

City of Boulder, Colorado

Energy Savings Performance Contract

FACTS

LOCATION

Boulder, Colorado

PROJECT DATES

01/2010 Audit start

08/2010 Audit end

10/2010 Construction start

Ongoing

PROJECT SIZE

66 buildings, 1,500,000 sq. ft.

CONTRACT

Amount: \$9,118,631

Type: Energy Savings Performance Contract



TEAM

PROJECT DIRECTOR

Dennis Jacobs, CEM

ACCOUNT MANAGER

Leslie Larocque

PROGRAM MANAGER

Bryan Hanson, CEM

ENERGY ENGINEER

Steve Ruby, CEM (Lead)

Jaymes McMullin, CEM, LEED® AP, EIT

CONSTRUCTION MANAGER

Garth McCann

CONTACTS

OWNER

Joe Castro

Facilities and Fleet Manager

City of Boulder

303 441 3163

castroj@bouldercolorado.gov

ENGINEER

McKinstry

303 215 4044

lesliel@mckinstry.com

PROJECT DETAILS

In June 2009, the City of Boulder partnered with the Governor's Energy Office on an Energy Performance Contract (EPC) for energy savings upgrades to 66 city facilities. The city chose McKinstry as their energy services company and is using the EPC program to implement a combination of energy conservation measures and renewable energy technologies to significantly reduce carbon emissions and costs. Technologies implemented include:

- Large solar thermal installations for pool water heating (19,300 therms/yr.)
- Solar PV installations at nine buildings totaling 711kW
- Installation of energy efficient lighting and controls
- Retro-commissioning to reduce energy use and improve comfort
- Weatherization of building envelopes
- Mechanical replacements (chillers, boilers, air handlers, etc.) totaling \$1.83M in future capital avoidance

This project leveraged \$1.9M in rebates from Xcel Energy for solar PV and energy efficiency and a \$360,000 grant from the U.S. DOE EECBG program. Xcel Energy is also paying the city over \$1M in renewable energy credit payments over the next 20 years. On behalf of the city, McKinstry wrote successful grant applications to the Colorado Carbon Fund and the city is receiving \$50,000 for selling renewable energy credits produced by the installed solar thermal systems. \$1.5M of Qualified Energy Conservation Bonds were also used to finance this project.

Results

The EPC also integrated the city's water conservation goals and they are now saving over 2,790 gallons per year without replacing fixtures. The project is saving the city an average of 25% in total energy consumption, which equates to over \$550,000/year in utility and maintenance savings. More importantly, the project helps the city meet its carbon reduction goals by saving nearly 20% of total city carbon emissions. The city received an award in January 2011 for this project from the Colorado Chapter of the American Public Works Association.