



SCADA AND SYSTEMS INTEGRATION

Ulteig offers a core set of Supervisory Control and Data Acquisition (SCADA) and Networking design services to owner/operators who need a reliable communication network capable of providing standardized information monitoring and centralized control and data storage.

These services can be mapped out as part of an upfront collaborative effort or completed once a project has been finalized. Our experts work with you to deliver a customized solution that meets your specific needs.

- » *RTU programming*
- » *HMI programming*
- » *RTU replacement design*
- » *Instrumentation Specification*
- » *Transformer monitoring*
- » *Custom Logic Development*
- » *SCADA Integration Support*

Already have SCADA but need to make updates, or add functionality? Ulteig will evaluate your existing system to determine if any of the following upgrades would help enhance your renewable investment:

DATA HISTORIAN INTEGRATION

Access to historical data allows you to review events leading up to faults and major system events, track equipment and site conditions over time versus what your vendors promised, and perform load forecasting analysis and other reporting.

The first step in gathering historic system data involves working with Ulteig to identify which data points from your Remote Terminal Unit (RTU) need to be archived. From there, we'll configure your RTU so data gets transmitted from these targeted points back to the historian. Our vigorous testing process then verifies if these points are archiving properly and being scaled appropriately.

Upon completion of this work, you'll have a fully-integrated information system containing centralized time-series and event-based data that you can use to optimize facility operations and use for all your reporting needs.

Not sure how to spec the hardware, software and sizing needed to meet your integration requirements? Ulteig has got you covered.

EFFECTIVE ALARM MANAGEMENT

An effective SCADA system should be configured to deploy text or email alerts whenever a significant event takes place. There is a lot of value in this, as adequate warning is key to swift resolution.

One should approach implementation of an alarm system with careful thought and consideration. It is important to define what events should (or should not) warrant notification. Not setting an alarm could mean missing a critical opportunity to address a potentially serious problem. Conversely, you may get inundated or desensitized by nuisance alarms if you decide to monitor every aspect of your operation or assign the same priority value to every alert.

Ulteig works closely with wind project owner/operators to determine what system conditions should exist to trigger an alarm. We then use the system's existing RTAC functionality to add a new program to the RTU. After some coding and application of desired escalation logic, your customized alarm system is programmed and ready for use.

OPC SETUPS TO MAXIMIZE WIND FARM VISIBILITY

OPC is a protocol used for large amounts of data that surpass traditional protocol capabilities. It is instrumental in the collection and analysis of historical process data and recommended for wind facilities since there are often 100-200 data points per turbine. Upgrading to OPC will provide you with more robust performance information. Ulteig will work with you to extract OPC-only data from your existing Wind turbine vendor's system.

DISPLAY CONFIGURATION

Ulteig is available for your display development needs. We have experience across many different vendor's HMI software.

SYNCHROPHASORS

Synchrophasors are microsecond time-stamped phasor data that can be used to determine the events leading up to a fault. The Electric Reliability Council of Texas (ERCOT) is leading the charge in requiring submission of synchrophasor data feeds, and the North American Electric Reliability Corporation (NERC) is likely to follow suit.

Ulteig can implement this with an additional piece of SEL hardware or install on an existing substation computer through the use of SEL software. Ulteig will install and configure this for you, setup an IRIG B connection or NTP (Network time protocol) to sync the time with your existing GPS clock, evaluate the data storage requirements, and then show you how to read these files before sending them off to ERCOT. All that is left to do is email a file.

SUBSTATION NETWORK

Need to expand your substation network to new devices? Existing network causing you CIP or operational headaches? Putting in a new substation?

From basic network configuration to SSL VPN's for remote access, Ulteig has your network needs covered.

ABOUT ULTEIG

Ulteig Engineers, Inc. delivers comprehensive design engineering, program management and technical and field services that strengthen infrastructure vital to everyday life. Ulteig's footprint spans the nation and provides its expertise in multiple Lifeline Sectors®, including power (both electric utilities and renewables), transportation, water and oil and gas, to a wide range of public and private clients. To learn more about Ulteig, visit www.ulteig.com.



Locations:
Fargo • St. Paul • Denver • Cedar Rapids
Bismarck • Detroit Lakes • Sioux Falls • Williston

We listen. We solve.® 888.858.3441 | ulteig.com

Brian Sharpe
Account Executive - Renewables
720.873.5802
brian.sharpe@ulteig.com

