

Let's Save Energy



School Energy Managers Project



August 2014

"READY FOR SCHOOL?"



The question everyone is asking this time of year

After a refreshing summer break, there is always a buzz as we get ready for school! Although the summer of 2014 was short, there is still great anticipation for the first day of school, and the first football game of the season.

Many students prepare for the first day with new clothes, shoes and supplies, which for Kentucky's 677,000 students will result in estimated spending over \$291 million*. In the same way, the 43,000 teachers in Kentucky prepare for the first day of school by looking for new ways to improve instructional methods, as well as improving the classroom itself. It is estimated each teacher will spend approximately \$500 throughout the year to help their students become "proficient and prepared for success," which would mean an estimated spending throughout the year over \$21 million.

School districts go to great lengths to prepare for the first day of school, as well as working throughout the year to ensure the best learning environment. In FY 2014, KDE approved 238 facility projects totaling \$430 million, in addition to maintenance and summer cleaning projects.

These estimated figures show that significant effort is given to ensure that school districts perform their best. Since *KRS 160.325*, school districts must now give attention to also performing their best when it comes to energy. There may be costs associated with this however there can also be significant dollar savings when implemented properly.

Energy performance is measured by the Energy Utilization Index, also known as the **EUI**. The

better performing districts are those with a *lower number*. The average district EUI has actually reduced from **64** to **58** since 2010, when energy management efforts expanded. This reduction, along with the full program of energy management efforts have resulted in over **\$36 million** in cumulative avoided costs through FY 2013.

This summer many districts eliminated future wasteful spending by implementing a variety of energy projects. Some of those projects included:

- Daviess County – removed a four-pipe boiler/chiller systems in a high school AND an elementary school and replaced it with a variable refrigerant valve system (VRV) with Direct Digital Controls (DDC) – **SUBSTANTIAL** savings will be recognized.
- Anderson County – turned-off seven walk-in freezers and "summerized" them, only keeping two running for the summer. Based on information from the Energy Information Administration (EIA), savings are estimated at \$4,000.
- Shelby County - Completed a building envelope project to reduce air infiltration resulting in expected annual savings of \$12,000 to \$16,000.

Picture at right shows the installation of foam insulation to the building bridge, sealing a gap between the exterior wall and roof areas. Reducing air infiltration problems can reduce the risk of water pipes freezing during cold temperatures like experienced



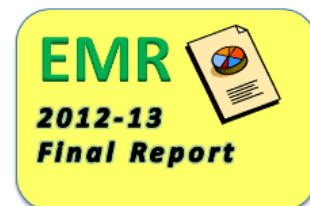
*Based on Nation Retail Foundation research at nrf.com

EMR Superintendent Packets . . . IN THE MAIL!

The required Energy Management Report "Superintendent Packets" were mailed on August 1. Completed forms are to be submitted by October 1. KRS 160.325 led to boards of education adopting an Energy Management Policy (05.23) that required the superintendent/designee to develop an energy management plan (EMP) for Board approval and to oversee the implementation and maintenance of the plan. In addition, **the superintendent is required to annually report program results for the prior fiscal year** by October 1

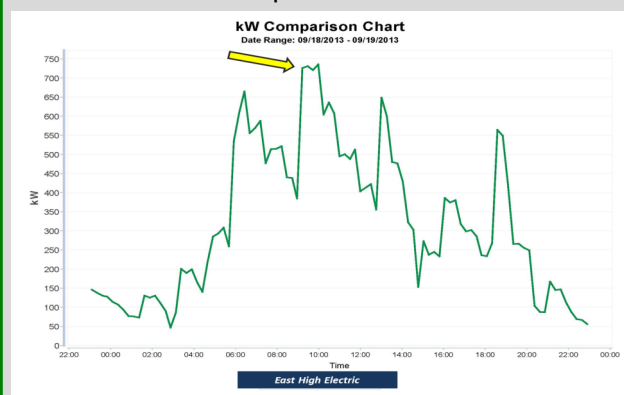
of each year. Compilation of this information is performed by KSBA's School Energy Manager Project Staff and provided to the Kentucky General Assembly's Legislative Research Committee and the Energy and Environment Cabinet by December 1. Last year's report is available on KSBA's website at

<http://www.ksba.org/EnergyManagementReport.aspx>



Be alert for September peak!

Analyzing actual data for consumption (kWh) and demand (kW) has shown that most school buildings use the greatest amount of electricity at any one time, during the month of September. That is called the "Peak Usage." Depending on the utility rate the building is charged, that peak usage could establish a minimum charge for the next twelve months. *WHAT YOU NEED TO KNOW . . .* try to keep your electric usage, especially during the middle of the day, at the lowest **comfortable** level possible. You don't want to "set a new peak!"



Graph at left shows the peak day Load Profile for a high school, which was near noon. This profile shows the amount of electricity being used throughout a 24-hour period and can identify where there is an opportunity for reduction.

US Department of Education's Green Ribbon Schools Tour plans stop in KY

The US Department of Education's Green Ribbon Schools Tour will be stopping in Kentucky on August 20 and 21! You are invited to tour one or all of the five participating Green Ribbon Schools in Central Kentucky, no RSVP is required. A "Listening Session" is open to the public on August 20 from 2:30 - 5:00 at Big Ass Solutions at 2348 Innovation Drive, Lexington, Kentucky. The theme of this panel and community discussion is "Healthy Schools, High Achieving Students."

Register for the Listening Session by emailing Michelle.Shane@ky.gov This two day event is the result of a partnership between the Ken-

tucky Environmental Education Council, the US Department of Education, Kentucky Department of Education, Kentucky School Boards Association, Kentucky National Energy Education Development Project, Kentucky US Green Building Council, Kentucky Association of Manufacturers, Big Ass Solutions, and honorees of the US Green Ribbon Schools Program. Tours will be in two Scott County schools, Northern Elementary and Georgetown Middle, and three Fayette County schools, Rosa Parks Elementary, Wellington Elementary, and Locust Trace AgriScience Farm.

For more information about KSBA's School Energy Managers Project contact martha.casher@ksba.org

