

Controlling Energy Costs Across 900 Stores

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Since 1984, Michaels has provided crafters of all ages with broad assortments of arts and crafts materials, educational in-store events and a shopping experience that inspires customers to complete an array of artistic, leisure and home accents projects from start to finish. Michaels offers a huge array of arts, crafts, framing, floral, wall décor, and seasonal merchandise and stocks its stores with approximately 37,000 items per store.

An aggressive national expansion program helped Michaels grow its store base from 16 stores in 1984 to more than 500 stores by 2005. In a span of 25 years, the retailer grew its store base to 1,018 locations and now operates two specialty stores including Aaron

Brothers and Artistree manufacturing facility. Today, Michaels is the largest arts and crafts specialty retailer in North America.

Since 1996, Michaels has been focused on a series of IT projects including the roll out of point-of-sale systems chain-wide to record item-level sales and standardized merchandise planograms to enhance merchandise presentation. The retailer also has eliminated non-core merchandise and has driven down costs through the centralization of functions.

In addition to these IT projects, back in 2004, Michaels wanted to gain better control and visibility into what was happening at retail locations regarding energy use, customer comfort, store operating hours and equipment performance.

“We had a laundry list of symptoms which we felt were driving up our energy and maintenance expenses,” says Rob McClay, vice president of store development and construction. “Some of the worst of these problems includes inconsistent temperature set points, “setbacks” and schedules, simultaneous heating and cooling in the same space due to HVAC equipment issues and poor system settings.”

McClay identifies some of the biggest challenges affecting Michaels at the time:

- No insight into key asset and site data.
- No means of ensuring lights are off and temperatures are reset when stores are closed.
- No means of averting unnecessary HVAC and lighting service calls through remote diagnosis of issues.
- No means of ensuring the service work was actually conducted.

“All of these issues led to excessive electricity and natural gas usage, which was compounded by continually rising utility rates,” says McClay. “We felt that energy should be a controllable expense, but we needed an infrastructure and reporting system to manage it.”

In order to drive down energy costs and carbon emissions, Michaels deployed an energy management solution at more than 900 locations. The retailer chose Site-Command Energy Management System (EMS) from Site Controls in early 2006.

Site-Command Energy Management System lowers energy consumption and maintenance costs through an on-site EMS unit which monitors and controls Heating Ventilation and Air Conditioning (HVAC) systems, interior and exterior lighting, store signage, refrigerators, trash compactors, solar panels and wind power. In addition, enterprise-wide issue reporting and asset intelligence are provided through a hosted data center. Besides lowering costs, Site-Command also helps ensure corporate standards for temperature and lighting are consistently maintained across the chain.

Michaels also worked with Site Controls to establish and track Key Performance Indicators (KPIs) including metrics such as the top 10 energy consuming sites on a kWh/sq. ft. basis, HVAC equipment performance, schedule and set point compliance, and connectivity trends.

At the time of deployment, Michaels initially realized energy reductions of 17 percent through schedule and set point compliance. By utilizing the platform's above-site visibility to identify and remedy HVAC and lighting equipment issues, Michaels has seen energy usage drop by more than 25 percent at stores equipped with Site-Command.

Besides lowering energy costs, Michaels has lowered electricity usage by 137 million kilowatt hours annually and has reduced CO2 emissions by approximately 192 million pounds.

"We are extremely pleased with the results we've seen from Site Controls in controlling our store-level energy expenses," says McClay. "Their enterprise tools help ensure we maintain and increase our savings over time. Most importantly, they serve as a true partner on our energy management journey."

The Site-Command system also features Intelligent Load Management capabilities which allows Michaels to participate in utility-sponsored Demand Response programs to reduce electricity usage during peak periods.

"In addition to increased energy efficiency day in and day out, the Site Command system allows us to participate in utility-sponsored Demand Response programs to reduce electricity usage during peak periods," says McClay. "Site Controls automatically manages electrical loads during critical grid situations, allowing us to implement load reductions while absolutely protecting the consumer shopping experience. We not only display good corporate social responsibility during grid emergencies, but we also generate revenue through incentive payments we receive from utilities."

According to McClay, Michaels is looking to expand the use of this system in several areas including:

- Business Intelligence extensions. Michaels is looking to have Site Controls remotely monitor the capacity and operation of the cardboard baler. This could save hundreds of dollars per site in hauling fees by only scheduling a pickup when necessary.
- Renewable energy (solar, wind) and energy storage (thermal, battery). As Michaels explores options for on-site renewable energy and storage, it will integrate the monitoring and operation of those devices into the Site Command platform.
- Smart grid initiatives. Michaels will expand upon its Demand Response program to take advantage of new opportunities such as real-time pricing integration and responsive load management integration into supply agreements.