

EPC – Renfrew Power Generation



Background

As an EPC (Engineering, Procurement & Construction) provider, ESAC was responsible for the overall electrical as a design-build contractor, with electrical subcontractor design/develop RFP and management. Studies were provided to ensure a system with unit protection and ESA requirements. Project management involved scheduling with suppliers and subcontractors, quality assurance, and implementing site-specific Health, Safety, and Environmental programs. Proper management during construction ensured that Renfrew Power Generation will be contributing to Ontario's power production in a safe and efficient manner for years to come.

Approach and Methodology

Original plants 1 and 2 were upgraded (including the switchgear, exciters, integrated protection and control) in the early 1990s. TLGS integrated system products/solution were used for the upgrade of existing plants. Capitalizing on current technology for protection, synchronizing and unit controls, TLGS optimized production capabilities for available water, also ensuring connection authority grid compliance. SCADA remote smart-phone alarming and user interfacing provides continual operations' coverage. Production performance, as well as historian trending and reporting, quickly and continually identify issues in optimizing equipment operation.

Key Challenges

Orchestrating and ensuring design adherence to ESA and unit supplier requirements with electrical subcontractor RFP details for required deliverables and project scheduling. Existing plants, having much older units operating similarly to the new TLGS, were given cost effective upgrades for an overall integrated system. The turbine and unit supplier specifications and civil consultant geographic were used to define MW productions efficiency profile. Multiple subcontractors required a keen focus on project coordination scheduling.

Ongoing Support

ESAC has provided technical support and services since the existing plants' upgrade for over 20 years. ESAC will continue to provide support and maintenance for technical interfacing with supply authority including trip/event analysis, system performance and required maintenance testing.