

Sustainable Solutions post



KPPC

Kentucky's Resource Center for
Environmental Sustainability



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P2 Successes

How can your business operate more efficiently and reduce or eliminate the cost of end-of-pipe pollution control? Pollution prevention is about lowering your operating expenses by using resources more efficiently, reducing material usage and creating less waste to process and treat. It's a way to make your business leaner and more competitive as well as improve its environmental performance.

KPPC has worked with hundreds of companies throughout Kentucky, to identify P2 opportunities, and in many cases, even low-cost and no-cost measures can have dramatic results. For 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. However, some P2 efforts require a long-term approach as well as the commitment and support of company leaders. P2 recommendations consider economic impacts that include effects on revenue, disposal costs, operating and maintenance costs and direct implementation costs (i.e., equipment purchase, installation, training, maintenance, etc.)

With long-term commitment, though, companies can increase productivity and reduce operating costs through cleaner production, improved process efficiency and better use of natural resources. In addition, by modifying production processes, promoting the use of non-toxic or less-toxic substances and implementing proven conservation techniques, companies can significantly improve their environmental performance.



Process water management is not regional or sector specific and can be applied to nearly every organization that employs water-intensive processes from metal finishing and food processing, to HVAC systems in large office complexes. Using PWM, KPPC 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 dollars in savings.

P2 in action – Process Water Management

KPPC encourages 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. KPPC undertook a targeted PWM effort, the Technology Diffusion Initiative (TDI), to work directly with industries during the past few years. The ultimate goal of the TDI program was the broad-based adoption of P2 and energy efficiency technology solutions that are commercially available but have not achieved market penetration.

This recently-completed TDI program initiative addressed P2 opportunities through unique, hands-on, one-on-one technology deployment and demonstration projects with participating industries. Through this focused effort, KPPC worked directly with companies that allowed demonstrations and full-scale technology trials at their facilities. These real-world trials helped participating companies to recognize P2 as a profitable alternative to end-of-pipe pollution control. Most companies do not have the technical ability or time to thoroughly evaluate P2/E2 technologies. TDI demonstrations and pilot trials allowed participating companies to develop an understanding of what the technology could do and how it works in a real world situation.

Lessons learned through PWM and TDI

- Part of the TDI process involved educating industries as to the true cost of water use. In promoting rinsewater efficient P2 technologies to metal finishing companies, KPPC needed to change companies' assumption that water is relatively inexpensive and not worthy of a significant management effort. They assumed the cost of water was simply the price at the incoming meter. However, when these companies were educated that the cost just starts at the meter, then accumulates costs as it passes through each process, and finally incurs significantly more costs in the wastewater treatment process, a totally new perception of water use costs evolved; there is a difference between price and costs.
- Widespread adoption of P2 technologies and practices, requires companies to integrate P2 within their organizational structure. Behavioral change in organizations was accomplished with a broader TDI concept approach that included development of a policy and designation of a team and team lead to assess, investigate opportunities and implement cost effective options.
- Cost savings achieved through the PWM often were beyond expectations, leading companies to become more proactive and aggressively search out even more environmentally driven, cost reduction opportunities.
- The TDI program initiative helped demonstrate how the adoption of new technologies provides added value beyond environmental compliance, favorably impacts worker health, improves community relations and increases profitability.

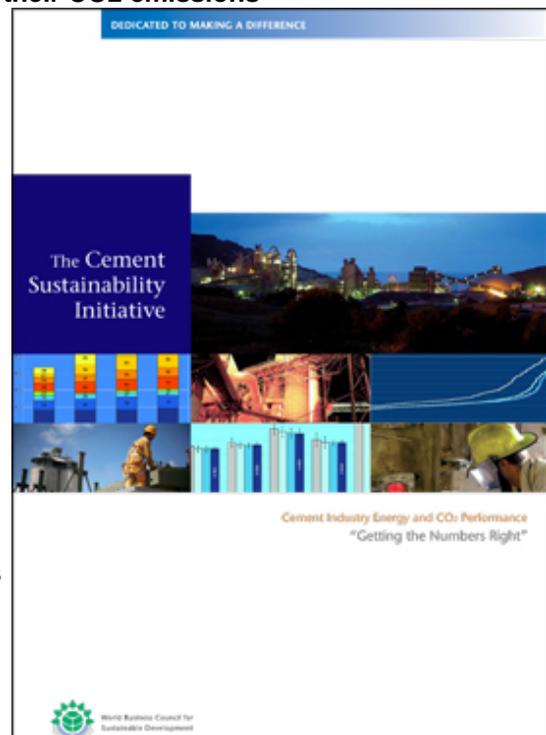
For additional information on how KPPC can help your company implement a process water management program or the recently-completed Technology Diffusion Initiative, contact KPPC at 502-852-0965.

Newsbits

- **Free Webinar – “By the Numbers: Greening Your Operations”**
Last week, approximately 400 participants heard from four industry leaders discussing how companies are putting analytical tools to work as a competitive advantage in addressing environmental challenges, from waste reduction and energy efficiency to strategies for reducing greenhouse gases, toxic emissions and water use. If you missed this IBM-sponsored webinar, you can [access it for free online](#) until October 22 (registration required).
- **Sustainable production – from chocolate to leather**
As companies continue to address the sustainability of their operations, increasing scrutiny is paid to how their raw materials are harvested or produced. They require more sustainable practices from their suppliers, and often require third-party certification of the environmental or social performance of those suppliers. These requirements affect every industry, and recent actions from major companies deal with the production of everything from chocolate to leather. [Mars announced](#) that it plans to use sustainably-grown cocoa in all of its chocolate by the year 2020, and [Cadbury has committed](#) to securing sustainably-harvested cocoa from suppliers across the globe. Meanwhile, addressing the issue of deforestation in the Amazon, [Nike's new leather policy](#) declares that the company will not use leather that comes from cattle raised in the environmentally-sensitive region. According to Greenpeace, Brazil's cattle industry is responsible for 80 percent of the deforested areas in the Amazon.
- **Cement producers slow their CO2 emissions**
According to a [recently-released report](#) from the World Business Council for Sustainable Development's Cement Sustainability Initiative (CSI), cement production companies are slowing their rates of CO2 emissions. Companies participating in the CSI study increased production by 53% from 1990 to 2006, but their CO2 emissions increased by only 35%. The study provides aggregated data on more than 800 individual cement facilities worldwide.

This decoupling of production rates and emissions is important

because cement production currently accounts for approximately 5% of global CO2 emissions, and production of this carbon-intensive building



material continues to increase.

CSI is a global effort by 18 leading cement producers, with operations in more than 100 countries. Collectively these companies account for about 30% of the world's cement production.

- **Owensboro surpasses energy reduction goals**
As part of the "Cool Cities" initiative, Owensboro* is committed to reducing energy use and carbon emissions in accordance with the Kyoto Protocol by 2012. The city is ahead of schedule in meeting these goals thanks to wide-ranging efficiency efforts, from energy efficiency to transportation and fuel savings. Other Kentucky Cool Cities include Bowling Green, Frankfort, Hobart, Lexington, Louisville and Villa Hills.
**Messenger-Inquirer, Owensboro, KY, July 11, 2009*
- **Corporations push ahead with emissions reductions**
This month, [UPS released its new sustainability report](#) which outlines the company's goal to cut carbon emissions by an additional 20% by 2020, for a cumulative reduction of 42% since 1990.

Mark your Calendar for these Upcoming Conferences and Events

Construction Stormwater Permitting Workshop – August 12 or August 19 – Frankfort

Offered by the Division of Compliance Assistance (DCA), [this half-day workshop](#) will provide an overview of the new stormwater general permit for construction-related activities and a discussion of the changes that have been made in the permit's requirements. In addition, agency staff will demonstrate the new electronic process that has been developed to allow parties to electronically submit a Notice of Intent (NOI) for coverage under the general permit. Participants can choose from four half-day sessions.



Sustainable Product Outlook: Green Products or Green Washing? –Webinar – August 20, 1:00 to 2:30 p.m. EDT

Mark your calendar for the [U.S. EPA's August Resource Conservation Challenge \(RCC\) Web Academy session](#).

Speakers: Scot Case of TerraChoice Environmental Marketing, Inc., Vincent Kitira of Responsible Purchasing Network and Dr. Jay Golden of Sustainability Consortium.



Kentucky Forum on Carbon Sequestration Through Agriculture and Forestry Management – September 10, 9:00 a.m. to 4:30 p.m. -- Louisville

Sponsored by the Kentucky Renewable Energy Consortium (KREC) and Energizing Kentucky, this forum will focus on the opportunities and challenges

that Kentucky's agriculture and forestry sectors will face in a reduced carbon economy. The forum will bring together leaders from agriculture, forestry, energy, research, government, business and advocacy sectors to hear from both national and local experts on carbon policy, climate change, the economics of carbon emission reductions, and on agriculture and forestry-based technologies to capture, convert and sequester carbon. The forum will also include speakers who will address forest management, algae research, energy crops and methane gas capture, and a Kentucky Stakeholder Response Panel. [Pre-registration](#) is required.

Green Prosperity: Recycling and a Sustainable Southeast –

November 3-4 – Lexington

[The 2009 workshop](#) Southeast Recycling Development Council (SERDC) offers sessions, tours, problem solving and networking geared toward recycling industry professionals, recycling and solid waste officials, economic developers and manufacturers.



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