

City of Peoria LED Facility Installations and other Grant Projects

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 deploy the cheapest, cleanest, and fastest energy sources. 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 duration. The grant funding will support administrative and project costs for several different energy efficiency related activities.

Desired outcomes of the EECBG Program as identified by the Federal government include: reduced energy consumption and reduced energy costs through efficiency improvements in the building sector; new jobs and increased productivity to spur economic growth and community development; accelerated deployment of market-ready renewable energy technologies; improved air quality and related environmental and health indicators associated with the reduction of fossil fuel emissions; and improved coordination of energy-related policies and programs across jurisdictional levels of governance and with other local and community level programs, in order to maximize the impact of this program on long-term local priorities.

84th Ave Pedestrian Enhancement Project

This project included construction of new brick paver sidewalks, crosswalks, shade structures, and landscaping from Monroe Avenue to Peoria Ave located in Old Town Peoria . Also included with the project was the installation of 34 new energy efficient pedestrian lights for lighting walkways and intersections, solar powered irrigation system controllers, as well installation of 12 solar powered LED (Light Emitting Diode) light fixtures mounted on the new shade structures. Each pedestrian light consumes only 66 watts of energy compared to 150 watts needed for an equivalent high pressure sodium lamp producing the same levels of lighting. In addition, the LED fixtures are rated to perform more than 10 times longer than typical high pressure sodium fixtures, thereby significantly reducing overall maintenance costs to the City. The lighting efficiency, as well as the overall uniformity of the light levels within the Old Town vicinity, was greatly improved, in addition to lowering energy and long term operational costs. LED-produced light provides a nice mix of both photopic and scotopic light. Combined, the light levels are greater.

Old Town Pedestrian LED Light Project



This project included the conversion of downtown streetlights to LED (Light Emitting Diode) type lighting, within the Old Town area, on 83rd Avenue, Washington Street, Grand Avenue, and Grand Avenue Frontage Road. The Old Town LED light program included replacing 75 existing 150-watt high pressure sodium light fixtures with



new energy efficient 66-watt LED light fixtures, staying consistent with the City's goals of finding ways to reduce overall energy consumption. This project was accomplished rather efficiently, in that the lighting manufacturer developed a method of replacing only the lamp portion of the pedestrian light fixture, while keeping the remaining portion of the light fixture undisturbed. In addition to the energy savings, the level of lighting and lighting uniformity was highly improved, as compared to the high pressure sodium lights previously installed.

LED Facility Lighting

This portion of the grant program entailed the conversion of site lighting associated with City operational and office buildings to LED (Low Emitting Diode) type lighting, which will reduce electrical consumption. Another component of the project will include the conversion of lighting in parking lots and Park-and-Ride lots to LED. Return on investment will be seen in less than 2 years. LED lighting was installed in: PSAB (Public Safety Administration Building) Parking Garage, Information Technology Center parking garage, east parking garage, west parking garage, park-n-rides, Greenway Park, Braewood Park, Fletcher Heights Park, Hayes Park, Terramar Park, Windrose Park, Lake Pleasant Conference Room in City Hall, the art gallery in City Hall, Rio Vista Gym Main Hallway, the Main Library, Library parking lot, Council Chambers parking lot, Public Safety Administration Building parking lot, Information Technology center parking lot, and in City Hall campus bollards.

Total Projected Savings from LED installations: Over \$93,000



LED installations in parking lots



Information Technology Project

This project included the purchase and installation of a PC 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. Program installed on 150 city computers. Energy savings generated so far: 260 kilowatt hours, which equals \$26.02 in savings.



USGBC LEED (Leadership in Energy and Environmental Design) Training and Certification

The LEED Professional credentials were developed to encourage green building professionals, planners, and sustainability coordinators to maintain and advance their knowledge and expertise in building and development concepts. The City of Peoria has identified staff members to pursue the LEED Green Associate credential, in addition to the ones who have already achieved credentials. A USGBC training provider was brought to Peoria to conduct the LEED Green Associate Training in group format in May 2010. Adam Pruett 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.



Pilot wind turbine

Done- The design and construction of 2 non-grid scale Skystream wind energy turbines (2.4 kw) located at Peoria Fire Station #9, within Lake Pleasant Regional Park. One of the turbines is 45 feet high, the other is 33 feet high. The rated wind speed of the turbines is 29 mph. This project resulted in the City generating renewable energy from wind power. Project complete. Goal: 40% annual reduction of the fire station's energy use. Energy savings to date as of 4/20/11: 2,709 kilowatt hours and \$257.55 saved. 15% of the Fire Station's energy has been wind-powered to date.



Wind Turbines at Peoria Fire Station #9

Public Housing Facility Energy Upgrades

This project will include the improvement of insulation, HVAC performance, and air distribution at the City's Public Housing Authority administration building. Project components will include:

- Changing to a 15.2 SEER Air Conditioning Unit 4 ton
- Changing to a new Gas Furnace
- Removal of fiberglass insulation and installation of R-35 insulation at the livable ceiling area, and air sealing with foam.
- Installation of radiant barrier in the attic/livable ceiling area
- Weather-stripping and sealing of exterior doors and windows, attic.



