



Grid Independent Remote Charging Station (GIRCS)

Project Overview

Through industry leader's funding, St. Clair College partnered to advance EV charging infrastructure research, focusing on remote, grid-independent solutions using 100% renewable energy.

Purpose and Objectives

Develop a tool for evaluating potential GIRCS locations and creating a site plan for a prototype in Ontario, emphasizing sustainability and remote access.

Company Information

St. Clair College partnered with industry leader, based in Windsor, Ontario, to specialize in affordable and sustainable EV chargers for both residential and commercial use, collaborating with leading brands to push the boundaries of EV charging technology.

Approach

- **Constraints:** GIRCS must be remote, in Ontario, and utilize renewable energy exclusively.
- **Energy Assessment:** Total energy needs and autonomy days calculated, ensuring safety for non-generation days.
- **Location Scouting:** Identified potential sites with no nearby charging stations.
- **Tool Development:** For calculating energy storage, generation mix, annual energy fluctuations, and cost analysis.
- **Site Planning:** Including layout of energy devices, storage, and overall land use, paving the way for construction readiness.

Deliverables

- A comprehensive tool for evaluating GIRCS locations, focusing on renewable energy sources. A detailed site plan for a GIRCS prototype, including:
 - Energy generation and storage layout.
 - Land use planning.
 - Electrical design and drawings.
- Prepared documentation for professional engineering review and future construction.

