



Contract Details

Contract Type:

Energy Savings Performance Contract;
Guaranteed Energy Savings;
Renewable Energy; Solar

Facility Size:

1.7 million square feet

Energy Project Size:

\$23.1 million

Energy Savings:

\$1.9 million



North Community Police Substation upgraded its solar energy system with the help of ARRA funds. The city's electric bill will be about \$5,000 cheaper.

Summary

According to the 2003 US Census, the City of Henderson (City) was one of the fastest growing cities in the United States. With such growth, the City needed improvements. In this partnership, and by use of a performance contract, Ameresco's combination of energy conservation and operational savings measures has helped the City achieve its goals through appropriate planning, retrofits, and equipment replacements.



Robert A. Swadell Justice Facility. To fund part of the project costs for the Justice Facility, savings were used from retrofitting traffic signals at over 64 intersections to LEDs.

Customer Benefits

The overall savings for the City of Henderson's (City's) Phase 1 project are 41 percent. The improvements deliver approximately 26 percent energy savings at the Robert A. Swadell Justice Facility and 79 percent from traffic signals and computers installed citywide. This provides a guaranteed annual savings of \$255,804.

The Phase 3 \$20,117,648 energy savings performance contract was entered into that includes 60 additional city buildings (an aggregate area of 1,586,213 square feet). The projected savings for the project are 18 percent citywide, which is \$1,671,761 million annually.

The Phase 3 lighting upgrade included 28,000 streetlights and is expected to generate 11,659,437 kilowatt-hours in electrical savings, or \$826,799 annually. Operations and maintenance savings for street lighting are guaranteed at \$90,683.

Construction began on Phase 1 and 2 in August 2006 and was completed by May 2007.

Construction began on Phase 3 in February 2009 and is scheduled for completion in February 2011.

Environmental Benefits

Pollution emission reductions in pounds per year for all phases are 34,929,951 carbon dioxide, 56,841 nitrogen dioxide, and 64,196 sulfur dioxide; total energy saved is 79,945 million British thermal units. The reductions are equivalent to removing 3,045 cars from the road or powering 1,666 houses per year.



All Photos are courtesy of the City of Henderson.



About the City of Henderson, Nevada

Officially incorporated in 1953, the City of Henderson is the second largest city in Nevada and home to over 270,000 residents. As the largest full-service city in the State of Nevada, Henderson is nationally recognized for accredited departments, such as fire, police, and parks and recreation, and award winning services including the Development Services Center. In addition, the city has continued to be fiscal stewards by maintaining one of the lowest tax rates and becoming the first to achieve the highest bond rating of any other Nevada municipality.

Learn more at

www.cityofhenderson.com

About Ameresco

Ameresco, Inc. is one of the leading global energy services providers. We deliver long-term customer value, environmental stewardship, and sustainability through energy efficiency services, alternative energy solutions, supply management, and innovative facility renewal strategies. The company has over 650 employees in regional offices throughout North America. Ameresco, Inc. has constructed billions in energy projects throughout the world.

Learn more at

www.ameresco.com



Services Provided

Phase 1 included upgrades at the Robert A. Swadell Justice Facility. Measures included energy management control system upgrades, computer control power management software installation, boiler replacement and efficiency improvements, exterior lighting replacements, plumbing maintenance improvements, window shades, sally port modifications, and sally port roll-up door replacements. Retrofit of the traffic signals to LED at 64 intersections was included so that the savings could fund part of the Justice Facility's energy project cost.

Phase 2 included upgrades at the Whitney Ranch Recreation Center. Measures included a heat pump pool heater system, circulation pump variable speed control, and power conditioning system installation.

Phase 3 citywide measures include retrofitting or replacing over 4,000 building lighting fixtures, installing over 1,500 new lighting occupancy sensors, installing or upgrading an energy management control system in 14 facilities, replacing 17 boilers in nine facilities, replacing chillers in three facilities, retrofitting over 310 plumbing fixtures, and installation of ultraviolet water treatment on indoor swimming pools. As an extension of the base contract, Ameresco installed two 15-kilowatt photovoltaic arrays, provided rooftop HVAC replacements, and provided an energy management system at emergency services facilities. In addition, the Phase 3 project includes retrofitting up to 28,000 street lights with induction lighting technology. The induction lighting is expected to reduce energy consumption of the systems by approximately 65 percent and increase the lamp life by almost seven times its current life expectancy.

GPS-mapped locations were provided for every streetlight and traffic signal. This valuable information is used for assisting in infrastructure and asset planning, providing maintenance history on every lamp and pole, and assisting in determining the appropriate resource allocations needed.

