



The City of Lafayette In 2007, The City of Lafayette, a small city of 25,000 residents in Boulder County began looking for ways to reduce their utility expenses for public buildings, while serving as a community leader in promoting sustainable energy management practices. With the help of Johnson Controls, Inc. and the Governor's Energy Office (GEO), The City of Lafayette was able to employ energy performance contracting (EPC) to achieve these goals.

The City of Lafayette Improves Facilities and Reduces Utility Expenses

Starting Down the Path Toward Savings

The City of Lafayette is pleased to announce the completion of a \$1.2 million energy performance contracting project that will save the City over \$88,000 in annual utility costs, \$17,000 in annual maintenance expenses and avoid the generation of over 959 tons of carbon dioxide emissions annually. The cost savings are equivalent to 25% of the 2007 fiscal year utility expenditures. The avoided emissions are the equivalent to taking 420 cars off the road, planting 2,899 trees or providing energy for 174 average-size homes each year.

Initially, Curt Cheesman, Director of Recreation and Facility Management was skeptical of the process: "I have a responsibility to the taxpayers, and at first this seemed too good to be true," he said. After working with the GEO, Curt earned a solid understanding of the EPC process and recognized that EPC was fiscally responsible and could help the City of Lafayette be a leader amongst municipalities with respect to resource management. "GEO's unbiased third party consultants helped me understand the EPC process and provided the security and confidence I needed to move forward," said Curt.

This project allows the City of Lafayette to significantly reduce their utility costs and carbon footprint, while using those savings to repay the project capital investment over the next 10 years, without increasing the City's operating budget.

"As a smaller city during hard times there was no way we could have done this project without performance contracting"

- Curt Cheesman, Director of Recreation and Facility Management



The upgrades to the City of Lafayette's facilities included new energy efficient roof top units for heating and cooling

In other words, funds that would normally pay for monthly utility expenses will be redirected to repay the capital investment on the project.

These improvements will result in better services for citizens and better working conditions for staff, while helping the City to do their part to preserve the environment in the Colorado Front Range and beyond.



Support From the Top Down

The GEO was instrumental in working with the City Council to convince them that EPC was a good fit for the City of Lafayette. According to Mona Newton, GEO's Central Regional Representative, "Support from the City Council was key to the success of this project." Once the decision to move forward was made, GEO was able to assist in every step of the process from analyzing utility bills and verifying the potential for savings, to ESCO selection and the evaluation of project proposals.

How does EPC Work?

An energy performance contract uses energy and water cost savings to fund capital equipment purchases.

An energy service company (ESCO) helps determine which measures are cost effective, then arranges financing and installs the new equipment, all at no capital cost for the customer. After a rigorous review of GEO's list of pre-approved ESCOs, the City of Lafayette chose Johnson Controls, Inc. as their ESCO. In addition to funding improvements with efficiency savings, Johnson Controls was able to leverage additional funding through utility rebates and grant funding from the GEO.

Going the Extra Mile

In addition to performing the standard work that is done through a performance contract such as lighting retrofits, and mechanical upgrades, the city went a step further and installed both solar electric and solar thermal technology on their community recreation center, and installed biogas utilization technology at the local waste water treatment plant.

The 10 kW solar electric system will generate 13,650 kWh of electricity annually while the solar thermal system, which will be used to heat pool water, will produce an estimated 5,530 therms/year.

The inclusion of solar technology into the project was supported by Xcel Energy's Solar Rewards Program and two grants from the GEO's Renewables in Performance Contracting Grant.

The biogas utilization upgrades at the waste water treatment plant corrected design deficiencies, and provided an offset to burning natural gas for the digestion process. The result is a \$20,000 annual natural gas cost savings to the City, guaranteed by the Johnson Controls, Inc.

City of Lafayette Performance Contract

Highlights, Benefits & Facts

Energy Efficiency Features

- HVAC upgrades
- Building automation systems
- Methane capture
- Boiler replacements
- LED traffic lights
- Solar hot water system for swimming pool
- Weatherization measures
- Computer upgrades

Operations and Maintenance

- Facility maintenance team training
- Ongoing building measurement and verification
- Operational savings by reduced lighting replacement requirements

Fast Facts

- Project size: 11 buildings, 297,433 Sqft
- Avoided CO₂ emissions: 959 metric tons
- Total project cost: \$1.2 million
- Annual utility savings: \$88,000
- Annual maintenance savings: \$17,000
- Pay back period: 10 years

Benefits

- Improved comfort
- More efficient operation
- Improved quality of interior lighting
- Reduced maintenance needs
- Acquisition of needed infrastructure upgrades
- Reduced carbon footprint
- Improved health and safety

Energy Service Company

- Johnson Controls, Inc.

How Can You Take Advantage of Performance Contracting?

GEO is currently working with schools, local governments, higher education institutions, and state agencies throughout Colorado to implement energy performance contracts. More information about energy performance contracting can be found on GEO's website at www.colorado.gov/energy