

CASE STUDY

Solar Park

Remote SCADA Implementation



732-922-6611

info@inflexionpoint.ai

www.inflexionpoint.ai

PROJECT STARTING POINT

With more than 32 million customers, RWE is focused on making energy that can be generated locally, stored and used anywhere. With this goal in mind, they looked to develop a 670-acre area into a solar park for energy generation in Orla, Texas.

InflexionPoint was brought on board to implement a SCADA system for the new facility to provide central monitoring from company headquarters in Chicago, IL. The SCADA system collects and displays real-time and historical power and meteorological data. Actual and estimated power production data are calculated. The SCADA system provides the necessary tools to better monitor and control the site and provided a basis for future SCADA applications within the company.



HIGHLIGHTS

- Remote installation of SCADA systems
- System based on Ignition system
- Real time & historical data, trends, and reports
- Reduced maintenance costs

THE CHALLENGE

The site is maintained by local O&M personnel, but operated remotely from the customer's data center, support personnel, and Inflexion Point's development team. Data integrity and network resiliency were key. Remote management of the application development, testing, deployment and startup presented technical and coordination challenges.

THE IGNITION VISION

InflexionPoint proposed a SCADA solution based on Inductive Automation's Ignition platform, including Vision, Historian, Alarm Notification, and Reporting modules. Ignition's modern technology stack and java foundation provide multiple developers simultaneous access and a robust development environment. Unlimited tags and clients provide a highly cost-effective solution for the company's current and future SCADA requirements.



OUR SMART SOLUTION

The system provides data collection locally at the site with the capability to view displays, data and reports at the central data center.

The system monitors several data sources, including 33 inverters, 23 tracker controllers and 4 weather stations which all communicate via Modbus/TCP. Ignition captured the data from the inverters to provide the user with a visual representation of the power flow.

The 23 solar tracking systems maintain alignment towards the sun. A real-time automation controller (RTAC) from SEL serves as the main power plant interface. Ignition utilizes DNP3 communications to access power quality, real and reactive power and metrics from the RTAC.

This system was deployed remotely over a six-month period.



IMMEDIATE RESULTS

The functionality and flexibility of Ignition's reporting module "powered" reports for certifying the system with Electric Reliability Council of Texas (ERCOT) using data from the Ignition Tag Historian.

Ignition enabled an optimized maintenance and cleaning schedule based upon real-time power production trends as well as recent rainfall.

In addition to monitoring power-related data, the system monitors the health of the data sources and quickly is able to diagnose and label any issues.