



GRAND VALLEY WIND FARMS
ENERGY PROJECTS

Renewables – Veresen Grand Valley(s)

Background

ESAC worked on the Ferndale project which was somewhat ground breaking in HONI interfacing as standards were not defined as they are today. Later projects have been designed in accordance with HONI requirements at that time. Two projects with the same HONI feeder and transfer trip are cascaded applications sharing both transfer trip and SCADA interfaces. Unmanned wind farms have auto-reclose for system/grid faults re-energization and utilize WTG SCADA systems.

Approach and Methodology

With technical adherence to HONI requirements, cost conscious protection and control standards were standardized for improved quality assurance with operational staff consistency. The protection and control differentiate external HONI system/grid (auto-reclose energization) and internal faults (lockout). Main RTU integrates protection relays with hardwired points providing SER (Sequence of Events Recording), HONI and WTG SCADA interfaces. DSL VPN interfaces are used for both WTG users SCADA interfacing and protection technical support.

Key Challenges

Achieving an accurate project budget and schedule with an evolving HONI interface and system communications, involving multiple organizations required adequate foresight and risk analysis. A priority was to develop a standard design that supports flexibility for the finite changes encountered. Additionally, defining a WTG short circuit model contribution to ensure accurate protective device implementation and Arc Flash conditions.

Support

ESAC offers technical support to address protection trips, communications failures, HONI and IESO technical interfacing. Maintenance and upgrades are performed as required with assistance of planning technical details and budgeting. New projects' technical reviews are performed for standard designs with budgeting and submissions (i.e. Form-B, Philosophy, Pathloss study).