



Case Study

Introduction to Calpine Corporation

Calpine Corporation is America's largest generator of electricity from natural gas and geothermal resources. Their fleet of 83 power plants in operation or under construction represents nearly 27,000 megawatts of generation capacity. Serving customers in 18 states and Canada, they specialize in developing, constructing, owning and operating natural gas-fired and renewable geothermal power plants that use advanced technologies to generate power in a low-carbon and environmentally responsible manner.

The Problem

Calpine's project objective was to implement a web-based electronic logbook application for recording plant status, shift activities, open issues to facilitate the shift handover. The system and data needed to be readily accessible to all Calpine plants in a format common to all users. It needed to be accessible from their widely distributed facilities and at the same time visible from a corporate level.

The challenge was to find one single system that could serve a high user load from facilities in different regions and with different fuel-types.

The Objectives

- Implement a web-based electronic logbook system
- Consistent communications / data across operators and sites
- Better recording of daily activities, issues and plant status
- A single user interface for Operators
- Improved Shift Handover

The Benefits

- Improved flow of information
- Streamlined management reports
- Increased awareness of power reliability problems
- Personnel can transfer to other sites with ease due to the consistent user interface
- Controlled and secure environment to manage logbook procedures
- Improved regulatory compliance
- Reduced corporate risk



How j5 International Provided the Solution

The j5 system meets these needs and is replacing all current methods of recording such information at Calpine. The j5 Operations Logbook, j5 Shift Handover and j5 Standing Orders applications are all in operation. Calpine has also been provided with custom configuration including the ability for each site to add its own predefined message templates.

j5 has provided a central installation that is flexible enough to accommodate Calpine's diverse facilities. Operators see only the data from their facility, but the data is visible at a corporate level for trending and analysis. This provides Calpine Corporation an overview of their corporate data set and allows analysis particularly in regard to their corporate NERC compliance.

Benefits of j5

The project has resulted in the establishment of a common methodology for recording plant activities, issues and status in a single data repository and this has unlocked many benefits:

- Management reporting has been streamlined
- There is an improved flow of information to users
- The transfer of information at shift handover is clear and automated
- Awareness of power reliability problems that need to be addressed has increased
- Transfers of personnel between plants have been aided
- A controlled, secure environment to manage logbook procedures has been established across the Calpine fleet, eliminating disparate logbook solutions
- Compliance with logbook policies and procedures on a common software platform has reduced corporate risk



"It has become an essential tool. Logbook entries from twelve remote sites can now be easily reviewed first thing each morning via the Emailed Daily Log Report. Old school operators were initially sceptical but quickly learned how to use the program. The program is used by 100% of the employees, many of which had no computer skills prior to Calpine. Previous paper logbook entries were lacking and management oversight of the log entries was used mainly when there was an incident. The program is used to support plant administrative activities such as GADs, corporate event reports and used to monitor daily work activities. One of the other major benefits of the program is the Operational Order Feature. Managers now have the ability to issue night orders, standing orders and new procedures and then have the ability to see that their direct report received and acknowledged. It makes the employees more accountable for their actions and is just a good way to communicate."

Calpine Plant Manager



Contact j5 International for more information:

www.j5int.com

sales@j5int.com