



Utilities – Toronto Hydro

Background

Since the early 1990s, ESAC has worked with organizations that would become part of the amalgamated Toronto Hydro. Being the

largest energy consuming city in Canada, Toronto requires exceptional monitoring and control to ensure that energy needs are being met. ESAC was contracted to supply over 300 pole-top RTUs communicating on 900MHz radio, and design/implement a redundant central interface with central SCADA upgrade protocol driver technical support.

Approach and Methodology

Each pole-top RTU is linked via radio communications for interface to a central monitoring station. When originally developed, Etobicoke Hydro had expressed a need for high reliability, so the system was provided in a manner to yield a high degree of fault-tolerance. Failure of any unit will not cause loss of communication for any other in the field. This design also allows for easy expansion; necessary due to the increasing energy needs of the Metropolitan Toronto area.

Key Challenges

A pre-existing SCADA station was incorporated into ESAC's solution to keep the project as economical as possible. All the desired features were provided to the client while eliminating a substantial additional investment. Additionally, drawings, fabrication/testing and reporting process were standardized to ensure quality deliverables at the most economical cost.

Ongoing Support

Fortunately, over approximately 20 years there have been no unit failures resulting in replacement parts or service. Maturing product components have required revised solutions and technical support with migration options for engineering project with budget planning. ESAC continues to support changing staff training as well as radio traffic optimization due to increased radio traffic.