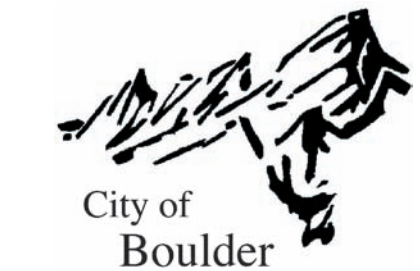


# Sustainable Energy Performance Contracting

Nominating Agency: City of Boulder

**Accomplishment:** In June 2009, City of Boulder partnered with the Governor's Energy Office (GEO) on an Energy Performance Contract (EPC) for energy saving upgrades to 66 City facilities. The City chose McKinstry as its energy services company to design and implement energy efficient facility upgrades that are paid for over time with savings from decreased utility bills. McKinstry provides a guarantee to the City that the energy savings will be achieved. As shown in the graphic, the upgrades don't cost the taxpayer any additional money because they are paid by existing operating funds, and in the long run, the City reaps the benefits of reduced energy use, energy bills and maintenance costs.

The EPC program is an example of the City implementing projects that are both environmentally- and fiscally-responsible. This program is being implemented in multiple phases. Design is completed for both Phase 1 and Phase 2 and the projects are currently in construction.



**Innovation:** City of Boulder has used the EPC program to implement a combination of both energy efficiency measures and renewable energy technologies to significantly reduce carbon emissions and costs, going beyond the typical energy efficiency performance contract. They did so after an energy and sustainability analysis was completed by Brendle Group, who showed that the City's sustainability goals could not be reached with just energy efficiencies. Renewable technologies were added such as solar thermal pool water heating installations at the South Boulder Recreation Center and East Boulder Community Center and solar photovoltaic installations at nine buildings totaling 711 kW of electricity production.

The City's goals for water conservation were also integrated into the EPC in a sustainable manner. The company, Hydrametrics, is providing over 2790 thousand gallons of water a year in savings without replacing fixtures.

**Achievement:** Construction began in September 2010 and 20 percent of the total project has been installed through November 2010, with project completion scheduled for summer 2011. Actual electricity consumption at the Park Central Building for the past two years showed a reduction in peak electricity use in October and November 2010, coincident with the installation of energy efficient lighting and controls. This corresponds to the anticipated 25 percent reduction expected for this facility.

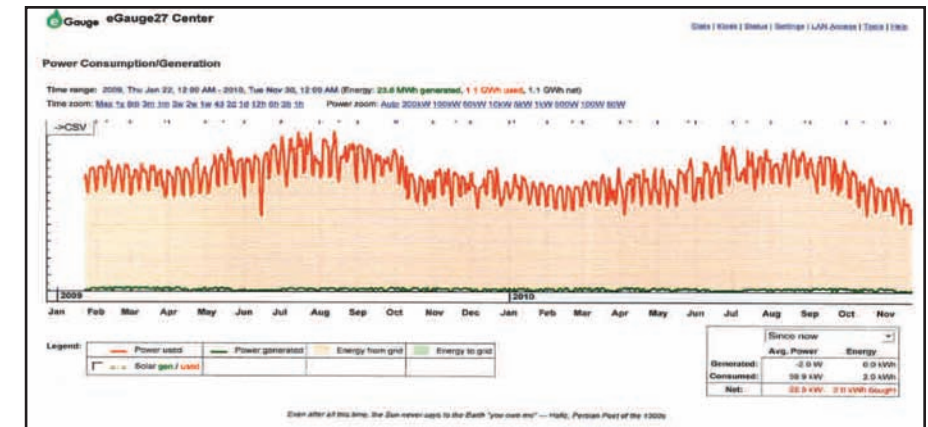
**Transferable:** The Governor's Energy Office developed the formalized energy performance contracting program that our City used to achieve these results. These types of results are transferable to all government entities in Colorado



through participation in GEO's EPC program. A presentation is scheduled in January 2011 at the next GEO Colorado Energy Strategy Group meeting.

**Cooperation:** The Program includes cooperation between City of Boulder, Colorado Governor's Energy Office, US Department of Energy, The Climate Trust, and private sector entities including McKinstry Company, Brendle Group and Xcel Energy.

**Summary:** City of Boulder has taken Energy Performance Contracting to a new level never before seen by the Colorado Governor's Energy Office since it formalized the program in 2000. The financials are outstanding with over \$500,000 in

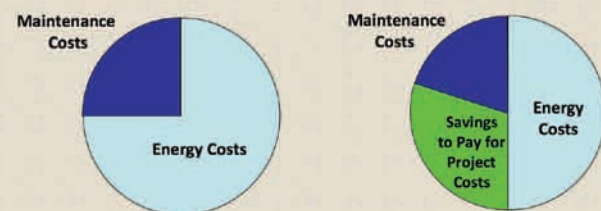


energy savings a year and \$12 million invested with 21 percent funded by grants and rebates. The City's focus on sustainability guided the EPC to include renewable energy resources, water conservation and waste reduction in their program implementation to make it truly meet the City's financial, economic and environmental goals. ●

## HOW DOES ENERGY PERFORMANCE CONTRACTING WORK?

### Energy Savings Performance Contracting (ESPC)

- Finance infrastructure improvements over longer terms (up to 15 years)
- Energy savings generated from improvements are used to make the lease payments



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