

Let's Save Energy



School Energy Managers Project



September 2014

Mega Savings for reducing Megawatts Energy Conservation and Efficiency pay off

When it comes to reporting, KSBA-SEMP is assisting districts' focus on **megawatt** reduction, not kilowatt reduction. This means that schools are impacting the construction of future power plants.

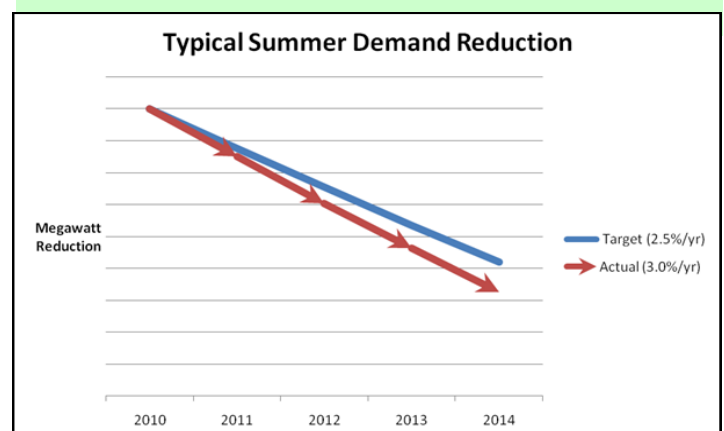
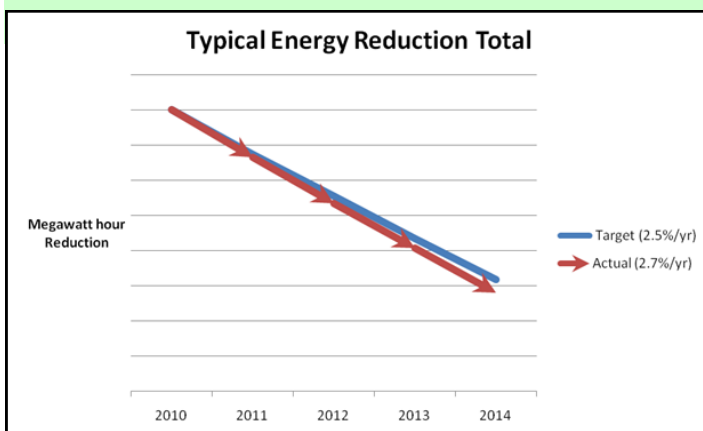
Kentucky has now made a significant mark in how school districts work with energy providers. This change was brought about when SEMP facilitated the Kentucky Public Service Commission's approval in April 2013 of a first-of-its-kind, demand-side management program of Louisville Gas & Electric and Kentucky Utilities, providing \$1.45 million to support energy managers in their service territories for FY2014 and FY2015. This has created a precedent for other utility companies to follow in their demand-side management initiatives. In fact, American Electric Power-Kentucky Power has also signed an agreement to have a similar program in part of their service territory that began July 2014.

The goal of the Energy Management Program for Schools is to support school districts in utilizing energy more wisely with the overall ob-

jective for each school district to reduce energy consumption. The LG&E/KU program sets a specific target of an annual usage reduction of 2.5 percent and achievement of energy utilization indices ("EUI") of 50 or lower. The participation goal for districts served by LG&E or KU was to retain or employ an energy manager to help districts comply with KRS 160.325, which required them to focus on rising energy costs.

In SEMP's first annual report provided recently to LGE/KU, 59 of the possible 85 districts that have either LG&E or KU K-12 school buildings participated in this program. The results achieved in reducing demand and energy are in line with the 2.5 percent annual reduction targets. This has meant not only a consumption reduction, but also a demand reduction, which is critical for our electric energy provider partners.

Shown in the graphs below are typical energy reductions for the participating LG&E/KU districts from FY10 through FY14. The 2.5 percent target reductions were met or bettered.



Districts participating in the LG&E/KU grant achieved greater reduction than the target!

How to capture the savings

Many Kentucky school districts continue to look for ways to save money through energy management. Because of those efforts, there is a clear picture of the projects that offer the greatest savings potential. The list of projects can be categorized by:

- Lighting retrofits
- HVAC controls
- District leadership
- Culture change
 - ◇ Communication throughout the system
 - ◇ Energy contests
 - ◇ Energy teams
- Performance contracting
- New construction
- Renovation

In the list above, the highest leverage items have been HVAC controls and lighting. Some districts have made the investment to upgrade their control systems, as well as to ensure qualified operators. Updated technology has allowed districts to easily take advantage of setting back to "unoccupied" mode for snow days and to use precise event scheduling to temporarily override setbacks for special events.

Many districts have also lowered their overall energy index by lighting changes. Over the last few years, the cost of lighting technology has lowered. LED lights, which were nearly unaffordable a few years ago, are now widely used.



Kentucky Green Ribbon Schools Tour recognizes three pillars

Three Fayette County schools and two in Scott County recently hosted a delegation of state and federal officials who came to see firsthand how those schools are becoming more "green" through energy efficiency and sustainability best practices.

Rosa Parks Elementary School, Wellington Elementary School and Locust Trace Agriscience Farm in Fayette County and Georgetown Middle School and Northern Elementary School in Scott County were chosen for the U.S. Department of Education's "Healthy Schools, High-Achievement Students" tour earlier this month.

All of the schools are recipients of the national Green Ribbon School designation for reducing the environmental impact and costs of building operations; improving the health and wellness of schools, students and staff; and providing environmental education among many disciplines, especially incorporating STEM, civic skills and green career pathways.

Joining in the tour were members of the KSBA-SEMP team, Education Commissioner Terry Holliday, several state legislators and community leaders in both districts.

Partners in the best-practices tour included KSBA, KDE, the Kentucky Environmental Education Council, U.S. Department of Education, Kentucky National

Energy Education Development Project, Kentucky U.S. Green Building Council, Kentucky Association of Manufacturers, the U.S. Green Ribbon Schools Program and the U.S. Department of Agriculture.



Photo above: Energy manager Jim McClanahan describes the impact of updated technology in the Scott County building automation control system. From left are: State Representative Jim DeCesare (R- Bowling Green), McClanahan (seated), U. S. Department of Agriculture representative Steve Hortin and SEMP Director Ron Willhite.