



## Dycor Technology Application Whitepaper

# Remote Data Monitoring, Logging and Transmission

## Background

Dycor Technologies specializes in creating custom Data Acquisition and Industrial Control solutions using a combination of proprietary technology and off-the-shelf components. Applications for our products are deeply varied, and this whitepaper presents a functional example of a solution that can be developed and tailored for your specific needs.

## Abstract

Operators of remote equipment installations require an effective mechanism for monitoring conditions, and potentially controlling remote mechanical assets. Dycor specializes in the development of remote stations tasked with monitoring, logging, and actively controlling valves, switches, and meters while recording data, and wirelessly transmitting results to operators geographically distant from the panels. This capability can drive savings and improve accountability for these remote locations.

## Problem

There are a large number of remote Oil and Gas facilities for valve management, testing and access. Many of these locations are typically only accessible by air, or by off-highway-vehicles. In cases of emergent failure, or system testing – manpower must reach out to these locations to operate relief valves, check gauges or switch on or off functions. Remote ‘Automated Relief’ valves may require monitoring – and again, these require visits when operated in remote locations.

## Application Design

Dycor remote management and logging systems use a combination of Data logging, Fully programmable PID Controllers, and wireless communications. These systems are powered by complete solar power capabilities, integrated to the towers.

- Complete data logging
- Multiple I/O channel access to monitor, control, and process data
- Electrical and Mechanical control integration with numerous Oil and Gas systems (particularly Stream-Flo valve systems.)
- Communicating over IP with monitoring and reporting systems to provide real time status at the operators place of business.
- Custom built solutions can include the ability to alter control parameters by loading unique control parameters for different equipment – one build, multiple implementation configurations.

## Dycor Custom Solution

Dycor Panel solutions are complete with Solar Power, Data logging, control systems, and wireless communication solutions – providing an on-site solution with the ability to perform basic management for security, safety, and auditing of Oil and Gas systems.

Data can be collected from on site sensors, and logged in-situ. PID Controls can switch power, activate servos, or valve actuators, and data can be transmitted wirelessly to a receiver station providing complete monitoring in remote locations.

Dycor works directly with field engineers to design these solutions and test with equivalent hardware to ensure that operation on site is turn-key.

- DataTaker Logging equipment
- SmartVue for Control applications
- Freewave Radio Support for Remote Communications
- Solar Power Panels, Controllers, and Batteries Remote Power

With the equipment in place, crews no longer need to make long, expensive trips to these sites as frequently, saving money on travel, accommodation, fuel, and most importantly – time.

Dycor remote monitoring and control stations reduce manpower requirements, activate instantly when required, and provide an audit chain of sensor data to verify operations. Custom configured for your site, and monitoring needs.

## Contacting Dycor

It doesn't matter if you're looking for help on a simple configuration issue with your data logger, or require custom developed, complex software programming for data acquisition systems to manage the data coming back from several hundred sensors – Dycor's technical team are here to get you up and running quickly and effectively.

Give us a call or **contact us on-line** at [www.dycor.com](http://www.dycor.com) requesting more information on how we can help you design and implement a data acquisition system that works for you.