

Local Government Case Study:

City of Visalia

Background

- Location: Fresno County
- Population: 95,000
- Size: 500 employees, 12 buildings in question
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Summary

In March 2000, Invensys Building Systems helped the City of Visalia conserve energy through audits, planning and implementation of energy projects. In early 2001, the city began three major projects: 1) Upgrade the HVAC systems, 2) replace the majority of its lighting and 3) install LEDs in the city traffic lights. The city received rebates from Southern California Edison (SCE) – \$35,000 for the new HVAC system and \$236,464 for the LED traffic lights. Thus far, Visalia has saved \$143,185 in energy costs. Invensys Building Systems continues to monitor and maintain the changes.

Referenced in Local Government Guides:

- #2, “Reduce Energy Use in Local Government Facilities Through Efficiency Improvements”

Plan

Invensys Building Systems, a multinational firm that does performance contracting, offered to help Visalia conserve energy. Invensys guarantees energy reduction and electricity cost savings: If the expectations are not met, the company will pay the difference between the expected results and actual results. Invensys began a measurement and verification contract with the city in July 2001. The firm will monitor the results every six months to a year for the next 10 years.

The City of Visalia chose to focus on improving the efficiency of their facilities by city following Invensys System’s recommendations and installing energy-efficient models of equipment and retrofitting the lighting systems. Britt Fussel the Engineering & Transportation Ser-

vice Manager was given the task of managing the energy conservation changes. Fussel took suggested changes to the city council for approval.

Programs: Efficiency

✓ **HVAC:** Replaced 55 HVAC Systems with Bryant (Carrier) units in 12 of the city’s buildings.

✓ **Street Lighting:** Installed Dialight brand LED lamps, with a manufacturer’s warranty of 5 years for materials, labor and light degradation, in 79 traffic intersection lights. The 8-inch sections heads were replaced with 12-inch section heads for 17 traffic intersections.

✓ **Lighting:**

- Retrofitted fluorescent T12 fixtures with energy-efficient T8 lamps, electronic ballasts and reflectors in the majority of the city’s 12 buildings.
- Replaced incandescent lighting with CFLs.

Budget and Finance

The overall program cost the City of Visalia \$1,050,529. The net cost was \$775,825 after taking the rebates into consideration. The City of Visalia received a \$236,464 rebate for the LED retrofit. The total cost was \$493,644 (\$253,850 with rebate). The total cost of the facility lighting retrofit was \$315,877. The city received a \$35,000 rebate from SCE for the HVAC replacement, which cost \$241,098. The city also participated in the Lease Purchase Program, under which Visalia borrowed money to implement energy-saving projects and repayed the loan with the energy-savings funds. At the end of the 10-year loan, the money spent, will be less than or equal to the energy-saving cost by Invensys.

Results

The results of the energy reduction programs were not in yet as of the date of this report. The financial savings are based on projected estimates. The net present value of energy savings for 10 years is \$1,263,889 with savings escalating 4 percent a year. The net present value of the HVAC retrofit for 10 years of energy savings is \$67,015. The net present value of the lighting retrofit for 10 years of energy savings is \$517,388. The net present value of the LED retrofit for 10 years of energy savings is \$679,537.
