WICHITA REGIONAL CLEAN AIR AWARDS for 2008

Individual Award Category

Dr. William Wentz, WSU Engineering Department and Dr. Art Youngman, WSU Biology Department

Dr. Bill Wentz is distinguished professor emeritus in engineering at Wichita State University. Dr. Art Youngman is professor emeritus of biological sciences at Wichita State University, where he taught Environmental Science as a general education course for more than 35 years. In 2006, Dr. Wentz and Dr. Youngman offered to volunteer time and expertise to develop a Greenhouse Gas (GHG) Emissions Inventory tracking system for the City of Wichita and to compile the data for the Inventory. City staff provided this data for calendar year 2006 and 2007. Dr. Wentz and Dr. Youngman developed the tables, performed the calculations, and conducted data analysis to provide the City of Wichita with its first look at Wichita's Greenhouse Gas emissions totals. The Inventory provides an opportunity to review annual energy consumption. Since the Emissions Inventory will be an on-going project, the data will also provide the City an opportunity to conduct trend analysis and look for ways to reduce energy usage and realize associated cost savings.

Government Award Category

KMUW – FM 89.1, Wichita State University

KMUW Radio Station constructed a new transmission facility recently. The new facility incorporated energy efficiency measures, used as many recycled and recyclable building materials as possible, and provided an environmentally friendly roof with plants to help cool the building and reduce stormwater runoff. Preliminary data shows a 33% reduction in energy usage over the previous transmission facility.

City of Wichita – Traffic Engineering & Maintenance

In an effort to reduce its carbon footprint and to save on both energy and maintenance costs, the City of Wichita initiated a project in 2008 to upgrade all of the incandescent traffic signal lamps to LEDs (light emitting diodes). LEDs reduce the energy consumption of an intersection by an average of 80%. As an added benefit, an LED lamp lasts up to 10 years whereas an incandescent lamp has a life expectancy of two years. This is a decrease not only in a reduction in the carbon footprint of the traffic signals, but also a significant cost savings in labor and materials that is ultimately paid by the taxpayer. Once all the new lamps are installed, monthly energy usage is expected to go down by more than 290,000 kWh. The reduction represents enough energy to power 391 homes in Wichita and results in a cost savings of $275,000 per year.

Business Award Category

Durham School Services

In 2006, Durham implemented the no idle policy to reduce the release of harmful diesel emissions from school buses into the atmosphere. For the last three years, the company policy required its operators to idle bus engines for only three minutes at initial start, which still allowed sufficient oil circulations to prevent engine damage. For Durham's fleet of 576 buses covering 504 routes, the total reduced idling hours was 68,040 annually. In addition, Durham School Services is committed to upgrading its fleet and currently has 44 buses with EPA07 engines equipped with after-treatment systems with a diesel particulate filter in place of a muffler. Particulate matter is collected in the filter and reduced to soot and ash in the process called regeneration. This new process greatly reduces diesel exhaust gas pollutants.

Westar Energy

The Westar project is called the "Colwich Switch" and is a year-long partnership with the city of Colwich. The project kicked off with a picnic in the Colwich City Park and the delivery of six energy efficient light bulbs to every home in Colwich. In addition, information about saving energy was made available to all residents and an energy-use survey was mailed to all residents to fill out. Westar is continuing to provide information and assistance to Colwich residents in an effort to reduce energy usage throughout the community. If all the CFL bulbs provided by Westar are put into use, Westar estimates that the combined energy saved will be 202,000 KWH per year.

Via Christi Regional Medical Center

Via Christi implemented a Building Automation Project at its St. Francis facility in 2007 to lower energy usage throughout the facility. The project will be completed in 2013 and will reduce energy consumption by 3,012,384 KWH per year with an associated cost savings of $350,613 per year. Major components of the project are relamping with energy efficient bulbs, installing timers, steam trap maintenance, educating employees on energy awareness, and an automated power management system.

Boeing Wichita Integrated Defense Systems

Boeing conducted an energy audit of its Wichita facility in 2005. Two engineering buildings on the south campus were initially targeted for improvements in energy efficiency. The projects included installing digital controls on HVAC systems, isolating computer systems and providing separate cooling systems for them, and improving efficiencies of cooling towers, chillers, and boilers. Total energy consumption has been reduced by 2,785,719 KWH per year.

Wal-Mart

In 2007, Wal-Mart launched an associate-driven program called the Personal Sustainability Project (PSP). This voluntary program encourages associates to make small changes in their lives that can benefit their own health and well-being, as well as the health of the environment. Personal projects can include recycling, developing healthier eating habits, using environmentally friendly products in the home, or cleaning up parks and recreation areas in local communities. As of September 2007, 480,000 Wal-Mart associates reported that they adopted a PSP. These associates are making small changes to their daily lives and educating customers and community members on sustainability. Wal-Mart plans to expand the PSP effort to its international stores.

In an effort to reach their goal of building a store prototype that is 25 to 30 percent more efficient and produces 30% fewer greenhouse gas emissions by 2009, Wal-Mart began building a high-efficiency store series. In 2008, a high efficiency store was opened in Wichita which is expected to use up to 25% less energy than a typical Supercenter.

In May 2006, Wal-Mart installed Auxiliary Power Units (APUs)—small, efficient diesel engines—on all trucks that make overnight trips. Wal-Mart drivers can turn off their truck engines and rely on the APU to warm or cool the cabin and run communication systems while on breaks. In a single year, this change could eliminate approximately 100,000 metric tons of carbon dioxide emissions, reduce the use of 10 million gallons of diesel fuel and save the company an estimated $25 million per year.