



DEDI's Energy In Education Collaborative

By: Brooke Smith

When the Department for Energy Development and Independence (DEDI) received Recovery Act funds, a priority for the department was to enhance energy education in Kentucky school districts. The funds, distributed by the US Department of Energy, were meant to not only stimulate the economy, but to augment the efforts of environmental educators in their mission to instill energy efficiency and conservation into the minds of the upcoming generations, who will be the driving contributors to the new 'green' economy.

Energy efficiency and conservation programs for K-12 schools are also very timely. The phrase 'times are tough' is not just a cliché for school districts across the Commonwealth. The fact that budgets have been dramatically slashed at all levels for K-12 schools has driven many administrators to look for solutions that have been hiding under their noses for years: energy reduction. As districts look for sustainable solutions to reducing their operational costs, school administrators are quickly learning that high performance, energy-efficient school buildings are the way to go.

In the past five years school districts across the Commonwealth have come to recognize the importance that reduced energy consumption has to their bottom lines. At the time of this publication, Kentucky is home to 105 ENERGY STAR labeled schools. As energy costs continue to increase, it is now paramount that school administrators take heed of the energy cost savings realized by school districts following ENERGY STAR standards so that they, too, may cut their district's energy costs, reduce their carbon emissions and put those cost-savings back into their school systems for teachers and curriculum.

These facts led DEDI to pull together seasoned partner organizations to enhance both K-12 facilities energy management and boost energy education curriculum. By creating a collaborative of top Kentucky energy management and education professionals,

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Kentucky Environmental Education Council

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DEDI initiated the Energy in Education Collaborative.

The Energy in Education Collaborative is a partnership involving four programs and two projects. The program elements of the collaborative are designed to be a comprehensive, holistic approach, focusing on energy and sustainability issues in the design, construction and operation of energy-efficient sustainable schools as well as addressing the educational/curriculum opportunities presented by this focus. The following are descriptions of what each partner is contributing to the Energy in Education Collaborative.

School Energy Managers Project

The School Energy Managers Project (SEMP) is administered by the Kentucky School Boards Association. Under this program, SEMP uses Recovery Act funding to pay a portion of the salary (75 percent the first year and 50 percent the second year) for energy managers at the local district level. SEMP is funding 36 energy managers serving some 131 school districts and, for 4 districts that already had full-time energy managers, SEMP helps fund energy curriculum coordinators. A number of other districts also already have energy managers on staff. The school energy managers are the front-line managers responsible for coordinating energy efficiency and sustainability programs in the district. "I am so excited that the energy managers-'the boots on the ground'-at a time of severe financial challenges for districts are producing significant monetary benefits during the early stages of this project," said Ron Willhite, who leads the Kentucky School Energy Managers Project.

Kentucky Energy Efficiency Program for Schools

Kentucky Energy Efficiency Program for Schools (KEEPS) is administered by the Kentucky Pollution Prevention Center at the University of Louisville J.B. Speed School of Engineering. KEEPS provides technical consulting services to Kentucky's 174 public school districts as well as supporting the SEMP managers, conducts energy assessments of schools, produces training workshops for school energy managers and assists school energy managers to establish energy teams and implement a structured energy management program using the proven ENERGY STAR model. "The Energy in Education Collaborative encourages engagement throughout our Commonwealth's school districts, including curriculum-based environmental and energy-based education," said Fred Byrd, KEEPS Program Manager. "This way a true environment for culture change exists. Together, we are creating a new generation of citizens who are engaged, educated and compassionate about these issues."

KY National Energy Education Development Project

The Kentucky National Energy Education Development (Kentucky NEED) Project is part of a national non-profit organization that focuses on energy curriculum development. KY NEED provides energy workshops for teachers, grade-appropriate curriculum materials and kits for energy activities in the classroom. NEED has a program to assist schools with the formation of student-based energy teams that look at how energy is used in the school. NEED also works with DEDI to produce an annual High Performance School Buildings Workshop, focused on the best practices for design of new, highly energy efficiency schools. The workshop target audience is architects, engineers and school officials, particularly those officials who are from districts that plan to build or renovate within the coming years.

Kentucky Green and Healthy Schools Program

The Kentucky Green and Healthy Schools (KGHS) program is administered by the Kentucky Environmental Education Council in the Education and Workforce Development Cabinet. This inquiry-based program uses the entire school grounds as a learning laboratory for students. Students conduct inventories in nine different areas, including energy, solid waste and water. They then develop and implement improvement projects in each area, receiving awards and recognition as certain milestones are reached. "The Energy in Education Collaborative funding provided by the Department for Energy Development and Independence has provided a tremendous opportunity for the Ken

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**Kentucky is now home
to more than 100
ENERGY STAR schools!**



Kentucky Environmental Education Council and its flagship program, Kentucky Green and Healthy Schools,” said Elizabeth Schmitz, Executive Director of Kentucky Environmental Education Council. “Interest in the program has grown exponentially, with a 196 percent increase in enrollment in 2011, as compared to 2010 enrollment figures. We have given out \$19,325 in grant funds to 28 schools in 15 counties. Students and teachers at these schools have used the ARRA funds to implement 38 energy-saving improvement projects at their schools, while learning about energy and ways to conserve it. In addition, the network provided through the Energy in Education Collaborative has been invaluable in improving communication among the many partners involved, and I am confident that the Collaborative will find ways to work together after April of 2012, when the ARRA funds are gone.”

Net-Zero Energy Schools

These two projects in education involve two newly constructed schools that were occupied in the fall of 2010 – Richardsville Elementary School (Warren County Public Schools) and Turkey Foot Middle School (Kenton County School District). Each of these schools was designed to be very energy efficient. In fact, the schools are projected to use only about one fourth as much energy as the typical school that just meets Kentucky’s building energy codes.



DEDI has awarded Richardsville Elementary \$1.3 million and Turkey Foot Middle \$2 million to pay a portion of the cost to install sufficient photo-voltaic solar capacity to make each of the schools a net-zero energy school – among the first in the nation to achieve such a feat.

An additional unfunded program partner is the Kentucky School Plant Management Association (KSPMA). KSPMA provides energy efficiency-oriented training and workshops to school facilities personnel and fosters the exchange of “best practice” information among peers.

The Energy in Education Collaborative is making an immediate impact because it provides schools a total package that addresses all of their energy-related needs. The collaborative provides school districts both on-the-ground staff devoted to energy management, training and technical consulting expertise and education curriculum and student involvement in energy management that enhances the learning process for all involved.

Energy in Education Collaborative Partners:

School Energy Managers Project

<http://www.ksba.org/energy-management>

800-372-2962

Kentucky National Energy Education Development Project (KY NEED)

www.need.org

859-578-0312

Kentucky Energy Efficiency Program for Schools (KEEPS)

<https://louisville.edu/kppc/keeps>

502-852-0965

Kentucky Green & Healthy Schools Program

<http://greenschools.ky.gov/>

502-564-5937

Education and Workforce Development Cabinet Secretary Joseph U. Meyer gives the special address at the joint 2011 Kentucky NEED and Kentucky Green and Healthy Schools Awards Luncheon in Frankfort on May 18, 2011.