



Wireless Internet: Tower Siting Process

Wireless Internet access relies on towers to relay wireless Internet signals. The location of these towers is subject to Industry Canada protocols.

The Eastern Ontario Regional Network was created by the Eastern Ontario Wardens' Caucus to enable high-speed Internet access across the region. EORN's goal is to provide high speed access at 1.5 Mbps or higher to 95 per cent of the households in rural Eastern Ontario and 10 Mbps to 85 per cent. Achieving this level of coverage will require a mix of wired, wireless and satellite technologies.

Building the Network

- EORN is building a 5,500-kilometre fibre optic "backbone" across the region, which includes more than 400 kilometres of new cable.
- EORN has selected a variety of Internet service providers (ISPs) to build local access networks off of this backbone, through an open, competitive bidding process. ISPs who bid on local access contracts propose how they will build their network in order to reach the most residents with the best service.
- In selecting proponents to build local access networks, EORN relied on a number of key criteria, including:
 - The geographic reach and number of households reached by the proposal;
 - The speeds and bandwidth that will be made available; and,
 - Competitive consumer pricing that bridges the urban/rural price gap.

Tower Siting Process

- Wireless Internet access relies on towers to relay wireless Internet signals. At the proposal stage, a wireless Internet provider will propose general locations for towers. Specific locations are not finalized until after the EORN contract has been awarded.
- ISPs identify possible sites based on a number of factors:
 - Priority areas identified by EORN;
 - Ability for the tower to connect to the backhaul network via one or more access points, and;
 - The number of households that could receive coverage.

- Priority is generally placed on the use of existing structures, such as other towers or silos, as well as appropriate municipal properties, if available.
- Tower locations must follow Canadian environmental assessment standards such as those for proximity to bodies of water.
- Once a prospective site has been identified, the ISPs must first work with the landowner to acquire the rights to place the tower on their property. Other processes and public consultation generally only occur once the property owner has agreed.
- The ISP must then go through a protocol established by Industry Canada, which is responsible for the development and operation of telecommunications in Canada.
- If there is a local protocol for tower siting, then that process, within reason, takes precedence over the Industry Canada protocol.
- Many municipalities do not see the need for their own protocol, as the Industry Canada protocol requires service providers to work with the local government and address public concerns.
- Under the Industry Canada protocol, formal notice must be issued to all property owners within a radius that is three times the tower height. Newspaper notices must also be published for towers greater than 30 metres high.
- There is a 30-day period for public comment, followed by periods when the ISP must acknowledge and respond to comments, and an opportunity for follow up from those with concerns.
- The purpose of the Industry Canada protocol is to address local siting concerns. Within that framework, the protocol says the following concerns are not relevant to the siting process:
 - disputes with members of the public related to the proponents service;
 - impact on property values; and,
 - questions on the appropriateness of the Industry Canada protocol, health and safety codes and other related legislation.
- After this process, which can last from 30 to 51 days, the ISP can request a Letter of Concurrence from the municipality.
- A municipality may deny this request or suggest alternate locations. If another suitable location is not available, then the ISP may be unable to provide high-speed Internet access to the area it sought to serve. The ISP may also ask for intervention from Industry Canada directly.
- EORN is usually advised of the actual site during the public notification process.

Health and Safety

- All telecommunications towers and the installed equipment must meet Health Canada safety codes pertaining to exposure to radio frequency fields. The specific regulation is known as "Safety Code 6."
- Wireless towers emit a low power radiofrequency energy or RF energy. According to Health Canada, the consensus of the scientific community is that RF energy from telecommunications towers including fixed wireless and cell phone is too low to cause adverse health effects in humans. In fact, RF exposures from telecommunications towers are typically well below Health Canada's exposure standards.
- The World Health Organization points out that due to their lower frequency, at similar RF exposure levels, the body absorbs up to five times more of the signal from FM radio and television than from telecommunications towers. Further, radio and television broadcast stations have been in operation for the past 50 or more years without any adverse health consequence being established.

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