

Pickering Hydro Corridor

Hydro One's priority is to deliver electricity in a safe and socially responsible way. The purpose of this fact sheet is to provide the public with more health and safety information about the Pickering Hydro One Corridor.

Health & Safety Background

- Hydro One has a dedicated team that regularly monitors global studies around electric and magnetic fields (EMF) and ensures that our infrastructure is built and maintained following best practices and industry standards.
- We look to **Health Canada**, the **World Health Organization** and the **International Commission on Non-Ionizing Radiation Protection (ICNIRP)**, for guidance on EMF and our approach.
- Based on global studies which continue to be regularly monitored, these organizations indicate that members of the public do not need to take precautions to protect from fields produced by extremely low frequencies such as transmission lines.

Key Facts

- Electricity produces fields which are referred to as EMFs.
- **EMFs are invisible forces found everywhere electricity is used** including household appliances, power cords, and wires. They are strongest when close to their source. As you move away from the source, the strength of the fields fades rapidly.
- In North America, **all electricity including transmission lines, operate at 60 hertz, which is considered to be extremely low frequency.**
- World Health Organization (WHO) states that “despite extensive research, to date there is **no evidence** to conclude that exposure to low level electromagnetic fields is harmful to human health.”
- **Health Canada states that members of the public do not need to take precautions to protect from fields produced by electricity** (extremely low frequency) because exposures are far below the limits recommended by the ICNIRP guidelines.
- ICNIRP's guidelines indicate that general exposure at low frequency, such as transmission lines, should **not exceed a level of 2000 milligauss (mG)**.
- To help further put this into context, household appliances such as a **vacuum operates at 300 mG**, a microwave at 200 mG and a washing machine at 20 mG.

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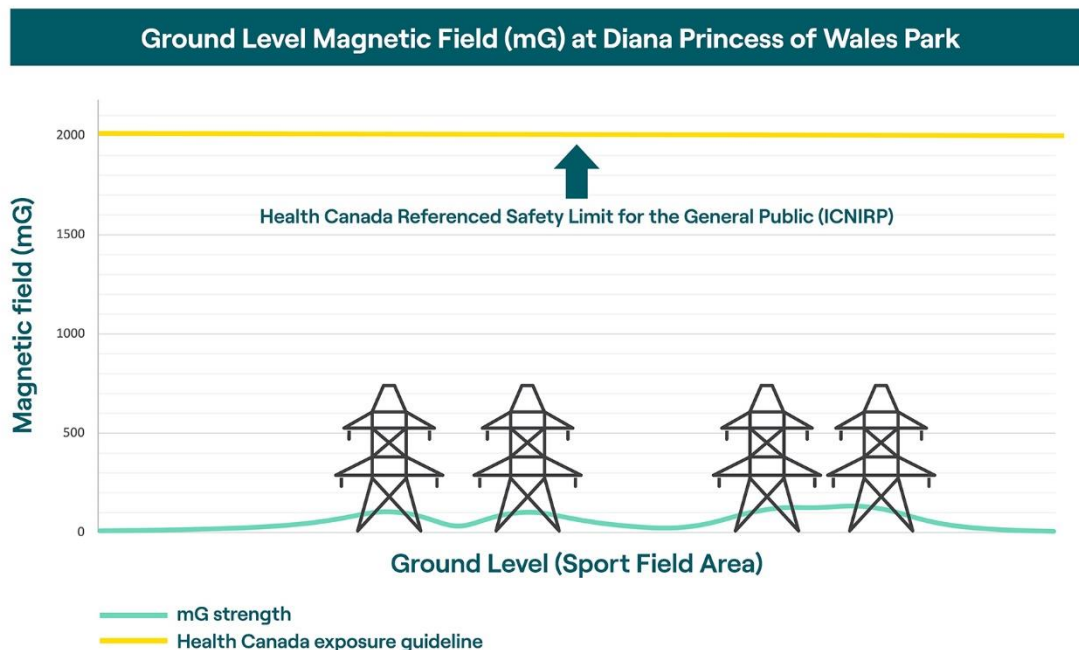
Hydro One has evaluated the lines and the clearance heights at the Pickering Hydro Corridor, confirming that they meet or exceed the high industry and regulatory safety codes and standards.

Hydro One also modelled the Electric and Magnetic Fields (EMFs) of the corridor and confirmed they were well below Health Canada's recommended limit of general exposure to low frequency such as transmission lines.

Below is a chart showing the levels of magnetic fields at the Diana, Princess of Wales Park under the Pickering Hydro Corridor.

- The chart shows four (4) double-circuit 230kV transmission lines.
- The green line represents magnetic field measurements as it extends from under the wires and to the edge of the corridor.
- The measures are compared against Health Canada's recommended limit of 2000 mG (yellow horizontal line).
- The towers represent the middle of the transmission line.

**Health Canada references using the safe limits prescribed by the International Commission of Non-ionizing Radiation*



Common household sources of magnetic fields

Appliance	Median mG
Electric Ovens	9 mG at 6 inches
Coffee Makers	7 mG at 6 inches
Refrigerators	2 mG at 6 inches
Vacuum Cleaner	300 mG at 6 inches
Microwave	200 mG at 6 inches
Portable Heater	100 mG at 6 inches
Washing Machines	20 mG at 6 inches

Additional Resources

- <https://www.hydroone.com/power-outages-and-safety/corporate-health-and-safety/electric-and-magnetic-fields>
- <https://www.canada.ca/en/health-canada/services/health-risks-safety/radiation/everyday-things-emit-radiation/power-lines-electrical-appliances.html>
- <https://www.who.int/news-room/questions-and-answers/item/radiation-electromagnetic-fields>
- https://www.jeic-emf.jp/assets/files/Fact%20Sheets/facrt_sheet_Effects%20of%20EMF%20on%20the%20environment.pdf
- <https://www.icnirp.org/cms/upload/publications/ICNIRPLFgdl.pdf>

We are committed to understanding and addressing any health concerns individuals may have. In the meantime, if you have any questions, please contact Hydro One's Community Relations's team:

1-877-345-6799

Community.Relations@HydroOne.com