unnecessary from a factual but not a legal standpoint. The defendants' evidence is preferable to that of the plaintiff. The individuals offering opinion evidence in fact are experts in the area that they offer their opinion. For example, Dr. Ollson, a consultant from Stantec Engineering, has the

following qualifications to provide opinion evidence in relation to this matter:

- Bachelor of Science in Biology.
- Masters of Environmental Science.
- Doctorate in Environmental Science.
- He has taught Environmental Risk Assessment graduate level studies at Royal Military College and the University of Toronto.
- He has supervised or co-supervised Masters, Doctorate and Post-doctorate students in the field of Environmental Health Sciences.
- He has worked in the field of Risk Assessment and Environmental Toxicology for over 13 years.
- He is recognized by various governments as a senior environmental health scientist, risk assessor and environmental toxicologist.
- He has worked for private corporations assisting in preparation of environmental assessment documentation to review potential health effects associated with living in proximity to wind farms.
- He has assisted in assessing environment health risk for wind farm projects on five occasions including the Red Lily project.

His affidavit evidence discredits the survey of the Mars Hill project by Dr. Nissenbaum, its methodology and conclusions, as well as the other bold, unsupported statements made by Dr. Nissenbaum throughout his affidavit.

[44] Extensive evidence from Red Lily was provided regarding a wind farm project at St. Leon, Manitoba, which uses identical turbines and is in a similar topographical area. The unchallenged evidence is that there are not the health or nuisance issues at St. Leon that are alleged will occur at Red Lily. The St. Leon Manitoba project

is clearly more comparable to Red Lily than Dr. Nissenbaum's Mars Hill, and the survey information provided in relation to St. Leon is much more detailed and appears to be more valid than Dr. Nissenbaum's survey.

[45] As part of the approval and information process, some people in the Red Lily area were taken to St. Leon for the purpose of viewing the operational wind farm there. There are no plaintiffs' affidavits from those people suggesting any issues of nuisance or health effects that they could identify.

[46] If I had to fully accept the opinion of Dr. Nissenbaum once contrasted with the totality of the evidence from Red Lily, my ultimate conclusion would be the same.

[47] Turning to the legal test to be applied given my findings of fact, it is clear that the first test of serious issue to be tried has not been met, whether or not I impose the requirement that the plaintiff show a strong *prima facie* case. The plaintiff has not shown that there is a high degree of probability that injury will occur. With respect to the issue of irreparable harm, the same conclusion flows. The plaintiff has not shown that irreparable harm will occur in my opinion, and clearly has not shown that there is a high degree of probability that the injury will in fact occur.

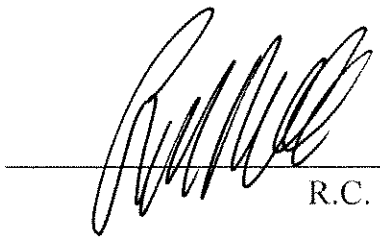
[48] With respect to the issue of balance of convenience, $60 million has been expended on the project to date. Significant costs will be incurred by the defendants if the project is halted pending trial. The inconvenience to the defendants is significant. The inconvenience of allowing the wind turbine project to be completed and operational to the plaintiff is minor and speculative. If there are nuisance or health effects, the operation of the wind farm would presumably show them in a fashion that the plaintiff can present at trial. If the plaintiff is successful at trial, remedies exist for curing a proven nuisance

or damages arising from negligence.

[49] The balance of convenience is also in favour of the defendants.

[50] In the circumstances, the application is dismissed.

[51] The issue of costs may be spoken to by way of a telephone conference call by application of any party through the local registrar.



J.
R.C. MILLS