



**Contract Details**

*Contract Type:*

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

*Technology Type:*

Photovoltaic System;  
Renewable Energy

*Facility Size:*

1.7 million square feet

*Energy Project Size:*

\$23.1 million

*Energy Savings:*

\$1.9 million

**Summary**

According to the 2003 US Census, the City of Henderson (City) was the fastest growing city 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 have helped the City achieve its goals through appropriate planning, retrofits,



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.



North Community Police Substation upgraded its solar energy system with the help of ARRA funds.

**Customer Benefits**

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

The Phase 2 project included upgrades at the Whitney Ranch Recreation Center.

A Phase 3 \$18,540,454 energy savings performance contract was entered into which included 60 additional city buildings having an aggregate area of 1,586,213 square feet. The projected savings for the project is 18 percent citywide, which is \$1,671,761 million annually. This includes facility improvements and the citywide street light upgrade.

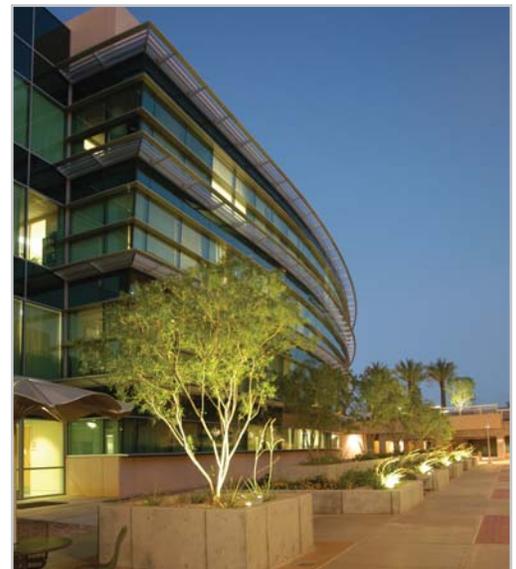
The lighting upgrade, which includes 28,000 streetlights, generates 11,853,778 kilowatt-hours in electrical savings, which equates to \$840,580 annually. Operations and maintenance savings for street lighting is guaranteed at \$87,000.

Construction began at the Robert A. Swadell Justice Facility in August 2006 and was completed by May 2007.

Construction began on the Phase 3 citywide project in February 2009 and was completed in February 2011.

**Environmental Benefits**

Pollution emission reductions in pounds per year for all phases are 34,929,951 carbon dioxide, 56,891 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, NV

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, 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](http://www.cityofhenderson.com).

## About Ameresco

Ameresco, Inc. (NYSE:AMRC) is one of the leading energy efficiency and renewable energy services providers. Our energy experts deliver long-term customer value, environmental stewardship, and sustainability through energy efficiency services, alternative energy, supply management, and innovative facility renewal all with practical financial solutions. Ameresco and its predecessors have constructed billions in projects throughout North America.

For more information about Ameresco and our full-range of energy efficiency and renewable energy solutions, please visit [www.ameresco.com](http://www.ameresco.com).



## Services Provided

For the Phase 1 Robert A. Swadell Justice Facility, technologies included energy management control system upgrades, computer control power management software installation, boiler replacement and efficiency improvements, exterior lighting replacement, plumbing maintenance improvements, window shades, sally port modifications, and sally port roll-up doors replacement. 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 upgrades were provided at the Whitney Ranch Recreation Center, which included a heat pump pool heater system, circulation pump variable speed control, and a 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 15 boilers in six 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 30-kilowatt photovoltaic arrays, replaced rooftop HVAC units, and provided an energy management system at emergency services facilities.

The Phase 3 project also included retrofitting up to 28,000 street lights with induction lighting technology. The induction lighting reduces energy consumption of the systems by approximately 65 percent and increases the lamp life by almost seven times its current life expectancy.

GPS-mapped locations of every streetlight and traffic signal were also provided. This valuable information will be 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.