

# More effective control for sustainable savings

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With nearly 900,000 locations, chain retail stores are among the largest commercial consumers of electrical power in the US. Spiraling energy costs and slow revenue growth are placing intense profit pressure on these retailers. Chain operators need a proven solution that automatically and systematically reduces energy consumption without impacting the customer experience.

Siemens' Site Controls™ Energy Management System (EMS) is a sophisticated, yet easy to use, energy and facilities management solution that helps companies face these pressures – and keeps them prepared for future opportunities. The Site Controls solution utilizes the latest hardware, cloud-based software technologies, and open architecture standards to enable real-time business intelligence, site comfort, energy management, and equipment diagnostics.

With a relatively small capital investment, Site Controls significantly reduces energy costs and helps improve shopper comfort through monitoring and controlling of Heating, Ventilation, and Air Conditioning (HVAC) systems, lighting, signage, refrigeration, submetering, and more. It's an integrated approach that has been proven effective in large chain Fortune 500 retailers, health clubs, restaurants, and branch banks throughout North America – some projects have delivered sufficient energy savings to recover installation costs in as little as 24 months.

# Sophisticated cloud platform and reliable on-site monitoring

Our industry-leading Siemens Site Controls<sup>™</sup> Enterprise Portal brings all of the gathered enterprise and site analytics information together for complete command and control across your entire portfolio of facilities. This intuitive, yet sophisticated, platform provides operational dashboards, drill-down views, tailored energy reporting, and anywhere accessibility from smartphones, tablets, and laptops.

While equipment failure and downtime are not an option, proper maintenance of HVAC systems and other energy consuming devices requires careful planning and forward thinking. The Enterprise Portal takes the time and resources out of this process by automatically determining the greatest opportunities for savings and shedding light on the biggest risks.

Data collected from each site is analyzed extensively, highlighting possible issues (termed 'exceptions') and pointing the way to in-depth diagnosis of problems, much of which can be done remotely, without requiring a service call. Then, prioritized views are generated, empowering you with the knowledge you need to rapidly and effectively resolve true equipment problems or site issues at every one of your facilities.

With Siemens expertise and a cloud-hosted platform, your company can lower IT and administration costs, access continuous innovation through seamless Site Controls software upgrades, and optimize and manage data across your enterprise.

Industry-leading, mobile-friendly portals Our industry-leading Site Controls Enterprise Portal continuously monitors data from all sites to identify exceptions, from big equipment, such as HVACs and generators, to small, like sensors. Our mobile-friendly solution, Site Portal, allows you to share limited site-level need-to-know information with those responding to open work orders for a single site.



Enterprise Portal Dashboard



Site Portal Condition Summary

### **Continual Improvement: Enterprise Continues to Be More Efficient**

### Enterprise Average Energy Intensity (kWh/Sq Ft)

### Average Usage & Cost: 12,500 Square Foot Store



 

 150,000
 123,207
 109,069
 94,726
 92,782

 BASELINE (NON EMS)
 2015
 2016
 2017
 2018

 Kerage Electric Spend
 \$11,998
 \$10,420
 \$10,206

 BASELINE (NON EMS)
 2015
 2016
 2017
 2018

 BASELINE (NON EMS)
 \$13,553
 \$11,998
 \$10,420
 \$10,206

 BASELINE (NON EMS)
 2015
 2016
 2017
 2018

 EMASELINE (NON EMS)
 (EMS)
 (EMS)
 (EMS)

### **Continual improvement and efficiency**

A major advantage of Site Controls is its ability to deliver savings long-term while other energy management solutions may show only short-term gains. By combining technology with continuous monitoring and analytics expertise you can realize year-over-year improvements well after initial deployment.

Most any energy management solution will show significant gains in the first year. That's when the most common inefficiencies are identified and addressed. In subsequent years new efficiencies are harder to find and initial savings can diminish due to on-site overrides and adjustments or undetected sensor failures. And while staff may have access to more energy usage data, they may not have the ability to effectively manage that data usefully. The chart above shows results from a Site Controls retail customer for the four years following implementation. Average energy intensity, usage and costs all continue to decline each and every year.

Site Controls is able to achieve these results through proactive monitoring and analysis and implementation of the right KPIs and alarms to ensure gains aren't lost. With Site Controls, expert analysis is able to identify faults to be address and new opportunities for savings. Meanwhile, true equipment problems can be rapidly identified and resolved before they become a drag on efficiency or savings.

### KPIs that drive performance

As part of the Site Controls solution, we work with you to define KPIs that gauge performance and keep you on track to meet your facility and energy goals. Most customers have multiple KPIs, each measuring a different facet of performance, which are tracked and reviewed with your Siemens team on a regular basis.



# Siemens Site Controls proactive management

As an industry leader and developer of advanced technology, with over 15 years of experience in 1,000s of sites across North America, Siemens has developed best practices for the successful installation, implementation, and ongoing optimization of energy management systems for multi-site retail chains.



Timeframes are average estimates. Actual timeframes will depend on customer adoption rate.

### Key facts about ALDI's deployment of the Siemens Site Controls™ EMS



## Compelling benefits of enterprise energy management

**Energy Savings** – Reduce your energy spend by establishing standard setpoints on all HVAC units and ensuring lights turn on and off at scheduled times.

**Repair & Maintenance (R&M) Savings** – The net effect of EMS is a significant reduction in the frequency of dispatches, with pre- and post-service call visibility increasing the effectiveness of the remaining repair visits that are truly necessary.

**Proactive Maintenance** – Prevent facility downtime and emergency contractor repair bills with proactive building analytics that predict the life expectancy and mechanical issues of HVAC equipment in all of your facilities. **Operational Efficiency** – Cost-effectively and efficiently manage more facilities without adding significant resources.

**Maintenance Verification** – Confirm that the maintenance contract or repair work you paid for was performed as promised.

**Reporting & Stakeholder Transparency** – Demonstrate a reduction in greenhouse gas emissions and operating costs using reporting capabilities tailored to the needs of stakeholders.





# The right partner helps deliver a fast ROI and continual year-over-year savings.

As an industry leader and developer of advanced technology, we believe that energy management is a proactive process, not a one-time project. That's why after the installation, we offer flexible support options that are tailored to meet your business model, whether you have a dedicated in-house staff or a field of third-party vendors.

## An integrated energy management solution

Unlike traditional EMS products, Site Controls offers an integrated, comprehensive solution, consisting of on-site hardware, implementation services, a cloud-hosted Data Center and dedicated Client Services to ensure energy and maintenance savings are sustained and expanded over time.

### Above-site visibility and control

Siemens offers the ability to effectively manage multiple sites with minimal administrative overhead. As a cloud-hosted solution, the Site Controls Data Center provides sophisticated analytics, real-time KPIs and operational dashboards without the IT and administrative costs of on-premise computing.

Lighting requirements for LEED<sup>®</sup>, Title 24, or other regulatory bodies can also be met by utilizing the advanced energy reporting, operational dashboards, and comprehensive site analytics that the cloud-based Site Controls<sup>™</sup> Enterprise Portal generates.

### Consistency across the enterprise

Monitor and control: By maintaining your corporate setpoints, the Site Controls platform ensures energy savings, customer comfort, and a consistent customer experience across your enterprise.



Resources	Legacy System (Alarm "Push" Model)	SIEMENS Site Controls Web
Internal Help Desk	5 – 10 FTEs	1–2 FTEs
On-site Vendor Support	1 FTE	NONE REQUIRED
After Hours Desk	3 – 4 FTEs	INCLUDED
IT Support	1 FTE	HOSTED SOLUTION
<b>Client Service</b> s – Assistance in setting strategic objectives to achieve your energy goals	2 – 3 FTEs	INCLUDED

Extended Services	SIEMENS Site Controls Web
Managed Services – Proactive service for additional support managing your energy savings	OPTIONAL INCREMENTAL SERVICE
Professional Services – Proactive service to directly manage your assets	OPTIONAL INCREMENTAL SERVICE

# Remote HVAC and maintenance diagnostics

Standardizing setpoints, eliminating system overrides, scheduling (occupancy), comfort, and maintenance via identification of failed mechanics, we monitor information and analytics to use energy smartly and maintain equipment proactively. This allows internal or outsourced maintenance coordinators to diagnose and reset/resolve HVAC and lighting remotely avoiding costly service calls. It also enables verification of contractor repair in real time.

### **Continuous commissioning**

Pro-active management helps maintain optimal equipment performance over time, effectively providing a continuous commissioning capability to ensure systems perform to original specifications.

### An open and secure architecture

As a platform, Site Controls is both open and secure. It is interoperable with programs that access our API (Microsoft Excel, for example). And, while it does not integrate directly with databases for security reasons, it exports data in common formats, such as CSV, that can be pulled into a database or spreadsheet. The end result: you can confidently share important data across your enterprise without adding costly software or new security concerns.

# Extensible platform monitors virtually any on-site device

The Site Controls platform integrates with a variety of equipment, from air quality sensors to hot water heaters to rooftop solar energy. The platform is designed to be "future-proof" enabling you to manage the buildings of today – and of the future.



### Total Energy Management is a new way of thinking

In addition to a powerful EMS system, a partnership with Siemens ensures successful implementation that can drive energy savings, provides a quick payback on investment, and continues to provide incremental gains throughout the life of the system. Our end-to-end energy management expertise and Total Energy Management approach can help you implement all of your energy initiatives: from procuring energy at a competitive price, to managing for better efficiency, to storing and generating energy on-site for greater business resiliency.

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