EPC – Lower Notch Generating Station

Background

This hydroelectric plant located on Lake Timiskaming required a transfer trip system and power line carrier communications system coordinated with Hydro One. Existing was mature products difficult to service and maintain. A redundant new system ensures the ability to maintain while in-service and grid protection interface reliability.

Approach and Methodology

As an EPC (Engineering, Procurement & Construction) project, which ESAC designed/developed RFP and managed the electrical subcontractor. An older in-service generating station with upgrades that required an “over-build” design solution minimizing plant downtime. The solution had to be reasonably checked and tested prior to scheduling final changeover. Central operations were ensured reliability with redundant system distinct annunciation. The new system was bench tested including panel's functional operation prior to site installation.

Key Challenges

Encountered challengers include existing drawings, existing protection relays interface and safely deploying an “over-build” solution. The applied technology had a high level of complexity and additional effort was put forth for project implementation with numerous groups and detailed technical interfacing. Existing conditions found during project phases required “on the spot” assessment, design/implementation impact to maintain changeover schedule (i.e. a grid impacting project).

Ongoing Support

ESAC offers service and “refresher understanding” plant group P&C technical support as well as solution support for planned protection and SCADA upgrades.