

Saving Time and Money, ecobee EMS Thermostats Breathe New Life into Church's Antiquated Heating and Cooling System

EXECUTIVE SUMMARY

This case study describes the installation of 32 ecobee EMS thermostats in an occupied 100,000sq/ft church in Springfield, Missouri in December 2011. The recently renovated facility is open 7 days a week, and hosts 25-30 events weekly in approximately 40 spaces throughout the facility.

PROJECT OVERVIEW

In 1978, the High Street Baptist Church moved into a new 100,000sq/ft building in Springfield, Missouri. The immense facility boasts over 40 spaces utilized for a variety of activities including Sunday service, bible study, community group meetings, business networking events, weddings, funerals, children's programs and more. Drawing over 2,000 people each week, the High Street Baptist Church is a forward-thinking organization that aims to attract a broad community by providing an assortment of services for people of all ages.

Over the past few years, the facility has undergone a complete redesign with extensive renovations taking place in communal areas to provide a more modern, welcoming space—but the rejuvenation went even deeper than that. The Church wanted to offer services that would appeal to multiple generations and bring together a more diverse audience. To accommodate their "Contemporary" Sunday service, they invested in the installation of a state-of-the-art lighting and sound system to accommodate live musical performances, and equipped the space with a specialized media room and audio/video production studio.

Outfitted with strictly Mac products including iPads and large flat-screen monitors, the facility's inefficient and degenerating 1980's DOS-based energy management system was no longer in-line with the churches' progressive philosophy. Worse, the unreliable and oftentimes inaccurate system caused the Facilities Manager an enormous amount of wasted time, and a large number of unnecessary service calls cost the church tens of thousands of dollars per year. Prior to each event, the Facilities Manager would climb up on the roof to examine each unit to ensure the equipment was operating properly, and often times it was not. He found it quicker and easier to do this than spend hours attempting to troubleshoot using their antiquated system. With 25-30 unique events occurring at the church each week, the Facilities Manager spent over 5 hours programming the thermostats on a weekly basis. Budgetary restraints prevented the church from being able to afford an estimated \$130,000 for a new Building Automation System—so they began researching alternatives.

THE SOLUTION

To mirror the Churches' progressive mindset, they searched for a solution that would be compatible with their complex Mac-based computer network and provide remote accessibility for making program changes and conducting diagnostics. After months of research, the Church had narrowed their search to ecobee and another competitive product.

Crescent Parts & Equipment, an ecobee Distributor located in Springfield Missouri, recommended the ecobee EMS thermostat and provided the team with the product information they needed. In addition, ecobee's Regional Sales Manager visited the facility in person and demonstrated the products' capabilities, explained how it would meet their

needs, answered their questions, and addressed their concerns.

Thrilled with the product, the online Portal and the service they received from ecobee, the Church decided to replace their old equipment and outfit the 100,000 square foot space with 32 ecobee EMS thermostats installed by their Contractor, Temperature Control Co.

"I got the sense that ecobee was forward-thinking—like we are—but they still understood the value of personal service. You don't find that with many technology companies these days. Anytime I contacted ecobee's Technical Support I got a real, knowledgeable person on the phone that was able to answer my questions within minutes. I knew there was going to be service after the sale—we just felt more comfortable with ecobee," said Chris Talburt, Facilities Manager at High Street Baptist Church. He continued, "Even after the units had been installed, Jay (ecobee's Regional Sales Manager) showed up to see how the installation went and he gave us pointers on how to make things run more efficiently, and maximize our energy savings. That's when I knew we had made the right choice."

THE INSTALLATION

"Once we got the wiring from the old system figured out, the installation of the ecobee EMS thermostats was a breeze. Simple plug-and-play," said Talburt. The installation of all 32 EMS thermostats was completed in December 2011, just in time to accommodate the numerous events the Church would host over the Christmas holidays.

Chris was able to set up the Web Portal on his own with ease. He promptly organized the Churches' thermostats into groups (such as chapels, children's areas, and sanctuaries) so that he could control several thermostats at once, saving hours of time each week.

PROJECT OUTCOME

After installing the ecobee EMS units, the team at the High Street Baptist Church have realized tremendous benefits, improving both their quality of life and their bottom line.

REMOTE TROUBLESHOOTING

Prior to installing the ecobee EMS thermostats, several service calls were required each month to identify and fix problems with both the HVAC equipment and the energy management system. Through the ecobee Web Portal, the Churches' Facilities Manager now receives Alerts on his iPad or computer when there is an issue with the equipment. He can then view the system reports from the comfort of his own home and remotely troubleshoot to determine if a service call is necessary. This feature alone has saved the Church hundreds of dollars in unnecessary service calls over the past two months. "ecobee's EMS thermostats seemed to breathe new life into our outdated HVAC equipment and our units seem to behave a lot better," said Talburt.

SMART RECOVERY

When programming an event with their old system, such as a wedding or Sunday morning service, the Churches' Facilities Manager always allowed 1-2 hours for the space to heat up or cool down to reach the desired temperature. By viewing his program reports in the ecobee Web Portal, he noticed the system was only turning on approximately 10-15 minutes prior to the scheduled event to attain the desired temperature. As a result, ecobee's Smart Recovery feature is estimated to reduce the HVAC runtime by anywhere from 25 to 75%. This will equate to huge energy and cost savings.

RANDOM START FEATURE

With ecobee's random start feature, the Church expects to save thousands of dollars during Missouri's traditionally hot summers. They will now have the ability to flatten their peak use by staggering runtimes to avoid peak energy rates.

QUALITY OF LIFE

Taking less than one minute to program each event, the Facilities Manager now spends approximately 25 minutes a week (as opposed to 5+ hours with the old system) scheduling the facility's weekly events. Each day he is able to wake-up and check for any alerts on his iPad over breakfast with his family, instead of having to get to the church hours before a scheduled event and climb up on the roof to ensure the equipment is working properly. In the past, the Facilities Manager spent many Sunday mornings behind the scenes tinkering with the equipment and troubleshooting problems through trial and error. Now he is able to attend the Sunday morning services with his family, and can monitor the equipment with his iPad if necessary. "If I'm on the roof or in the back fiddling with the equipment—that takes away from time I could spend enjoying the service with my family. My wife is ecobee's biggest fan!" Talburt explained.

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