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The Ontario Energy Board
Farm Stray Voltage Consultations
[http://www.oeb.gov.on.ca/OEB/Industry+Relations/OEB+Key+Initiatives/Farm+Stray+Voltage+\(EB-2007-0709\)](http://www.oeb.gov.on.ca/OEB/Industry+Relations/OEB+Key+Initiatives/Farm+Stray+Voltage+(EB-2007-0709))

Dear O.E.B.:

I have been studying the consultant submissions regarding Farm Stray Voltage and am very disappointed by the information provided. I am also disappointed that it has taken the OEB so long to reach this stage of the proceedings.

My first concern is that the true cause of the stray voltage problem in Ontario, which has been created primarily by Ontario Hydro/Hydro One, has not been properly identified or explained. The distributors have a duty to provide safe electricity to Ontario consumers without causing harm or creating dangerous situations. Instead, they have failed to update their distribution system to make it fully compatible with modern electronic equipment and higher usage. Ontario Hydro/Hydro One has not followed sound electrical engineering practices by keeping their distribution system updated from its original installation. This is the real and simple cause that the OEB needs to address.

Most people would be horrified if an electrician wired their home and then said that a large percentage of the neutral return electricity would not be running through the wires, but uncontrolled throughout the house. This situation would obviously be very dangerous and could cause serious health problems for the house occupants. Yet, this scenario is similar to that which Ontario Hydro/Hydro One has practiced during many years, unbeknownst to the citizens of Ontario. Through these dangerous actions, Hydro One has become the worst polluter in the province, harming farm animals, humans, and the general environment that has been exposed to their uncontrolled electricity.

Electricity in Ontario should flow out on the wiring system, be used safely within electrical devices, and then should flow back to the substations on the wiring system. The term “Stray Electricity” is a very misleading term because there is nothing stray about it. Hydro One has been allowing their neutral electricity to leave the electrical distribution system through their grounding system and the grounding systems of consumers across the province. The electricity is then totally uncontrolled and creates a hazard to anyone or anything in its path. This is illegal and improper conduct by Hydro One, an organization that has access to scientific studies showing the harm ground current electricity causes and also has access to knowledge about proper remediation methods to eliminate it. Further, this information should have been a priority for Hydro,

yet has not been. The rationale given in the Board discussion paper for this apparent ignorance is an alleged decreasing number of stray voltage problems during the last twenty years (p. 83), although the report also states that statistics regarding the number of cases have not been maintained (pp. 90-91). Considering that this situation has now reached a crisis point requiring a Minister's Directive, it is obviously a problem that Hydro should have been addressing.

My second concern is in regard to the limited scope of this process. The Minister's Directive specifies that action needs to be taken to assist "farm customers", yet the OEB has chosen to focus only upon livestock and, in particular, dairy cattle. It is a simple matter of logic to realize that if the current is having a detrimental affect upon cows, there is a high probability that it is also harmful to other life on the property. The stated rationale that cows are large animals and therefore more severely affected does not necessarily apply, as the ground current has also been known to affect other living things, including the farmers themselves. And, if the voltage is affecting the farmers and their families, it is most surely affecting "farm operations", as specified in the Directive.

I am well aware of the danger and harm caused by "stray voltage" because I have suffered the harm and effects inside my home. My own case of prostate cancer may be explained by stray electricity and high frequencies that were measured travelling up and down both legs while standing in my kitchen. Even after Hydro One completely disconnected all electrical connections to my house and there were no other sources of electricity, I could measure harmful electrical stray voltage inside my home. Furthermore, I am also aware of many cases where stray voltage in barns and resultant harm to animals has coincided with strange illnesses to the families living in the farmhouses. The callous and dishonest way that Hydro One treated me during my problems with stray voltage is a situation that the Ontario Energy Board still needs to fully investigate. Other complaints regarding the manner in which Hydro One treated customers with ground current difficulties were voiced at the public meetings, and has been rightly identified in the report as a problem that requires attention.

While Hydro One is the main offender in the creation of the "stray current" situation, the Ontario Energy Board has also been a big part of the problem. As the governing body, the OEB has a duty to ensure that Hydro One operates safely by following all rules and regulations. The grounding system of the Hydro One distribution system is meant to be a safety feature that is used for dangerous conditions. These situations include lightning strikes and accidents along the system. The grounding system was never meant to provide a continuous flow of neutral electricity into the ground and across the properties of unsuspecting property owners. This flow of uncontrolled electricity across the properties of others may best be described as trespassing.

While a flow of uncontrolled electricity is bad enough, the situation is, in reality, much worse because this electricity is actually "dirty electricity". The electricity has picked up dangerous high frequency pollution during usage, making the flow of electricity far more dangerous. Consultants used by the OEB during this process have failed to mention the great danger and importance of high frequency pollution. Many studies have linked this

type of pollution to many illnesses and cancer. The dangers of high frequencies harming health are clearly documented in the Bio-Initiative Report – www.bioinitiative.org . Uncontrolled electrical flows from Hydro One’s faulty system deliver this highly dangerous toxic mixture across much of Ontario and it probably causes much illness and cancer to unsuspecting citizens. It is imperative for the health of Ontario citizens and for the good of the environment that this terrible pollution be stopped entirely. The failure by the consultants to report and discuss the dangers associated with polluted stray voltage is a “red flag” with which the OEB and the citizens of Ontario should have the greatest concern. In addition, the consultants failed to mention how the flow of neutral electricity is being hampered by high frequency pollution on the neutral distribution line. If the OEB consultants are not aware about the dangers and the issues of high frequency pollution, you should be very careful about relying on any information that they provide. If they have deliberately ignored this critical issue, they should be fired as OEB consultants.

The dangers of stray voltage even without high frequency pollution are great. In order to make sure that this danger is fully understood, I have attached a copy of *Kavat et al*, a scientific research document sponsored by the Electrical Power Research Institute (EPRI) which shows an increase in cancer in homes with higher stray voltage levels. This document, together with the knowledge of the extent of the stray voltage problem in Ontario, may well explain why so many people in the province are developing cancer. The OEB must consider the adverse health effects of stray voltage to the human population when making serious decisions that will effect the health of many Ontario citizens.

Hydro One and other utility companies know how to stop stray voltage; they were advised of this many years ago. The instructions were documented in IEEE 519-1992. Utilities were advised to increase the size of their neutral wires by two and a half times larger than the power delivery wires. There are also several other technical papers on mitigating stray voltage, which Hydro One appears to have ignored. The OEB needs to consider all of the information pertaining to stray voltage mitigation in these technical papers.

Much of the information that I have learned about stray voltage has been from Mr. Dave Stetzer, an electrical specialist from Blair, Wisconsin. Mr. Stetzer measured and evaluated the ground current problems at my home. He has also assisted many farmers in different areas of Ontario. I believe that he is probably the most knowledgeable and practical specialist of ground current electricity in North America. I have attached a document entitled *D Stetzer Testimony – electrical problems pdf*. The information in this document may be of far more use to the OEB in identifying the true dangers and solving the problems of stray voltage than all the consultants’ reports that have been produced for the OEB. The Stetzer testimony contains a great amount of very important information that your consultants have failed to produce. It also provides references to many technical papers on mitigation of stray voltage. I also urge the OEB to hire Mr. Stetzer as the main consultant to ensure that the Hydro One electrical distribution system is brought up to a safe standard and that stray voltage is eliminated.

The consultants hired by the OEB have downplayed the real danger of stray voltage. This is dangerous and improper and has resulted in a weak discussion document from the OEB that could cause even greater dangers to the Ontario citizens. The consultants' job should have been to clearly document all the dangers caused by stray voltage in a non-partisan balanced document. It appears that they have produced a one-sided document that helps Hydro One to avoid incurring costs to repair an outdated system. The OEB needs to ask the question, has there been outside intervention in the production of the consultants' reports? Did the OEB hire the right consultants? Did the OEB specify the information that is required? Ontario deserves a complete and honest report so that the correct decisions can be made. The consultants have downplayed the need to completely eliminate stray voltage. Some of their suggestions may resolve some stray voltage issues on some farms, but they may also cause problems on other properties. Band-aid solutions will not make Ontario safer and will not eliminate the dangers.

My comments have not directly addressed the specifics of the staff discussion paper because I feel that it has sidestepped the larger, main issue, which is the overwhelming need to eliminate "stray voltage" throughout all of Ontario. There are, however, a couple of points in the report on which I would like to comment.

One of the issues that is raised in various discussions concerns the amount of regulation allowed to the distributors in various areas, such as education and problem resolution. Based upon my own experience and that of others, I would like to state that I feel strongly that there should be oversight of the distributors in the implementation of this process. There also needs to be an independent ombudsman or investigative body to assist with a timely and satisfactory resolution of cases, and detailed records must be kept. In addition, there should be clearly defined standards and procedures that will eliminate these problems. I also feel that the distributors need to be better educated about stray voltage and that there should be a public awareness campaign to help not only the farmers, but anyone who may be affected by this scourge.

The Staff Discussion Paper looks at other jurisdictions in the United States and what they have done in regards to stray voltage problems. U.S. corporations are notorious for their lack of concern for health and safety. Their concern for the 'bottom line' is often at the cost of the environment. For the OEB to simply follow the lead of U.S. utilities that have not even solved their own stray voltage issues, would be a mistake. The OEB must develop an Ontario specific solution that will ensure proper safety in this Province.

The cost of upgrading and repairing the Hydro One distribution system will be great, but the cost of suffering and health care incurred by not repairing it may be much greater. Although the OEB has a directive to correct farm stray voltage they also have a duty to ensure the electrical system throughout Ontario is safe. Please do not do half a job or a quarter of a job; please do it right first time and for the future.

In summing up:

1. The true dangers of stray voltage on human health and the environment must be defined.
2. A decision to stop all bad practices by utilities that are causing stray voltage must be made.
3. A program to upgrade and repair the electrical distribution system must commence as soon as possible, starting with known and reported stray voltage problems.
4. Compensation should be provided to those who have been financially harmed by stray voltage that was caused by previous utility negligence.

Thank you for the opportunity to comment on this discussion paper. I look forward to the day when stray voltage is no longer a source of pollution and a problem for the citizens of Ontario.

Yours truly,

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