



Kentucky Energy Efficiency Program for Schools



KEEPS Status Report

January 1, 2010 – December 31, 2010



KPPC

Kentucky's Resource Center for
Environmental Sustainability



Kentucky Energy Efficiency Program for Schools

What is KEEPS?

KEEPS helps Kentucky school districts reduce energy consumption and lower operating expenses. The program is administered by KPPC – Kentucky Pollution Prevention Center – at the University of Louisville J.B. Speed School of Engineering. KEEPS provides a valuable package of tools, training, coaching and expertise that helps school districts establish and implement an effective energy management program.

Kentucky Revised Statute 160.325 was signed into law on April 24, 2008, and required all boards of education (174 public school districts) to enroll in KEEPS by January 1, 2010. Boards of education are required to report data on energy usage, costs and energy saving measures to KPPC through KEEPS.

This Status Report highlights how KEEPS uses American Recovery and Reinvestment Act (ARRA) funds to provide its services to Kentucky's school districts. It also showcases how Kentucky's school districts have used KEEPS resources to incorporate best energy management practices into their day-to-day operations and highlights savings in energy consumption and cost reduction across the Commonwealth.

“Enrolling in the KEEPS program is an excellent way for our school districts to gain energy cost savings while also protecting the environment. These energy savings help schools save valuable funds and teach children the importance of energy conservation.”

Governor Steve Beshear

KEEPS is designed to help Kentucky reach its goal of meeting 18 percent of the state's energy needs from efficiency improvements by the year 2025.



Commitment to Continual Improvement

For a school district to realize the fiscal and environmental benefits of a sustainable energy management program, it first must understand the process of how to achieve that success.

Making the commitment to cost reduction through best energy management practices is a key first step in achieving sustainable, short-term and long-term success of a school district's energy management program. Before Kentucky school districts could make that commitment, they first had to understand what the commitment involved.

In 2010, KEEPS focused most of its efforts on raising awareness about the program, why the program exists, what school districts must do to realize success in the program and, most importantly, the financial and environmental benefits of participating in the program.

To validate the school districts' commitment to continual improvement and set the course for ongoing success, KEEPS provided resources that helped the districts:

- implement school board approved energy policies
- develop district-wide, cross-functional energy teams to spearhead energy management program efforts
- implement effective communication plans to raise awareness about energy-saving initiatives
- understand and utilize resources provided by KEEPS and its partner organizations
- become ENERGY STAR® Partners

“KEEPS delivers tremendous resources to our district through expertise and coordination of activities as we focus on energy savings in our district. Our partnership with KEEPS is very important to this district. Every dollar reduced in energy costs translates into teaching positions, materials, programs and other services saved that directly impact teaching and learning.”

Dr. Jerry Ralston
Superintendent
Barren County Schools

All 174 of Kentucky's school districts have enrolled in KEEPS

In 2010, of all 174 Kentucky school districts:

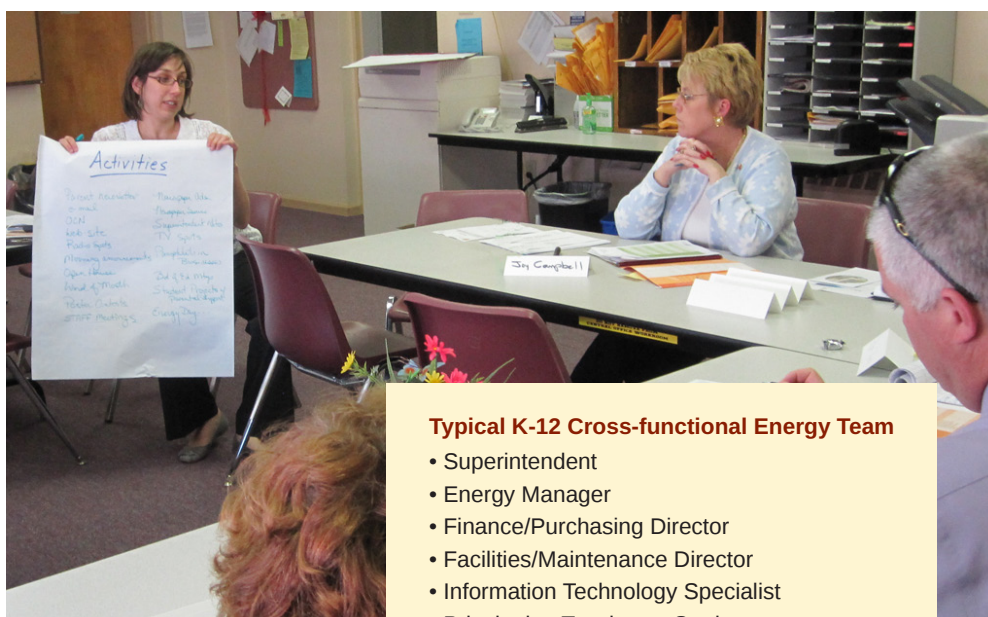
- 173** - established school board approved energy policies to garner leadership buy-in
- 153** - were actively involved in KEEPS and participated in district leadership meetings
- 142** - had energy management initiatives spearheaded by 48 energy managers
- 98** - established cross-functional energy teams comprised of representatives from different areas of operation and met regularly
- 97** - established baseline and follow-up energy performance tracking standards

Changing Behavior and Taking Ownership

A school district's success in KEEPS depends on how much a district takes ownership of its energy management program. Cross-functional district energy teams, which direct energy management program efforts, encourage the behavioral changes necessary for the program to succeed among all areas of operation within the school district.

Understanding the energy management process is not intuitive, which is why the KEEPS team of 13 regional coordinators, engineers and energy managers maintain frequent and direct contact with district energy teams and energy managers.

In 2010, KEEPS representatives attended 127 district energy team meetings.



Typical K-12 Cross-functional Energy Team

- Superintendent
- Energy Manager
- Finance/Purchasing Director
- Facilities/Maintenance Director
- Information Technology Specialist
- Principals - Teachers - Students
- Food Services Manager
- Curriculum Coordinator

“My KEEPS regional coordinator is very knowledgeable and provides wonderful support for me and my districts. She has attended many of my districts’ meetings to further explain the meaning, process and development of energy management. This is the same for all KEEPS staff that I have encountered. Their expertise and love of the job is priceless.”

Courtney Lewis
Energy Manager, Whitley County and Corbin Independent Schools
Kentucky School Energy Managers Project

Training

KEEPS-sponsored training and partner-sponsored workshops and events provide peer-to-peer networking and mentoring opportunities that allow school districts to share ideas and offer guidance on implementing best energy management practices.

KEEPS 2010 Training Activities

Throughout the Commonwealth, KEEPS hosted or participated in **25** training events, workshops, conferences or other outreach activities in 2010, attracting **581** attendees.

- Kentucky NEED Coordinator Training
- Kentucky School Boards Association Annual Conference
- Kentucky High Performance Schools Workshop
- Bracken County Energy Conservation Night
- Kentucky Green & Healthy Schools Awards Summit
- Kentucky Association of School Business Officials Conference
- KEEPS Reporting and Tracking Webinars (4)
- Energy Matters in Kentucky Schools Workshops (4)
- UofL Campus Sustainability Day
- Kentucky Association of School Superintendents Summer Institute
- KEEPS Utility Bill Analysis Training
- Kentucky School Energy Managers Project Training
- U.S. DOE Meeting for School District Energy Development
- Kentucky 2010 Special Subcommittee on Energy Meeting
- Hart County Public Schools Fall Festivals (2)
- Kentucky School Plant Management Association Roundtable
- Kentucky School Boards Association Winter Symposium
- Governor's Conference on the Environment



“This training (at the KASBO Conference) provided very useful information that can help change the mindset of the staff and students in our school district to hopefully save us some money and provide some long-term benefits.”

Brent Highfil
CFO, Crittenden County Schools
Board Member, Kentucky Association of School Business Officials

Empowering School Districts

KEEPS training, tools and other resources allow Kentucky school districts to create sustainable energy management programs that generate cost savings for the districts year after year.



KEEPS
Energy
Management
Toolkit

In addition to the on-site training that the KEEPS team provides, the KEEPS Training System offers a series of self-guided, web-based training resources ("toolkits") to complement each step of the energy management process.

Toolkits include more than 60 presentations, worksheets and other supplemental materials that are available to download from the KEEPS website, www.kppc.org/KEEPS.

In 2011, KEEPS will provide several training opportunities that focus on how to make the best use of these toolkits. The goal is for district energy teams and energy managers to use these resources to assess and improve their energy performance on a continual basis – and allows the districts to work at their own pace.

Leveraging ENERGY STAR®

ENERGY STAR® is a joint program of the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE) that promotes cost savings through the use of energy-saving products and practices. KPPC uses the ENERGY STAR seven-step Guidelines for Energy Management as the structure for delivering KEEPS services to Kentucky school districts.

The KEEPS Training System encourages the use of ENERGY STAR resources such as Portfolio Manager and Target Finder and the purchase of ENERGY STAR products for improved efficiency. The system includes a dedicated presentation that illustrates the benefits of becoming an ENERGY STAR Partner. Districts must become an ENERGY STAR Partner to be eligible for KEEPS awards.



K-12 ENERGY STAR Partners in Kentucky – **68**

58 became ENERGY STAR Partners in 2010

K-12 ENERGY STAR-labeled facilities in Kentucky – **87**

In Fiscal Year 2010 Kentucky's school districts purchased:

516 ENERGY STAR-labeled exit signs

484 ENERGY STAR-labeled HVAC units

954 ENERGY STAR-labeled office equipment (printers, copiers, etc.)

KEEPS Energy Efficiency On-Site Assessments

In calendar year 2010, KEEPS conducted **34** on-site assessments which accounted for a total of **2,712,209** square feet assessed. KEEPS engineers and energy managers identified the following projected annual savings:

Electrical usage savings **18,421 MMBtu***

Natural gas savings **31,930 MMBtu**

Fuel oil savings **262 MMBtu**

A total of \$634,973 in potential annual cost savings were identified through 34 KEEPS on-site assessments.

*MMBtu is one million Btus (British thermal units)



KEEPS Utility Bill Analysis

An essential element of achieving results is assessing energy performance. KEEPS also helps district energy managers conduct a utility bill analysis to examine rate structure, compare rates and look for billing errors.

K-12 utility bill analysis results for calendar year 2010

Number of districts that conducted a utility bill analysis – **40**

Estimated cost or value of billing errors identified – **\$218,467**

Actual dollar amount from refunds, reimbursement or credit from utility service providers as a result of the utility bill analysis – **\$200,389**

*“The money that pays those energy bills comes out of the same fund that pays the teachers. I’d rather have that money going toward education than toward utilities.”**

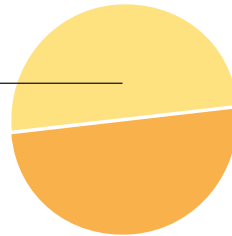
Jon Nipple
Energy Manager, Grant County Schools
Kentucky School Energy Managers Project

**Published on NKY.com – 8/8/2010*

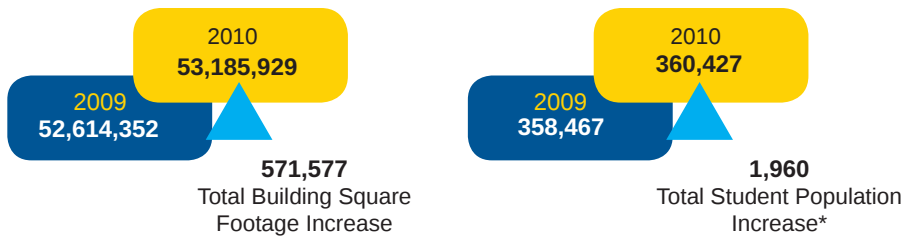
Achieving Results

Of Kentucky's 174 school districts, 128 submitted Energy Management Reports (EMRs) for fiscal year 2010 to fulfill their requirement to report data on energy usage, costs and energy saving measures to KPPC through KEEPS. The EMRs benchmark and track Kentucky school districts' energy performance and cost savings over the life of the program. Ninety-seven districts established consistent performance tracking standards by submitting EMRs for both fiscal years 2009 and 2010.

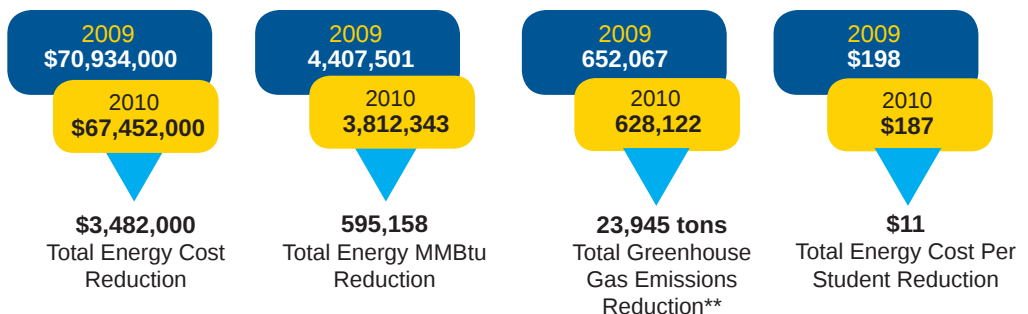
97 of Kentucky's 174 school districts (**56%**) submitted Energy Management Reports for both fiscal years 2009 and 2010.



For those **97 districts**, building square footage and student population **increased**.



The **97 districts** actually **lowered** total energy usage and **decreased** the average annual cost per student, even as facility size and student population grew.



* Student population numbers provided by Superintendent's Annual Attendance Report (SAAR)

**Result provided using KY DEDI air emissions calculator

Recognizing Achievement

Because so many Kentucky school districts have embraced the KEEPS program and are taking active steps toward realizing cost reductions through improved energy performance, KEEPS has developed an awards program that recognizes school districts' progress through the seven-step energy management process. This three-level awards program requires school districts to utilize KEEPS, ENERGY STAR and partner organization resources to achieve measurable results and submit documentation of those results to KEEPS for award consideration. The first awards will be issued in early 2011.

The KEEPS awards program consists of:

- **Stewardship Award** – districts that complete Step One of the energy management process
- **Champion Award** – districts that complete Steps Two, Three and Four
- **Leadership Award** – districts that complete all seven steps

Reaching Out Through KEEPS Resources

Communication is key to the success of the KEEPS program. Reaching out with information and resources and encouraging feedback and information exchange among partners and members are essential elements of KEEPS' communications efforts.

The *KEEPS Moving Forward* e-newsletter is distributed monthly and reaches school district energy teams, partner organizations, state agencies, businesses and other organizations. The newsletter includes news and notes about the program, tips for best energy management practices, information about training events sponsored by KEEPS, ENERGY STAR and partner organizations and special features that highlight school district energy program successes. *KEEPS Moving Forward* is distributed to **703 subscribers** and reaches all regions of the Commonwealth. In 2010, KEEPS created **119** new informational materials and distributed more than **2,700** printed materials, reaching every school district in the Commonwealth.

"KEEPS made no secret at the (September 2010 Special Subcommittee on Energy) meeting that it needs engagement, participation and support of the state lawmakers in 2012 ... to continue to lower energy costs and energy usage. ... (KEEPS is) a good idea, and one I hope the General Assembly will continue to support."

KY State Representative Brent Yonts
Legislative Log
Week of October 10, 2010



www.kppc.org/KEEPS

The KEEPS website plays a vital communications role by providing the latest information, tools, training and links to ENERGY STAR and other online resources. In 2010, KEEPS added 19 web pages to its site with new tools and information, and it will continue to expand in 2011.



In 2010, KEEPS established its place in the social networking arena with the KEEPS Facebook page, www.facebook.com/KyKEEPS. The page currently has 149 Facebook “likes” or fans and includes news and notes about school district energy program achievements and updates on KEEPS and partner organization initiatives.

KEEPS in the News

KEEPS has been referenced or featured in 44 articles published in magazines, newspapers and newsletters throughout Kentucky.

A press conference was held on February 8, 2010, at Roby Elementary School in Bullitt County (photo at right) for the Governor’s announcement of American Recovery and Reinvestment Act funding to expand the KEEPS program.



“The KEEPS website and toolkits are user-friendly and have been extremely effective in helping create a sustainable energy management program for my school districts. Their toolkits have been vital to much of the success I have attained thus far.”

Chris Curtis
Energy Manager, Green River Regional Educational Cooperative
Kentucky School Energy Managers Project

Leveraging ARRA Funds

As a pilot program, which began in 2005, KEEPS provided its services to Kentucky public school districts, colleges and universities that applied to participate. With the cost savings realized through improved energy performance in such pilot sites as Bullitt and Kenton County school districts and Western Kentucky University, KEEPS demonstrated itself as a proven model for successful energy management.

In 2010, American Recovery and Reinvestment Act (ARRA) funds expanded KEEPS to provide its services to all 174 Kentucky public school districts. For Kentucky's economy, this funding has not only created more jobs though the expansion of KEEPS, it also has and will continue to induce more jobs within school districts as they consider long-term, capital-intensive energy management strategies.

For Kentucky's educational system, ARRA funding for KEEPS provides Kentucky's teachers and students with a cleaner, more positive and productive learning environment.

Total ARRA funding for KEEPS in 2010	\$1,773,516
Jobs created from ARRA funds (KPPC)	19
Jobs retained from ARRA funds (KPPC)	3

KEEPS Moving Forward in 2011

Raising awareness about KEEPS to Kentucky's school districts was the key focus of 2010. As this Status Report shows, in just one year, Kentucky school districts have made incredible strides toward making best energy management practices part of their day-to-day operations. In 2011, KEEPS will provide more training, assessments and resources that will help school districts put their energy management plans into action, with the goal of realizing positive short-term and long-term results. Goals for KEEPS in 2011 include:

- Drive school districts' progress through the seven-step energy management process
- Train school district energy managers and energy teams on how to conduct utility bill analyses and energy efficiency assessments of facilities
- Distribute awards to districts that achieve success throughout the program
- Work with partner organizations to deliver efficient and effective services



KEEPS is funded by the American Recovery and Reinvestment Act through the combined efforts of the Kentucky Department for Energy Development and Independence, the U.S. Department of Energy and KPPC.

KEEPS is administered by...



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KPPC is Kentucky's primary resource to help businesses, industries and other organizations develop environmentally sustainable, cost-saving solutions for improved efficiency. Based at the University of Louisville J.B. Speed School of Engineering, KPPC provides technical information and assistance that is free, confidential and non-regulatory.



In accordance with Kentucky Revised Statute 160.35, this report has been prepared for the Kentucky Legislative Research Commission and the Kentucky Department for Energy Development and Independence as a summary of activities of KEEPS for calendar year 2010.

Client participation and energy performance metrics presented in this report are based on information from baseline and follow-up KEEPS Energy Management Reports submitted to KPPC by Kentucky school districts as of November 30, 2010. Energy performance metrics are also gathered from energy efficiency assessments conducted by KEEPS engineers and energy managers.



Partners

Department for Energy Development and Independence As part of the Kentucky Energy and Environment Cabinet, DEDI's mission is to improve the quality and security of life for all Kentuckians by creating efficient, sustainable energy solutions and strategies; by protecting the environment; and by creating a base for strong economic growth.

Kentucky Chapter – National Energy Education Development Project – NEED promotes an energy-conscious and educated society by creating effective networks of students, educators, business, government and community leaders to design and deliver objective, multi-sided energy education programs.

Kentucky Green & Healthy Schools – KGHS is a state-wide, web-based and student-centered program that empowers students and staff to move their school toward becoming safer, healthier and more environmentally sustainable.

Kentucky School Boards Association – KSBA serves school boards and districts in such areas as governmental relations, board member and staff training, insurance and risk management, legal, policy, publications and community relations and is the administrator for the Kentucky School Energy Managers Project.

Kentucky School Plant Management Association – KSPMA promotes and enhances the educational process through proper management practices related to school operations and maintenance.