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Hausner Hard-Chrome (HHC), a fourth generation family-owned plating and industrial coatings company, recently completed an extensive lighting retrofit project at its Owensboro, Kentucky, facility. The company has worked with KPPC since 2010 and is an active and committed member of both the Kentucky Energy Alliance and the Kentucky Save Energy Now initiative.

HHC partnered with the Kentucky Cabinet for Economic Development on this lighting retrofit project and is promoting the successful savings and benefits achieved for the company and the community by providing the project details below.

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- Kentucky Association of Manufacturers 2012 Energy Conference, June 13-14, Louisville



Before

Machine Shop

After

On March 2, 2012, Gov. Beshear announced HHC as one of four companies selected to receive American Recovery and Reinvestment Act funding through the Kentucky Cabinet for Economic Development. With the help of KPPC and Equipment Depot, HHC partnered with the Cabinet to receive this funding to retrofit their plant lighting for energy conservation purposes. The results include: a reduction in utility usage and cost and the associated carbon footprint, production of 'green' jobs, a safer working environment, and improved equipment reliability. These grant funds played a critical role in bringing this project to completion within the desired timeline.



Before

Polishing Area

After

Quick Facts:

- Total project cost: \$70,755.47
- Matching American Recovery and Reinvestment Act Funds: \$35,377.74
- 9.25 month payback on HHC investment (including grant and tax incentives)
- 31% overall increased lighting quality (measured average 32 foot candles before, 42 after)
- Calculated Annual Environmental Sustainability Impact:
 - \$31,617.96 annual savings in lighting costs.
 - 445,323 kWh reduction
 - 35 MMBtu/yr in natural gas savings
 - 1,387 MTCO₂e reduction
 - 1,345 research and contracted labor 'green' hours

HHC's Project Overview

This project began with the Environmental Sustainability assessment for HHC provided by KPPC as one of several improvement opportunities described in the report revealing real saving opportunities. Some of the topics considered were energy efficiency, fixture type, light quality, life expectancy and overall reliability.

KPPC made HHC aware of Kentucky's Industrial Facility Retrofit Showcase grant solicitation as well.

We then proceeded to develop a plan that would provide the right lighting replacement for the right return on investment. Our lighting vendor was experienced with grant reimbursement projects and provided the necessary info. We found that the replacement lighting retained 94% of its start-up light quality for the duration of its life, while the old fell from 71% to 52% through its life. It has a 20% increased life expectancy, reducing labor and production conflicts in limited accessibility areas. It's instant-on versus delayed start, and is 31% more candles and brighter white color providing a safer work environment and improved morale. These products are American made as well.

All the installation work was completed in February 2012, and the following electric bill reflected the improvement. The old fixtures were donated to a not-for-profit, subsidized, special needs employment facility, reducing their operation costs as well. The new fixtures were sized and installed as a one-to-one replacement for installation efficiency, with some actually being eliminated as a result of increased light quality. Better lighting provided at less cost equals tremendous results!

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Kentucky Association of Manufacturers - 2012 Energy Conference, June 13-14

On June 13 and 14, join the Kentucky Association of Manufacturers (KAM) for its second annual Energy Conference in Louisville. The conference will provide manufacturing companies and stakeholders in the manufacturing sector with information regarding energy and Kentucky.



National and state-level industry leaders will conduct general sessions over the two-day conference. Participants will learn best energy practices from KAM members, strategies to capitalize on short-term opportunities with long-term thinking, secure workable solutions and tangible take-a-ways, and discover transition strategies to make facilities and operations more energy efficient. The conference will also provide attendees with an opportunity to explore a robust and diverse trade show targeted to energy in the manufacturing sector.

A legislative panel discussion will be held on June 13 during which attendees will have the opportunity to hear how members of the Kentucky General Assembly are responding to issues associated with manufacturing and energy.

Make plans to join KPPC for breakout work sessions on day two of the KAM conference.

- 8:15 a.m. Getting Started - Part 1

A systems approach to energy efficiency enables energy managers, facilities personnel and other energy team representatives to understand the process of energy management, as well as helps educate their companies on how an effective energy management program benefits their organization and the environment. The Energy Star seven-step energy management process guides energy teams to implement a successful energy efficiency program that reduces operating costs through the use of energy-saving products and practices for improved energy performance. Tools such as motor and process equipment inventories and shut-down checklists are designed to help energy teams develop and implement their own energy management program.

- 10:00 a.m. Getting Started - Part 2

Kentucky industries will present their success stories in implementing an energy management program and share the "how-tos" and lessons learned during the process.

For [registration and additional conference information](#), visit KAM's website.

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Compressed Air Systems Webinar Now Available Online

If you missed the March broadcast of KPPC's Compressed Air Systems webinar, you can now access the recording on our website.

Compressed air systems have a valuable place in industry, but left unchecked can quickly become a liability to your facility. With the ever-increasing prices of energy, lowering any variable cost is essential. This

webinar explains the true cost of compressed air systems to energy managers, facility engineers, operators, plant managers and maintenance staff, and discusses steps to improve the efficiency of existing systems. The webinar also discusses financial and energy savings. Presented as part of KPPC's environmental sustainability training series.

[Access this FREE recorded webinar on the KPPC website.](#)

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Newsbits

■ **Bardstown Schools Hires 'Green' Architectural Firm**

From Kentucky Standard. An architectural firm responsible for building the first school in the nation to run on "net zero" energy has been selected to advise the Bardstown Independent School District on future projects — including the construction of a new school.

Kentucky-based Sherman Carter Barnhart designed Richardsville Elementary in Warren County, which through the use of solar panels, active daylighting strategies and insulated concrete-block walls produces as much energy as it needs to operate. The district visited this school as it considered the architectural firm, Superintendent Brent Holsclaw told the school board. "We were very impressed with facilities they had built," Holsclaw said. "Sometimes architects have outstanding ideas but they really don't fit very well at school, and they seem to bridge that gap." To Holsclaw's knowledge, Sherman Carter Barnhart may be the only architectural firm in the nation to focus on a "net zero" strategy.

■ **New Information about Air Emissions from Electricity Generation Available**

This month, U.S. EPA released a new edition of the [Emissions and Generation Integrated Resource Database \(eGRID\)](#), a comprehensive source of data on the environmental characteristics of virtually all electric power plants in the United States. eGRID contains emissions and emission rate information for the following air pollutants and greenhouse gases: nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). CO₂, CH₄, and N₂O are greenhouse gases that contribute to global warming or climate change. NO_x and SO₂ contribute to unhealthy air quality and acid rain in many parts of the country. eGRID also includes data on electric generation, fuel mix (for renewable and nonrenewable generation), and many other power plant attributes. eGRID presents this information for power plants and for states, three different sets of electric grid boundaries, and the United States in total.



U.S. EPA also released an updated Power Profiler, an easy-to-use application that helps people understand how their electricity use affects the environment.

■ **Study Examines Non-recycled Plastics Conversion Technology; Close to Commercial Viability**

From Resource Recycling. A study finds considerable energy and greenhouse gas savings using various conversion technologies for non-recyclable plastics instead of landfilling them — and finds those same technologies are close to being commercially viable.



The study, "[Environmental and Economic Analysis of Emerging Plastics Conversion Technologies](#)," prepared by research firm RTI International and funded by the American Chemistry Council, examines the efficacy of two types of conversion technologies: gasification, which accepts all municipal solid waste (MSW), including non-recycled plastics; and pyrolysis, which solely manages non-recycled plastics. In the report, RTI looks at both technologies that have non-recycled plastics as a key feedstock, though some of the facilities it profiles accept such varied materials as "MSW, refuse-derived fuel (RDF) from sorted MSW, woody wastes from construction and demolition, used telephone poles, and other wastes from industrial, commercial and institutional (ICI)."

One of the key findings of the study is how close many of the technologies are to commercial viability, within five to 10 years for most. Plastics-to-oil technologies were found to be "generally closer to full scale commercialization" than the MSW gasification plants.

"When combined with strong recycling programs, these energy recovery technologies could help communities increase landfill diversion and cost savings over traditional waste management methods," said Keith Christman, managing director of plastics markets for the American Chemistry Council.

Upcoming Training, Events and Conferences

■ Lower Your Cost of Doing Business Through Energy Efficiency

June 6, 9:00 - 11:30 a.m. ET, Morehead

Join KPPC and the Morehead State University Small Business Development Center for a FREE workshop to learn how making your business more energy efficient can help lower operating costs and increase profitability. Also learn about USDA grants, loans and utility rebates available to small businesses. Complimentary breakfast provided for all attendees.

The FREE workshop will show small businesses how to:

- Understand energy and energy costs
- Read and understand your utility bill
- Identify “no cost” and “capital cost” energy saving opportunities within your business
- Apply for grant and loan funding and rebate programs through Federal, State, utility and other programs



[Please register by June 1.](#)

■ Online Resources for Safer Chemical Assessments

June 12, 2:00 - 3:00 p.m. ET, Webinar

This webinar will walk attendees through the Safer Chemical Alternatives Topic Hub and the Interstate Chemicals Clearinghouse (IC2) Safer Alternatives wiki. Presenters include Michelle Gaither of the Pacific Northwest Pollution Prevention Resource Center and Pam Eliason, Senior Associate Director and Industry Research Program Manager, at the Toxics Use Reduction Institute.



[Register for this free webinar.](#) Seating is limited. Hosted by the [National Pollution Prevention Roundtable.](#)

When exploring options for identifying environmental sustainability opportunities like this at your facility, keep KPPC's free, confidential and non-regulatory services in mind. The Center offers on-site assessments, customized training and technical information to help companies lower operating costs and reduce waste at its source. [Contact us](#) for more information.

■ Kentucky Association of Manufacturers 2012 Energy Conference

June 13-14, Louisville

From Kentucky's manufacturers to economic developers to state politicians, there is a need for understanding and education in an uncertain energy environment. KAM's second annual energy conference is built for the manufacturer and all who benefit from the growth of the manufacturing industry. [See above for more details.](#)