Case Study

Control Solution

Power Plant Data Collection

Power Transmission Monitoring

- ☑ Data Collection
- ☑ Power Transmission Monitoring
- ☑ Municipal / Utilities

City of Sabetha, KS

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The data logging and report generation functions really ***reduce the time and effort required*** *to facilitate report generation requirements. Bachelor Controls was able to create a report format that* ***made the conversion from a totally manual application to the automated function simple and seamless with very little training requirements.***

Randy Campbell
Electrical Production Supervisor
City of Sabetha

BCi UTILIWARE™

BCi POWER VIEW™

BCi

Bachelor Controls, Inc.

Systems Integration for Manufacturing

Project Summary

The City of Sabetha, Kansas, generates its own power. The City needed a method to track and monitor power transmission by the plant. Bachelor Controls, Inc. (BCI) developed a power plant data collection system to view operating conditions at remote locations. Using this data, the City could pinpoint power disruption causes, accurately measure excess power available to sell, and maintain a consistent Power Factor.

Objectives / Requirements

The City required a collection system that would monitor and compile information on each plant and relay it to a central PC. Information to be captured and displayed included:

- Three-Phase Current
- Frequency
- Kilovars
- Kilowatt Hours
- Capture Alarm Input
- Three-Phase Voltage
- Kilowatt
- KVA
- Power Factor Information

Results / Benefits

Using *BCI POWER VIEW™,* BCI developed a power transmission monitoring and data collection system to view operating conditions at remote locations. The system monitors real-time Load Balance and the Power Factor over the Feeder Loops, plus logs the data for future analysis. The data may then be analyzed by the owner/operator to determine changes to the line required to reduce line loss and maintain a consistent Power Factor.

The system is expandable to integrate and monitor the total amount of fuel usage while generating operating points associated with each individual generator (such as bearing temperatures, oil pressure and temperatures, etc.)

In addition, accurate Kilowatt generation and time usage data enables the City to quickly calculate Nitrous Oxide (NOx) exhaust emissions for maintaining compliance with the State Department of Health and Environment.

BCI programmers customized the system to be monitored through redundant PCs for extra data security and reliability. In the event that one should fail, the second will continue to collect the data.

From the ability to monitor the feeder lines independently — both real-time and historically logged data — ***we are able to complete line maintenance more efficiently and cost effectively.*** *The data allows me to* ***detect loads at any time of the day*** *so that we can implement the proper over-current protection equipment, appropriately size conductors, etc.*

Troy Lay
Electrical Distribution Supervisor
City of Sabetha