# La Porte Independent School District

## Automated Logic Corporation-United Environmental Services

2006 Energy Savings Surpass 2005! (see Energy Update)

## School District Upgrades Building Automation, Cuts Energy Costs with M-Power® and WebCTRL®

### The Challenge

- Capture, monitor and assess energy usage data to identify savings opportunities
- Develop and implement energy conservation measures to reduce operating costs without major changes to existing systems
- Deliver maximum return on investment while updating existing control system
- Improve day-to-day, system-wide operations

### The Players

The La Porte Independent School District (LPISD) serves nearly 8,000 students in Harris County, Texas, part of the Houston metropolitan area. The district includes 11 campuses: six elementary schools; one school for sixth graders; two junior high schools; one high school; and an alternative school. A total of 1,052 personnel support school operations.

The district has used Automated Logic systems since 1984. In early 2005, Mike Clausen, LPISD's director of facilities and construction, contracted Automated Logic-UES to upgrade the district's building automation system to WebCTRL® and to develop new energy conservation measures as well.

"The project was unique in that it didn't require a lot of new equipment," said Don McCorquodale, CEM, Automated Logic-UES facilities performance analyst. "We were able to achieve our goals by upgrading the system with WebCTRL and UES's M-Power® software. These two applications allowed us to capture and assess district data, identify the biggest energy users and implement conservation measures that cut costs by more than $115,000 over 2004 - all within a seven-month period."

### Energy Update:

**District's Savings Rate Accelerates in Second Year**

*La Porte's energy "report card" looked even better in 2006! Using strategies comparable to 2005 and with no additional capital investment, the district's savings rate surpassed the levels set in 2005. Despite energy rate increases in 2006, M-Power enabled the La Porte ISD to successfully sustain its energy savings initiative.*

*(Savings calculated from 2004 base year.)*


*Mike Clausen, district director of facilities and construction, believes that WebCTRL is helping meet the schools' needs and taxpayers' concerns.*

### The Solution

Contracted to install the systems and monitor energy consumption, Automated Logic-UES used WebCTRL's reporting capabilities to capture data from each of the district's schools. The information was extracted by M-Power, exported to a central database and sorted into categories including raw kilowatt, kilowatt per square foot, cost per square foot and cost per student. Data from both WebCTRL and the Electric Reliability Council of Texas established a baseline for measuring savings and pinpointing no-cost and low-cost conservation measures that would immediately impact energy costs. In addition, WebCTRL's building management functions enabled Automated Logic-UES to define occupancy schedules, adjust setpoints and control other parameters affecting utility expenses.

"The new applications were essential for analysis and implementation," McCorquodale remarked.

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"WebCTRL and M-Power provided a comparative analysis between 2004 and 2005. Using actual billing data from the revenue meter is persuasive to a group like a school board," McCorquodale continued. "It enabled us to show that the return on investment took less than three months." The accelerated ROI was achieved even with significantly more cooling degree days during May-June 2005 as compared to 2004.

LPISD's Clausen thinks WebCTRL is also making it much easier to meet the real-world comfort demands of a very busy school system and cited an example.

"A couple of months ago, the school board changed its regular meeting date," Clausen said. "When I arrived, the air wasn't running because the building hadn't been scheduled for use. I logged onto WebCTRL right from the meeting room and turned on the air. Nobody even noticed there was a problem."

WebCTRL has also enabled the district to address potential problems more easily. The food services operation, for example, is now using the system's alarm feature to monitor freezers at each of the schools. Before the upgrade, personnel had to physically check the units at each location.

"It's a lot more convenient," said Clausen. "And it's helping us meet our duty to the taxpayers by giving us a way to reduce energy costs as much as possible."

### Project Summary

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|---|---|
| Savings: | $115,000+ in 2005 (compared to 2004) |
| Location: | City of La Porte, Harris County, Texas |
| Project Type: | Retrofit |
| Building Size: | 11 campuses |
| Building Usage: | Schools and administrative offices |
| Objectives: | Reduce natural gas and electricity consumption |
| Design Considerations: | Enhance capabilities for monitoring, trending and alarming; create mechanism for capturing and analyzing usage data |
| Major Decision Drivers: | Compatibility with existing Automated Logic systems; implement conservation measures without major hardware-replacement expense |
| Installation Date: | May 2005 |

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