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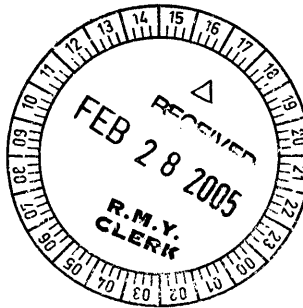
Gary Schneider

Manager – Transmission Approvals
System Development



February 25, 2005

Mr. Denis Kelly
Region of York
Office of the Regional Clerk
Corporate Services Department
17250 Yonge Street,
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**REGION OF YORK
CLERK'S OFFICE**

FILE No. - P07

→ Chair
· CAO
· B. Tuckey

Re: Supply to York Region – Draft Environmental Study Report (ESR)

Thank you for your letter of December 17, 2004 regarding Council's decisions in respect to the proposed Transmission Improvement in York Region as outlined in our Supply to York Region Draft ESR report.

Your letter states that the Regional Council:

- is requesting a bump up to an individual EA,
- supports an initiative to provide distribution connection for a proposed 300 MW peaking station,
- supports Markham's request for a mediation process and
- is requesting that the Federal Minister of Health further review the "issue and impact" of Electro magnetic fields.

Hydro One is currently responding to those who have requested bump-up. We will also be summarizing the responses received and providing the Minister with our recommendations.

Our intent has always been to work in partnership with the Region. As such, we came to the Region early in the planning process to provide information about the needs, the potential solutions and the process that we were beginning. In addition we will not pursue Ontario Energy Board (OEB) approval without the support of York Region.

Hydro One sincerely believes that the individual EA process will not be able to advance this project. If the Minister of Environment selects an Individual EA path, the prospects are high for a delay of several years. This places the supply to York Region in jeopardy. Action by York Region and the local utilities will likely be required to put in place non-transmission alternatives to provide supply reliability. However, most of these actions will only defer the need for transmission improvements and may not be required once the transmission system reinforcement is complete.

As you are aware, an independent assessment by the Independent Electricity System Operator (IESO formerly the IMO) and a joint assessment by the York Region electric utilities and Hydro One (York Region Supply Study, 2003) concluded that there is a need for reinforcement of transmission facilities within the Region. The proposed transmission system upgrade was supported unanimously by the local utilities in the York Region Supply Study.

With respect to distributed generation, to date Hydro One is not aware of any firm plans for non-transmission options. As such, it is prudent that we continue proceeding with EA approval to minimize the consequences of delays in project in-service dates. The Ontario Power Authority (OPA) is currently assessing the needs in York Region and the supply options available. Hydro One will take the appropriate steps once the OPA review is complete.

As you have noted, the Town of Markham has proposed mediation. Since March of last year Hydro One has conducted an extensive consultation program in an effort to inform stakeholders about the project and to identify and mitigate concerns. This program began with briefings to inform provincial, regional, municipal and local utility staff about the project and planning process. We have held meetings with local elected officials hoping for meaningful discussion and progress in moving this project forward.

It must be recognized that there are many bump-up requests covering numerous issues. Agreement would be required on all issues rather than having a series of independent mediations. A multi-party process with many differing interests and levels of understanding will be challenging and likely unworkable. The existing processes require public input and review by the Ministry of Environment and the Ontario Energy Board. We do not believe there would be any benefit in introducing another stage in the planning process.

One means of resolving the issues raised by the Region is the possibility of burying the portions of the proposed transmission line in urban areas. Hydro One has expressed a willingness to consider this on a beneficiary pays basis. However we note that in the January 11, 2005 letter of Mr. Fisch, that the Region is taking the position that Hydro One should pay the entire cost. This is one example of why mediation is unlikely to be successful.

With respect to your proposed request to the Federal Minister of Health for further review of the issue and impact of EMF, I am attaching a very recent position statement together with a response statement concerning childhood leukemia, based on an updated review from the Federal, Provincial and Territorial Radiation Protection Committee (FPTRPC). The FPTRPC is an intergovernmental committee that provides advice on radiation protection to Health Canada and the provincial and territorial health agencies. I am sure that you will find this to be informative and useful.

Thank you for your input on the Supply to York Region proposal.



Gary Schneider

Federal-Provincial-Territorial Radiation Protection Committee – Canada

Position Statement for the General Public on the Health Effects of Power-Frequency (60 Hz) Electric and Magnetic Fields – Issued on January 20, 2005

1. Electric and magnetic fields (EMFs) are produced by the generation, transmission, distribution and use of electrical energy at power frequencies (60 Hz in Canada). People are exposed to these fields while in close proximity to power lines and other electrical facilities, as well as electrical wiring, equipment and appliances in homes, schools and workplaces.
2. Studies to investigate the health effects of these fields have taken place around the world for more than thirty years. These studies include laboratory research into effects on cells and animals, as well as epidemiological (human health) studies looking at possible associations between exposures and diseases in the population. Short- and long-term scientific investigations have been conducted and are continuing.
3. Laboratory research has shown that power-frequency EMFs can interact with biological systems; however, results to date have not provided conclusive evidence that these fields cause adverse health effects, such as cancer. Epidemiological studies have not established an association between exposure to power-frequency EMFs and the development of cancer in adults. The evidence associating cancer in children with exposure to power-frequency EMFs remains inconclusive.
4. After a recent evaluation of the scientific data, the International Agency for Research on Cancer classified extremely-low-frequency (ELF) magnetic fields as "possibly carcinogenic to humans" based on studies of childhood cancer (<http://monographs.iarc.fr>). "Possibly carcinogenic to humans" is a classification used to denote an agent for which there is limited evidence of carcinogenicity in humans and less than sufficient evidence for carcinogenicity in experimental animals. In the case of ELF fields, the evidence is not strong enough to conclude that they cause cancer in children. More studies are needed to draw firm conclusions.
5. Immediate biological effects can result from direct exposure but only at field strength levels well above those typically found in living environments. Peripheral nerve and muscle stimulation can be caused by intense magnetic fields and hair stimulation by intense electric fields. Minor shocks may be caused by touching poorly-grounded, conducting (metallic) objects located under some high voltage lines, as a result of electrical charge induced by high intensity electric or magnetic fields.

6. Based on the available scientific evidence to date, the Federal Provincial Territorial Radiation Protection Committee (FPTRPC) concludes that adverse health effects from exposure to power-frequency EMFs, at levels normally encountered in homes, schools and offices, have not been established. Protection of the public against acute effects, such as minor shocks that may occur from contact with conducting objects under high voltage power lines, can be achieved through awareness initiatives undertaken by the electrical power industry.
 7. There have been increasing requests from concerned citizens that the precautionary principle (PP) be used in a number of areas, including exposure to EMFs. It should be noted that the extent of PP covers a variety of measures ranging from moderate methods such as monitoring scientific developments and providing information, through participation in the process of acquiring new knowledge by carrying out research, to stronger measures such as lowering exposure limits. Since there is no conclusive evidence that exposure to EMFs at levels normally found in Canadian living and working environments is harmful, FPTRPC is of the opinion that moderate measures and participation in the process of acquiring new knowledge are sufficient. These types of activity are consistent with the Canadian government framework on precaution.
 8. The FPTRPC will continue to monitor scientific research relating to the health effects of power-frequency EMFs and will reassess its position periodically as new information becomes available.
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Notes:

- (a) This Position Statement replaces the previous Position Statement (first released by the FPTRPC in November 1998 and updated in October 2002).
- (b) This Position Statement is not intended to provide direction on health and safety aspects of electromagnetic interference by EMFs with medical electronic devices, including cardiac pacemakers. Electromagnetic interference with such devices requires different considerations from those used in the evaluation of human health effects.

Federal-Provincial-Territorial Radiation Protection Committee – Canada

Response Statement to the Issue of Power-Frequency Magnetic Fields and Childhood Leukemia – Issued on January 20, 2005

The Federal-Provincial-Territorial Radiation Protection Committee (FPTRPC) is aware of concerns about possible health risks from exposure to power frequency electric and magnetic fields (EMFs). In response, the FPTRPC developed a Position Statement to address the issue*. Of particular interest is the risk of cancer from living near power lines and other sources of EMFs. These concerns appear to arise as a result of the controversial and contradictory findings in scientific research, especially from epidemiological studies.

The outcome of a recently conducted pooled analysis of several epidemiological studies shows a two-fold increase in the risk of leukemia in children living in homes, where the average magnetic field levels are greater than 0.4 microtesla (4 milligauss)[†]. The explanation for this elevated risk estimate is unknown, but the authors of the pooled analysis suggest that it may be accounted for, in part, by selection bias of cases and controls in the original studies used for the pooled analysis. However, the number of subjects in the greater-than-4-milligauss group is very small, and thus the significance of the finding is questionable. More refined statistical and epidemiological methods will be needed to clarify this finding. Further, no mechanism has been identified in the research literature that supports the suggestion that these fields can cause or promote the development of cancer.

It is the opinion of FPTRPC that the epidemiological evidence to date is not strong enough to justify a conclusion that EMFs in Canadian homes, regardless of locations from power lines, cause leukemia in children.

* Position Statement for the General Public on the Health Effects of Power-frequency (60 Hz) Electric and Magnetic Fields; issued by the Federal Provincial Territorial Radiation Protection Committee – January 20, 2005

[†] Ahlbom A, Day N, Feychting M, Roman E, Skinner J, Dockerty J, Linet M, McBride M, Michaelis J, Olsen JH, Tynes T and Verkasalo PK. A pooled analysis of magnetic fields and childhood leukaemia. *Br J Cancer*. 2000;83(5):692-698.