Case Study

PLC-Based Energy Monitoring

Company Profile

This customer delivers sustainable, high-quality, low-cost potable water supply to the current and future communities of its region through water resource development, water purification process innovation, source water protection, and effective asset management.

Challenge

Our customer wanted to be able to monitor power consumption in their pumping facilities. Traditional power meters require a place to be panel mounted, and their communications capabilities are limited to serial point-to-point connections.

It was not cost-effective to modify existing switchgear panels to accommodate panel meters and then to manage the serial data connections into their PLC to gather the needed data.

Solution

Because the water district was using Emerson's RX3i Profinet-enabled PLC, Rawson/Industrial Controls introduced them to the Power Monitoring Module, which has direct connection to CTs and PTs and coprocessing capability to calculate voltages, currents, power use, and more. The Power Monitoring Module can be mounted on the CEP single-slot Profinet I/O platform, allowing the measurement to take place at each breaker location without the need to wire instrumentation back to the PLC cabinet.

Results

With multiple energy monitoring and control solutions, Rawson/Industrial Controls helped the customer select the most cost-effective solution for monitoring their power consumption. In this case, the installed base of Emerson PLCs controlling the pumping operation made for easy integration of the Emerson PLC-based power monitoring equipment.