Environmental Sustainability – Economic Growth

Making a Difference in Kentucky’s Environment & Economy

Industrial Recycling Resources
Making a Difference Through Strategic Partnerships

Energy Savings in Kentucky’s Public Schools
Advancing Renewable Energy & Energy Efficiency
Making a Difference Through Training, Outreach & Communications

The Year in Review
KPPC Budget
Board of Directors
KPPC Staff

From the Executive Director and Board Chairman

Each year as we begin to develop KPPC’s Annual Report, we first ask ourselves, “Are we making a difference for our clients and in the quality of life in the Commonwealth?” With that question in mind, it is our pleasure to present KPPC’s 2008 – 2009 Annual Report. This Annual Report illustrates how KPPC works toward a greater measure of success and establishes lasting partnerships with Kentucky businesses, government, environmental organizations and communities. Through its technical assistance services and training and outreach programs, KPPC has had a measurable impact on the state’s environmental and economic performance.

KPPC believes that environmental sustainability means taking a balanced approach of using our natural resources to meet the needs of the present without compromising the ability of future generations to meet their needs. Helping our clients move toward sustainability’s “triple bottom line” means reducing their costs, improving their operations to provide them a competitive advantage in the global marketplace, and improving the well-being of employees and the community.

KPPC focuses on its vision, mission and core competencies to be Kentucky’s best resource for pollution prevention (P2) and energy efficiency (E2) technical services. The Center remains a leader in every aspect of P2 and E2. KPPC delivers technical support and outreach to its clients with exceptional customer service and teamwork. The Center has the tools and the talent to provide more and better services to Kentucky’s businesses, industries and other organizations and maintains the focus that is vital for success.

KPPC is proud to have accomplished so much, but there are still many challenges that lie ahead. Such challenges focus on defining sustainable development within the context of pollution prevention in Kentucky and shifting the potential for sustainable development concepts into reality and success. This Annual Report provides a comprehensive narrative of environmental performance and effectiveness undertaken by KPPC. We are excited about what the future holds for KPPC, and we are determined to remain a leader in the area of pollution prevention and energy efficiency technical assistance, training and applied research.

As Executive Director and Board Chairman, we would like to thank our staff, members of the Board of Directors and our partners whose efforts contribute so much to KPPC’s success. Of course, our thanks go to you as well for your interest and support, and we hope you will enjoy reading about KPPC’s efforts. If you have questions or if you would like to learn more about KPPC’s many programs and initiatives, please contact us or visit our Web site.

Cam Metcalf
Executive Director

Douglas C. Griffin
Board Chairman
Environmental Sustainability – Economic Growth

Environmental sustainability means taking a balanced approach of using our natural resources to meet the needs of the present without compromising the ability of future generations to meet their needs. As Kentucky's only state-mandated pollution prevention technical assistance resource, KPPC provides pollution prevention and energy efficiency assessments, training and outreach to the Commonwealth.

Sustainability Through Source Reduction

According to the U.S. Environmental Protection Agency (EPA), pollution prevention (P2) means “source reduction” – any activity designed to reduce or eliminate the volume or toxicity of a waste stream at its source. P2 also includes increased efficiency in the use of energy, raw materials, water, or other resources, or protection of natural resources by conservation.

KPPC is dedicated to source reduction and environmental sustainability through all of its programs and services and for all media – surface water, ground water, waste and air. KPPC's programs help identify waste at its source by assisting its clients in reducing material usage and creating less waste to process and treat, which in turn helps conserve and protect all of Kentucky's natural resources. Through its technical assistance services and training and outreach programs, KPPC has had a measurable impact on the state’s environmental and economic performance.

KPPC's Service to the Commonwealth

KPPC was established in 1994 at the University of Louisville J.B. Speed School of Engineering to provide technical assistance to business and industrial clients throughout the Commonwealth. The Center serves the Commonwealth with assistance in pollution prevention, energy efficiency and conservation, waste reduction, adapting new technologies, industrial recycling and renewable energy research and innovation.

KPPC’s Pollution Prevention (P2) program provides services that promote, implement and enhance P2 initiatives and help reduce or eliminate waste at its source. By modifying production processes and focusing on proven waste reduction techniques, companies can significantly improve environmental performance and lower costs. A P2 assessment may include an on-site visit to review sources, quantities and costs of hazardous and non-hazardous solid wastes, air emissions and wastewater discharge.

KPPC’s Energy Efficiency (E2) program provides services designed to familiarize clients with concepts of energy efficiency and help them implement and sustain their own E2 policies and practices. E2 technical assessments focus on reducing energy consumption and reducing energy costs. An assessment may include a utility bill evaluation, a usage and needs review and an on-site visit by KPPC engineers.

All assessments are free, confidential and non-regulatory, which means that businesses can be assured that no information gathered in an assessment is reported to any other agency or outside organization without the client’s permission.

Measuring Success – Are We Making a Difference?

For KPPC, the true measure of success is the success of its clients. The Center tracks its clients’ environmental performance improvements, cost-savings and reductions in:

- hazardous and non-hazardous waste generation
- air emissions
- water usage and wastewater discharge
- natural gas consumption
- electricity usage

KPPC also tracks increases in the use of “Green Energy” and the potential for carbon reductions.
Making a Difference in Kentucky’s Environment & Economy

Kentucky, like the rest of the nation, has experienced difficult economic times over the past year. During this economic downturn, it is even more important for businesses and industries to cut costs and become as efficient as possible. KPPC recognizes that organizations must find ways to reduce their operating costs by evaluating production processes. Through its on-site assessments and technical assistance programs, KPPC can help identify waste, excess energy usage, or even new revenue opportunities through recycling and new technologies. These services are available at no cost to Kentucky organizations.

KPPC strives to strike a balance between the need for businesses and industries to be profitable and competitive while at the same time helping them improve their environmental performance. During fiscal year 2008-2009, KPPC’s technical teams made 78 site visits to Kentucky businesses, industries and organizations and completed 764 hours on-site to identify opportunities to help clients improve both their economic and environmental performance and advance sustainability.

In fiscal year 2008-2009, KPPC reached over 2,300 new and returning clients through its technical assistance and outreach efforts.

KPPC’s technical assistance programs identified opportunities to reduce hazardous and non-hazardous material usage, hazardous waste, energy usage, water usage and air emissions. KPPC’s Technology Diffusion Initiative (TDI) program, completed in December 2008, addressed P2 opportunities through unique, hands-on, one-on-one technology deployment and demonstration projects with participating industries.

KPPC’s technical assistance programs also encourage water conservation through process water management (PWM) which helps industries identify opportunities in which P2 technologies can be used to reduce environmental impacts at a profit.

Since its inception in 2006, KPPC’s PWM program has helped Kentucky businesses and industries reduce water usage by more than 2 billion gallons, chemical use and solid waste by 7.5 million pounds and electricity by 5.5 million kWhs. These reductions resulted in more than $4 million in savings.

KPPC calculated the savings in greenhouse gas emissions from recommended annual electricity reductions for its clients.

<table>
<thead>
<tr>
<th>Greenhouse Gas (GHG)</th>
<th>Emissions Reductions (pounds per year)</th>
<th>Electricity Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2 (Carbon Dioxide)</td>
<td>5,791,993</td>
<td>$818,190</td>
</tr>
<tr>
<td>SO2 (Sulfur Dioxide)</td>
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</tr>
<tr>
<td>NOx (Nitrogen Oxide)</td>
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<td>$4,067,475</td>
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</tbody>
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Identifying Opportunities

KPPC’s programs for fiscal year 2008-2009 resulted in positive changes for its clients. KPPC clients have adapted P2 and E2 policies for their organizations, developed teams to address P2 and E2 opportunities, and helped train others in pollution prevention and energy efficiency improvements.

KPPC’s success depends on the success of its clients. Awareness of P2/E2 opportunities and compliance improvements, successful mapping of their processes, and implementation of KPPC recommendations were achieved by clients this fiscal year.

Part of KPPC’s work with clients is to develop ongoing relationships that help them incorporate environmental awareness as part of their company’s philosophy and culture. Changes in an organization’s behavior, reductions in usage and waste generation, coupled with an awareness of P2 and E2 opportunities, result in significant savings and environmental benefits.

In non-hazardous material usage, KPPC identified over five million pounds of reductions per year with potential annual savings of $1,067,285. In hazardous materials usage, 1,017,120 pounds per year with an annual savings of $301,068 were identified. Hazardous waste generation reductions were estimated at 1,080,000 pounds per year with a savings of $41,925 and air emission (CO) reductions at 48,800 pounds per year with an annual savings of $31,695. In solid waste generation, KPPC identified a potential reduction of 798,600 pounds per year with an annual savings of $296,358.

In addition to identifying potential savings, KPPC maintains a Consultants Directory as a resource to assist its clients in improving their environmental performance. The companies listed specialize in consulting services in emergency response, environmental consulting or engineering, laboratory services, regulatory compliance, site remediation, UST management, waste management, pollution prevention and environmental management systems.

Since KPPC began in 1994, it has provided services and training to every county in the Commonwealth. During the 2008-2009 fiscal year, KPPC’s technical assistance and training opportunities reached 82 of Kentucky’s 120 counties—covering every region of the state.

In fiscal year 2008-2009, KPPC identified a total potential savings of $4,067,475 for its clients. These savings could be achieved with a total investment of only $818,190.
Small Investments Can Mean Big Savings

Sometimes a small investment in pollution prevention and energy efficiency can realize significant cost savings and environmental benefits. As an example, one of KPPC’s clients spent $450 to implement a water usage reduction program at its facility and is saving $70,000 annually. Another client company spent $50,000 on technology upgrades and realized full payback in less than one year.

The following opportunities for savings were identified by KPPC technical staff during the fiscal year.

Reduction in Solid Waste Generation – An evaluation of using plastic pallets in place of wood found a savings of 45,000 pounds per year in waste. With an initial investment of $18,000, the annual savings would be $13,717 with payback in 16 months. KPPC recommended trash compaction for one organization that would save them $6,676 per year with an initial investment of $10,005. Payback would be 18 months.

Reduction in Energy Usage (electricity) – Monitoring and/or improving one company’s power factor savings would be $13,717 with payback in 16 months. KPPC recommends installing capacitor banks to save 318 kilowatt hours per year. A $3,720 investment would save $2,293 per year with payback in 19 months.

Reduction in Wastewater – KPPC found that well water usage and sewer discharge metering for one of its clients could save $40,000 gallons of water per year. An investment of $6,000 would realize savings of $8,030 per year with full payback in 9 months.

In 2008, the U.S. Environmental Protection Agency (EPA) awarded KPPC client Fetter Printing Company in Louisville a Special Recognition for Excellence in Program Development Award.

A KPPC assessment team conducted an on-site visit at Fetter evaluating energy systems, processes and equipment. A written report with recommendations for improvements and projects was provided to Fetter’s Facility Supervisor and Program Manager to help them develop a sustainability strategy. Fetter Printing Company serves the printing needs of automotive, industrial and consumer and coatings companies.

The company was recognized by EPA for integrating ENERGY STAR® and its energy management approach into its corporate sustainability strategy. Key achievements in 2008 include: achieving a 16 percent reduction in energy intensity in 2008 across its printing, office and warehouse operations; developing its energy management program based on ENERGY STAR® tools and resources and communicating the value of energy efficiency and ENERGY STAR® to clients, employees and surrounding communities.

Measuring Success

For fiscal year 2008-2009, KPPC identified significant reductions and savings for its clients –

Reduction in water use = 2,104,494,000 gallons per year – That’s enough water to supply Kentucky’s 4 million+ residents with potable water for almost a month, or fill 210,449 full size swimming pools, take 263,061,750 showers or 105,224,700 baths

Reduction in solid waste = 798,600 pounds per year – That’s enough to trash a community of 500 people would throw away in a year

Reduction in natural gas usage = 11,000,000 therms per year – That’s enough to heat 15,700 average midwestern homes for a whole winter

Identifying Opportunities for the Loretto Motherhouse

Joy Jensen, representative from the Loretto Motherhouse, explained the advantages of working with KPPC –

“Our Loretto Motherhouse in Marion County is a large historic complex of a convent, long-term care facility, and other housing units. The Kentucky Pollution Prevention Center helped us look at energy efficiency possibilities and ways to cut our air emissions. KPPC engineers offered several recommendations, some that we can address immediately.

Ms. Jensen outlined some of the steps Loretto Motherhouse is taking to implement KPPC recommendations, saying, “We are developing a comprehensive recycling program, and we are studying a geo-thermal heating and cooling system. To reduce our air emissions we can plant switch grass as a biomass fuel to mix with coal and wood chips. The Kentucky Pollution Prevention Center is a valuable resource to help us in our community efforts to be environmentally responsible and to use renewable sources of energy to decrease greenhouse gases.”

Industrial Recycling Resources

KIME, the Kentucky Industrial Materials Exchange, which KPPC created in 1995, was redesigned in January 2009 to offer industries a more comprehensive, user-friendly online resource. KIME is a free service administered by KPPC to help participants find industrial producers who want to buy, sell, trade or simply recycle their waste materials. The types of materials exchanged through KIME range from chemicals, paints and coatings to construction materials, wood waste and agricultural by-products. The KIME Web site – www.kppc.org/KIME – features an easy to use online database that facilitates exchanges between industrial producers.

From the time the redesigned KIME site first came online through the end of fiscal year 2008-2009, 97 companies registered as exchange members. The Web site had 11,929 users sessions and 35 materials listed. An average of 86 visitors browsed the KIME site each day.

The service is helping bring companies together. A listing on the KIME Web site has generated several inquiries for a Louisville-based company that produces landscape mulch and processes raw material. The large volume of available wood waste could be used for mulch or hog fuel, and the company owner hopes to see an increase in business generated through the KIME service.

Recycling Services Directories

To further help KIME exchange members, KPPC has developed the Recycling Services Directories which lists companies that are recyclers of a particular commodity or assist in some other way with environmentally responsible business practices.

John Simpson, Vice President of SMS Tire Processing in Brodhead, Kentucky, says that a company in Knoxville, Tennessee contacted him about the tire rubber he has available, and he hopes to develop even more business opportunities through his KIME listings.
Making a Difference Through Strategic Partnerships

KPPC maintains partnerships with local, state and national organizations in order to leverage funding and expand the reach and impact of its activities throughout Kentucky. During fiscal year 2008-2009, KPPC participated in the following industrial, local, state and federal network of groups actively involved in pollution prevention and energy efficiency activities.

Bluegrass Partnership for a Green Community
KPPC collaborated with the Bluegrass Partnership for a Green Community to help “green” the upcoming Alltech FEI World Equestrian Games (WEG) to be held at the Kentucky Horse Park in September 2010. KPPC will continue to assist with identifying opportunities related to waste reduction and recycling, environmentally-preferable purchasing and energy efficiency. The partnership includes members from government, public schools and Kentucky colleges and universities.

Drought Mitigation and Response Advisory Council
Cam Moscaff, KPPC Executive Director, was appointed by Governor Steve Beshear to serve on the Drought Mitigation and Response Advisory Council to develop a plan that would take a proactive approach to drought planning and management.

ENERGY STAR® Partnership
ENERGY STAR® is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy which helps consumers and businesses save money and protect the environment through energy efficient products and practices.

Kentucky Energy Efficiency Workgroup
KPPC is a founding member of the Kentucky Energy Efficiency Workgroup. The group is comprised of approximately twenty organizations from across Kentucky. The group’s efforts to-date have included conducting conferences to promote energy efficiency, discussing regulatory changes needed to align rate incentives for all stakeholders, and pursuing changes in utility rates and Integrated Resource Plans to support Demand Side Management and other energy efficiency endeavors.

Kentucky Excellence in Environmental Leadership – KY EXCEL
KPPC is an Advocate Member of KY EXCEL, a voluntary environmental leadership program administered by the Kentucky Division of Compliance Assistance. KPPC also conducts presentations at DCA-sponsored events.

KRG – Kentucky Recycling Interest Group
KPPC helped with the formation of KRG and continues to support the group’s efforts. Facilitated by the Kentucky Division of Waste Management, KRG is a public-private partnership whose primary goal is to reach ‘net zero’ waste output for the Commonwealth. KRG promotes economically-viable, safe, energy-conserving and sustainable recycling and waste management practices. KPPC co-sponsored KRG workshops which were held semi-annually at various locations around the state.

MACED – Mountain Association for Community Economic Development
MACED works to create economic alternatives and serves communities in the eastern Kentucky and Central Appalachia region. KPPC collaborated with MACED to identify synergistic opportunities that support MACED’s Energy Efficient Enterprises project through efforts such as performing joint assessments and conducting workshops.

Partnership for a Green City
The partnership’s goals are to foster conservation, pollution prevention and restoration of ecosystems with both public policy and personal behavior, promote a common agenda for Louisville as a green city, preserve and enhance the quality of life for our citizens and future generations, and widen recognition of the importance of good stewardship of the community’s natural resources. Members include the University of Louisville, Louisville Metro Government and Jefferson County Public Schools. KPPC is represented on the waste management and green building teams.

J.B. Speed School of Engineering co-op students Shawn Crowe (left) and Jon Hughes work with KPPC technical staff. The co-op program develops educational opportunities for UofL students.

Energy Savings in Kentucky’s Public Schools
KPPC’s Kentucky Energy Efficiency Program for Schools (KEEPS) is making a difference in Kentucky’s economy by helping Kentucky school districts save energy and lower their operating costs. KEEPS was funded by the Kentucky Energy and Environment Cabinet through the Department for Energy Development and Independence and administered by KPPC in fiscal year 2008-2009.

Through KEEPS, KPPC offers a valuable package of tools, training, coaching and expertise to help school districts analyze and understand their energy consumption. Regional workshops, webinars, online training modules and resources address everything from light usage and heating/cooling conditions to natural gas usage and best energy management practices.

Through workshops, webinars, on-site visits and web-based resources, KEEPS program services are available to all 175 public school districts in the state of Kentucky.

In fiscal year 2008-2009:
• KEEPS conducted Energy Management Workshops in Georgetown and Cave City Kentucky. Total attendees at the workshops was 255, representing 70 school districts.
• KEEPS conducted two Energy Management Webinars with 30 attendees joining the online training events.
• KEEPS developed and made available an online energy management survey. The survey provided valuable information about the progress and needs of enrolled districts.

Kentucky House Bill 2 Section 16 was signed into law on April 24, 2008 requiring all public school districts to enroll in the KEEPS program by January 1, 2010. During fiscal year 2008-2009, more than a third of Kentucky's school districts did so, well ahead of the January 2010 requirement, and participants are making progress in addressing their energy use issues.

Open enrollment began on November 1, 2008, and sixty-three of Kentucky’s 175 public school districts (36%) had enrolled in the KEEPS program through the end of fiscal year 2008-2009.

KEEPS Seven-Step Energy Management Process
In fiscal year 2008-2009, KEEPS published the final online modules of its Seven-Step Energy Management Process Training on the KEEPS Web site. Based on the ENERGY STAR® Guidelines for Energy Management, the online training modules were designed to help energy managers, facilities personnel and other Energy Team representatives learn the process of energy management. It also helps them educate their school district or institution on how an effective energy management program benefits their organization and the environment. The training modules are available at www.kppc.org/KEEPS.

KEEPS Moving Forward
The KEEPS Moving Forward e-newsletter was created as a resource for energy team members at Kentucky public school districts. The first newsletter was distributed to 293 subscribers in April 2009. Each issue focuses on training and workshop opportunities, tips for improving efficiency, energy-related resources and updates on what KEEPS member districts are doing to further their energy efficiency programs. Kentucky school districts are encouraged to subscribe, or to submit items of interest for the newsletter.

“Through KEEPS, we have been able to save money, increase awareness of energy efficiency practices and align financial incentives with supporting energy efficient programs.”

– Don Short, Superintendent, Harlan Independent Schools

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Advancing Renewable Energy and Energy Efficiency for the Commonwealth of Kentucky

KREC’s Kentucky Renewable Energy Consortium (KREC) is a resource for advancing renewable energy and energy efficiency efforts within the Commonwealth of Kentucky. KREC was established in 2005 by a federal direct appropriation to the University of Louisville and is administered by KPPC. Originally named the Kentucky Rural Energy Consortium, KREC created a new icon and renamed the program the Kentucky Renewable Energy Consortium in fiscal year 2008-2009. The new name more accurately reflects KREC’s activities and goals in all aspects of renewable energy and energy efficiency.

KREC is a clearinghouse and networking group with more than 60 partner organizations and 220 public members. KREC’s goals include outreach and education, demonstration and deployment of new energy efficiency and renewable energy technologies and funding research at Kentucky’s universities.

KREC Activities

As part of its commitment to research, KREC initiated the 2009 Competitive Grants Program. The grants program received a total of 29 final research proposals. Grant award announcements were made in September 2009.

To advance its goal of education and outreach, KREC created REnews, a monthly e-newsletter to keep KREC members informed of renewable energy initiatives and KREC activities and events. The newsletter is sent to more than 220 KREC members each month. KREC also designed and implemented a new Web site with expanded information and resources, including a “renewable energy technology at work” feature.

A Solar Heat Pipe Wall demonstration unit, one of the seven research projects funded by KREC’s initial 2007 grant program, was installed on UofL’s Shelby Campus in 2009. The heat pipe augmented solar wall was developed by Dr. M. Keith Sharp, Associate Professor of Mechanical Engineering, J.B. Speed School of Engineering at the University of Louisville.

KREC provided technical assistance to Kentucky through its energy efficiency engineer in conjunction with other KPPC programs. KREC also provided marketing, web development and technical support to the Kentucky Renewable Energy Consortium (KREC) for its work.

KPPC was established in 2005 by a federal direct appropriation to the University of Louisville and is a resource for advancing renewable energy and energy efficiency efforts within the Commonwealth of Kentucky. KREC was created as part of the 25x25 Roadmap program and is a resource for advancing renewable energy and energy efficiency efforts within the Commonwealth of Kentucky.

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To keep up-to-date on new initiatives, KPPC staff attended the 5th National 25x25 Summit in Washington, DC. The two-day summit featured speakers who addressed a number of issues, from federal climate change legislation to renewable energy policy. KPPC’s Executive Director, Cam Metcalf, presented an overview of Governor Beshear’s energy strategy – Intelligent Energy Choices for Kentucky’s Future.

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KPPC was actively involved in 64 training sessions, workshops, meetings, conferences and events and hosted 12. Total number of attendees at all events was 2,186.

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One of the best ways to help improve Kentucky’s environmental and economic performance is through training and outreach. KPPC provides a wide range of training opportunities that can assist its clients in learning how to control costs and improve the quality of Kentucky’s environment. KPPC provided training, workshops and seminars with a total attendance of 2,186 in fiscal year 2008-2009.

Training

KPPC hosted or participated in 64 workshops, webinars and other education or training events. Over one hundred hours were devoted to training and education and involved the time and talent of all KPPC staff members. Through KPPC’s Web site, newsletters and e-mail communications, KPPC’s clients and the public were notified of training opportunities throughout the year.

KPPC’s presentations, webinars and workshops are designed to assist business groups, industrial clients and other organizations address solid waste reduction, recycling, sustainability and industrial water management issues.

Working with its clients in various stages of environmental management planning, KPPC’s technical staff trained teams of employees in how to identify and manage waste reduction, pollution prevention and energy efficiency opportunities within their organizations. During fiscal year 2008-2009, KPPC worked with new potential clients to prepare them for developing their environmental management plans and creating knowledge able, dedicated teams to implement those plans.

Industrial Water Management Webinar

More than 30 companies and organizations from around the U.S., Europe and Canada participated in KPPC’s “Industrial Water Management” webinar on September 16. KPPC’s executive director and other members of the Center’s technical team, defined KPPC’s seven step Process Water Management (PWM) program, and explained how it can be implemented. This session was conducted as part of P2 Week, in conjunction with the National Pollution Prevention Roundtable.

Compressed Air Workshop

The KPPC-hosted Fundamentals of Compressed Air Workshop held on October 15 attracted 30 facility engineers, operators and maintenance supervisors from companies across Kentucky, Southern Indiana and Ohio. Participants gave high marks to instructor Bill Scales for his ability to communicate the efficient use of compressed air.

“I doubt if there are too many people anywhere who would be at Bill’s level of qualification on this topic,” said one workshop attendee.
Electric Transportation for the Bluegrass Workshop

Greenhouse gas emissions, climate change, fuel costs and our dependence on imported oil are great challenges Kentucky and the nation face in the near term. On November 10, at the Electric Transportation for the Bluegrass workshop in Lexington, KY, state government and corporate leaders focused on one of the important technologies that could help address these issues: electric transportation.

The workshop, which drew 60 attendees, was offered through a partnership between the Kentucky Clean Fuels Coalition, KPPC, the Kentucky Renewable Energy Consortium, University of Louisville, University of Kentucky and the Kentucky Department for Energy Development and Independence.

The workshop was held in conjunction with the University of Kentucky’s Electric Transportation for the Bluegrass Workshop, which was held on the same day and drew a similar number of attendees. The workshop was sponsored by the Kentucky Energy Technology Center, which is a joint venture of the University of Kentucky and the Kentucky Department for Energy Development and Independence.

Dr. Len Peters, Secretary of the Kentucky Energy and Environment Cabinet, told participants that the challenge we face is a large-scale problem which will require multiple answers. He said, “Electricity for our transportation industry is going to be a significant part of the whole issue of addressing energy independence.”

Outreach

Louisville Youth Summit

Four of KPPC’s engineers and technical experts teamed up this school year to mentor students from a Louisville school as part of Brightside’s Environmental Youth Summit. The team worked with a group of students to explore energy efficiency and other environmental topics. The youth summit gives students in grades 4-12 an opportunity to share ideas and discuss how to reduce litter and improve the environment. The summit is hosted by the Partnership for a Green City.

Renewable Energy Focus at Sustainability Fairs

University of Louisville Provost Shirley Willingananz appointed a Sustainability Council to support and track campus sustainability progress. University of Louisville, University of Kentucky and the Kentucky Department for Energy Development and Independence.

KPPC highlighted the Kentuck Renewable Energy Consortium’s (KREC) work with renewable energy at Sustainability Fairs held in Lexington, KY.

KPPC’s new primary logo and program icons were used throughout the 2008-2009 fiscal year to create updated information brochures and marketing materials for all of KPPC’s programs and services.

During fiscal year 2008-2009, KPPC developed nearly three hundred communications pieces. Through the web, e-newsletters, brochures, posters, presentations and training materials, the total distribution for the fiscal year was 21,536. KPPC created nearly 135 new designed program brochures for all of its services, developed and published 123 new web pages and released monthly or bi-monthly editions of its three e-newsletters to 1,130 subscribers.

In October 2008, KPPC sent the first Sustainable Solutions Post to provide industry-specific news, tips for improving efficiency, environment- and energy-related resources and notices for workshops, training and conferences.

KEEPS members receive up-to-date news, energy savings tips, and member activities through the KEEPS Moving Forward e-newsletter.

Through REnews, KREC members receive information about energy efficiency and renewable energy activities throughout Kentucky. REnews keeps its members up-to-date on legislation, grant opportunities and KREC research, meetings and other initiatives.

Web-based Resources

With its expanded Web site, KPPC has made new information and materials available to its widest audience ever. KPPC’s Web site generated more than 125,000 user sessions in 2008-2009 and now offers news, access to published materials, a staff and program directory, KIME (the Kentucky Industrial Materials Exchange), a recycling services directory and much more.

Through the use of webinars, the Center also found that it could reach more people while reducing the time they invested, and could lower CO2 emissions by eliminating the need to travel by car or air. Three webinars were held during 2008-2009.

Community Outreach

Helping reach out to the community, KPPC staff members volunteered their time to work with related community groups this past fiscal year to support engineering and environmental activities.

A KPPC staff engineer served as a judge for the March 2009 Engineering Exposition (E-Expo) hosted by UofL’s J.B. Speed School of Engineering. This annual event showcases undergraduate research, pre-engineering competitions and activities for younger students, guided tours, exhibits, and the cutting edge research facilities at UofL.

KPPC’s KEEPS Coordinator met with 30 Spalding University students in November 2008 to discuss environmental career options.
**KPPC**

The Year in Review

**New KPPC Board Members**

KPPC’s board of directors, appointed by the Governor, represent various facets of Kentucky state and local government, industry, agriculture, higher education, environmental protection and the community at large. Newly-appointed board members are:

Joyce Evans of the Center for Biomedical Engineering at the University of Kentucky

Kevin Murphy of the Calvert City Municipal Water & Sewer System and

David Pedigo of Akebono Brake Corporation in Elizabethtown.

**Awards & Recognition**

**Most Valuable Pollution Prevention (MVP2) Award**

On September 18, 2008, KPPC received a Most Valuable Pollution Prevention (MVP2) Award for efforts to implement its technical assistance program. The National Pollution Prevention Roundtable (NPPR) has sponsored the MVP2 awards program since 1999 to recognize outstanding and innovative P2 projects and programs. This is KPPC’s second MVP2 award from NPPR. KPPC also won the award in 2005 for its published article, “Leveraging Funds Towards Results.”

**Southern Growth Policies Board 2009 Innovator Award**

KPPC was a winner of the Southern Growth Policies 2009 Innovator Award. The awards recognize initiatives that improve economic opportunities and quality of life in the region. This award recognized KPPC for its efforts to encourage economic opportunities relating to bio-products, alternative energy and energy efficiency. As one of 13 Innovators in the Southern region, KPPC was publicly honored in June in Biloxi, Mississippi.

**Greening the Center**

After extensive renovation, KPPC moved to its new home in the east wing of the Burhans Building on UofL’s Shelby Campus in January 2009. KPPC saw an opportunity to “Green” the Center during renovation and worked with UofL’s Planning, Design and Construction office to create an environmentally responsible new space for the Center that would maximize energy savings, water efficiency, CO2 emissions reduction and indoor air quality. To reduce energy, water and material consumption, contractors installed T-8 lighting and occupancy sensors, LED exit lights, and automatic sensors for rest room faucets, soap and towel dispensers. To minimize environmental impact and make use of recycled materials, all newly purchased office furniture for the Center contains both pre and post-consumer recycled content, including carpets, chairs and storage units. To help improve indoor air quality, cubicule panels are GreenGuard™ certified as low-emitting for formaldehyde, VOCs and aldehydes. The Center’s new space demonstrates KPPC’s commitment to innovation and environmental stewardship.

**KPPC in the News**

A feature article in the August 1, 2008 edition of Business First of Louisville, entitled Cleanup Crew, highlighted KPPC’s pollution prevention and energy efficiency assessment services, and the environmental and economic success of Denyo Manufacturing Corp., one of KPPC’s clients. Implementing KPPC recommendations, Denyo Corp. has reduced the amount of waste it produces and has seen significant cost savings.

**ClimateEdu: News for the Green Campus**

As a university-based pollution prevention program, KPPC was featured in the September 10, 2008 article, “Students Reach Out to Local Businesses, Reduce Pollution” published by the National Wildlife Federation in its web-based ClimateEdu: News for the Green Campus.

**2008-2009 Budget**

Even in these difficult economic times, Kentucky has made an important investment in environmental sustainability by providing KPPC with funding from the Hazardous Waste Management Fund. Kentucky’s $360,000 investment has allowed KPPC to leverage funding through a number of grants and contracts. State and Federal agencies have recognized the value of KPPC’s services to the Commonwealth by providing more than $797,000 of additional financial support this past fiscal year, giving the Center a total 2008-2009 operating budget of nearly $1,157,000.

- **$360,819** – Hazardous Waste Management Fund
  - KPPC’s Core Funding from the Kentucky Department for Environmental Protection provides organizational and administrative support for the Center’s technical services.

- **$360,558** – Kentucky Renewable Energy Consortium (KREC)
  - Federal appropriation for the development of a statewide consortium to provide research, development, deployment and outreach in renewable energy and energy efficiency initiatives.

- **$92,355** – Energy Efficiency Engineer
  - SBAC – Kentucky Energy Efficiency Program for Schools (KEEPS)

- **$89,348** – Kentucky Department for Energy Development and Independence funding to support energy efficiency projects for the Commonwealth.

- **$127,402** – Technology Diffusion Initiative (TDI)
  - Federal appropriation for a regional program to provide demonstrations of proven P2, E2 and bio-based products and technologies to improve market penetration.

- **$54,418** – Pollution Prevention Grant
  - $23,611 – Metrics Database Development
  - U.S. Environmental Protection Agency funding allows KPPC to provide P2 activities throughout the Commonwealth.

- **$33,862** – Higher Education Fund
  - Funding to improve KPPC’s technical capabilities to demonstrate and provide demonstrations of proven P2, E2 and bio-based products and technologies to improve market penetration.

- **$9,519** – U.S. Department of Defense
  - Federal DOE funding to provide training and site assistance for development of an environmental management system to promote pollution prevention.

- **$5,000** – Kentucky Institute for the Environment and Sustainable Development
  - Funding to improve KPPC’s technical capabilities to work with KIESD on environmental and sustainable development issues at local, state, national and international levels.
Looking forward to an exciting and productive 2010...

- Winner of the 2009 National Pollution Prevention Roundtable MVP2 Award for Best Publication
- KPPC’s 2009 Environmental Sustainability Award presentations
- KREC Competitive Research Grants Program
- KREC Forum on Carbon Sequestration Through Agriculture and Forestry Management
- Online Consultant’s Directory