



# Energy Efficiency and Conservation Block Grant

## September 2011 Update

### Overview

The U.S. Department of Energy's Energy Efficiency and Conservation Block Grant Program (EECBG) is a federal program that provides grants to local governments and states, to fund programs and projects that reduce energy use, fossil fuel emissions, and improve energy efficiency. The program represented a Presidential priority to assist in the deployment of new Green Energy technologies. The *American Recovery and Reinvestment Act of 2009* appropriated \$3.2 billion for the Energy Efficiency and Conservation Block Grant (EECBG) Program. On December 31, 2009, the City of Peoria was awarded **\$1,308,500** in Energy Efficiency and Conservation Block Grant funding to be utilized over a three-year period.

The grant award has funded a grant project manager and ten individual projects within Peoria. Below is a summary of the ten projects that were funded.

### **PROJECT #1 - LED FACILITY LIGHTING**

**Status: Completed**

**Current projected savings: Over \$93,000**

This project entailed the conversion of both site and building lighting at City facilities to high efficiency Light Emitting Diode (LED) units, which will reduce electrical consumption and long term replacement costs. LED lighting was installed at the following:

- Public Safety Administration Building (PSAB), Information Technology (IT) Center, and City Hall east & west parking garages,
- Main Library, Council Chambers, Public Safety Administration Building and IT Center parking lots,
- Old Town park-n-ride lots,
- Greenway, Braewood, Fletcher Heights, Hayes, Terramar, and Windrose Parks,
- City Hall Lake Pleasant conference room and art gallery
- Rio Vista gym and main lobby
- Main Library 1<sup>st</sup> and 2<sup>nd</sup> floors
- City Hall site lighting



In total, **2,121 LED lights** to date have been installed as part of this project at 16 facilities in the city, saving the City 934,388 kilowatt hours (kWh). The final facility to be upgraded will be the main MOC building.



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## **PROJECT #2 - OLD TOWN PEDESTRIAN LED LIGHT PROJECT**

**Status: Completed**

**Current savings: \$2,831 (Also received a rebate for \$5,374 from APS)**

This project converted the downtown streetlights to LED units within the Old Town area, on 83<sup>rd</sup> Avenue from Monroe Street to Grand Avenue, on Washington Street from 85<sup>th</sup> Avenue to 83<sup>rd</sup> Avenue, and on Grand Avenue from 83<sup>rd</sup> Avenue to Peoria Avenue. The Old Town LED light program included replacing 75 existing 150-watt high pressure sodium light fixtures with new energy efficient 66-watt LED units. In addition to the energy savings, the level and uniformity of the lighting was improved. In the past 8 months, the City has reduced energy consumption by **20,813 kWh** and created a cost savings of **\$2,831** through this project (as of 8/1/11). We also received a rebate of \$5,374 from APS in April 2011.

## **PROJECT #3 - INFORMATION TECHNOLOGY PROJECT**

**Status: Completed**

**Current Savings: \$26.02**

The City purchased and installed a Personal Computer desktop energy management software termed "Power Save". This software program is capable of monitoring computers when in use, and accurately determining when computers are inactive so they can be powered down. The program has been installed on 150 city computers. The estimated energy savings generated so far is **260 kWh**, which equals **\$26.02** in savings.



## **PROJECT #4 - WATER HEATER TIMERS**

**Status: Completed**

**Current Savings: Undetermined**

The project included the installation of timers on a total of twenty three water heaters at city buildings. The timers allow the units to be automatically shut off outside of normal working hours, to save energy.

## **PROJECT #5 - PLANNING AND INSPECTION MATERIALS AND TRAINING**

**Status: Completed**

**Current Savings: Not applicable**

Grant funds purchased code plan review, inspection training materials, and tools for City Building Safety staff. The materials were used to educate staff on green building codes/standards for construction.



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### **PROJECT #6 - US GREEN BUILDING COUNCIL LEED TRAINING AND CERTIFICATION**

**Status: Completed**

**Current Savings: Not Applicable**

The LEED (Leadership in Energy and Environmental Design) Professional credentials were developed by USGBC to advance knowledge and expertise in green building and development concepts. The grant funded a training session, provided study materials, and paid for certification exams. Adam Pruett, Chris Jacques, Jared Spangler, Rob Gubser, Shawn Kreuzwiesner, Melissa Sigmund, Dan Davis, Kathy Sponsel, Ed Boik, Bill Beaudoin, and Seth Blumen have been certified as LEED Green Associates. Ed Striffler has been certified as a LEED Accredited Professional, with the specialization of Building Design and Construction (higher level certification).



### **PROJECT #7 - PILOT WIND TURBINE**

**Status: Completed**

**Current Savings: \$297.73**

This project installed two non-grid scale Skystream wind energy turbines at Peoria Fire Station #9, within Lake Pleasant Regional Park. This project resulted in the City generating renewable energy from wind power. The goal was a 40% annual reduction of the fire station's energy use. Through July 1, 2011, the project has generated **3,131 kWh** of green energy and saved **\$297.73**. Since becoming operational in May, 2010, a total of 15% of the Fire Station's energy has come from wind power.



### **PROJECT #8 - PUBLIC HOUSING FACILITY**

#### **ENERGY UPGRADES**

**Status: Completed**

**Current Savings: \$302**

This project entailed improving the overall energy efficiency of the City's Public Housing Authority administration building. The work included:

- Improvements to the building's attic and wall insulation,
- Installing a new HVAC system,

- Installing new HVAC ducts to better distribute air within the building,
- Installing new weather seals on exterior doors

An energy audit was performed on the building before and after the improvements, in order to confirm that the work did improve the efficiency of the building. Since the improvements were completed in April, 2011, the average energy usage of the building has dropped approximately 40%.

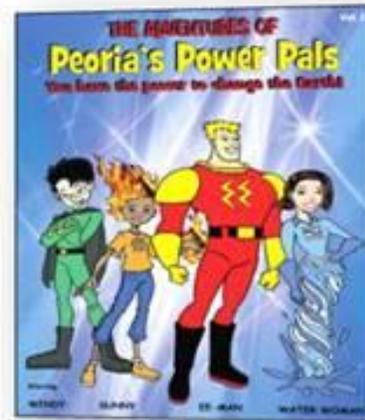
### **PROJECT 9 - COMMUNITY OUTREACH AND EDUCATION**

**Status: Active**

**Current Savings: Not applicable.**

The community outreach and education program focused on energy reduction, conservation and sustainability. The City of Peoria is dedicated to developing an awareness and education program that will affect the way our residents perceive energy efficiency and conservation. A strong public education program has the potential to create real and long-term positive behavioral changes within the community. Our energy efficiency campaign includes:

- The creation of the “Peoria Power Pals”. The “Peoria Power Pals” are featured in school activity booklets, posters, trading cards, and a magic presentation at elementary schools.
- Newspaper ads that feature a coupon for a CFL (Compact Fluorescent Light) – redeemable at our city libraries.
- The distribution of energy-saving products/appliances such as CFL and LED light bulbs. To date, **2,231 CFLs** and **192 LED** light bulbs have been distributed.
- Creation of a puppet show that delivers an important energy conservation message to children in grades 1-4.
- Partnering with Peoria High School Video production department to create short energy and conservation videos.
- Building of a portable wooden display to illustrate comparisons between windows and lighting technologies that are available to consumers.
- Signage/placards in the vicinity of the Old Town area to educate the public about the LED street lights that have been installed on 83<sup>rd</sup> Avenue, Washington Street, Grand Avenue, and Grand Avenue Frontage Road.



A component of the Community Outreach and Education Program includes City staff attending several events to meet with individuals, classes, or groups, to discuss energy conservation and



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education. Grant funds were used to create handouts, purchase energy-saving lights and educational material for these following events.

### **Spring Into Peoria Festival- February 26, 2011**

The City of Peoria sponsored the first Spring into Peoria Festival, in its entertainment district at Arrowhead Fountains Center, across the street from Peoria Sports Complex. The event was a collaborative effort between the city's Economic Development Services Department, Community Services Department and the Peoria Chamber of Commerce. The event invited entertainment district businesses and auto dealers to participate, as part of the city's efforts to increase foot traffic and enhance sales opportunities for district businesses. Spring into Peoria overlapped with Fan Fest, which is the event that traditionally kicks off spring training in the city. The overlap was intentional with the hope that participants from one event would move into the other to improve the success of both.

The Energy Efficiency/Sustainability Awareness team attended the event and distributed 288 CFLs (funding provided by the EECB Grant).

### **Spring Training Game at Peoria Sports Complex – March 18, 2011**

Seattle Mariners vs. Arizona Diamondbacks. 11,000 people attended the game. 700 CFL light bulbs were distributed to event attendees. Educational/informational material on energy conservation tips for the home and office were distributed. Staff also distributed 4 Kill-A-Watt electrical energy usage monitoring meters, 4 programmable thermostats, and 4 surge protectors/circuit breaker switches.



### **Pioneer Days Green Zone – April 2, 2011**

Peoria Pioneer Days 2011 was about honoring Peoria's heritage while also demonstrating a commitment to future generations by promoting sustainable practices throughout the community. This event showcased a "Green Zone" that was entirely focused on educating citizens in the area of environmentally conscious practices. The City Sustainability Team distributed **112 LED** light bulbs and **162 CFLs** at the Pioneer Days Parade and Event.



### **Loop 303 Dedication Event – May 7, 2011**

The newest portion of Loop 303 was dedicated Saturday May 7th. Approximately 2,500 people attended the event and Governor Janice Brewer made a speech at the dedication ceremony. City staff set up a booth to educate citizens on energy conservation tips for the home and office, and gave out 270 CFL bulbs and 80 LED bulbs.



### **PROJECT #10 - IT BUILDING ENERGY ANALYSIS STUDY**

**Status: Active**

This project includes the evaluation of the electrical and cooling systems in the City's IT Data Center to determine equipment or operational modifications that could improve overall efficiency of the space. The project will also fund the completion of EnergyStar certification of City Municipal complex buildings, to set a baseline for future energy improvements.