

Contract Details

Contract Type:

Budget-Neutral Upgrades; Energy Savings Performance Contract; Guaranteed Energy Savings

Technology Type:

Photovoltaic System; Renewable Energy; Solar Thermal; Wind Generation

Facility Size:

48 buildings; one million sq. ft.

Energy Project Size:

210 kW Photovoltaic
51 kW Wind
\$19 million

Annual Energy Savings:

\$982,684

Summary

The City of Reno energy program was funded through a combination of Federal Energy Efficiency and Conservation Block Grants, Clean and Renewable Energy Bonds, Qualified Energy Conservation Bonds, Recovery Zone Economic Development Bonds and utility rebates, making this the first instance in the nation where a major municipality has been able to successfully integrate American Recovery and Reinvestment Act (ARRA) funds and rebates to create a fully self-funding project.



The Mayor placing a light bulb in the City's now energy efficient welcome arch.



As part of the comprehensive lighting upgrade project, Ameresco replaced over 2,000 incandescent 11 Watt light bulbs with 2 Watt LED light bulbs.

Customer Benefits

The City of Reno selected Ameresco in 2008, following a competitive process, to begin a year-long energy resource audit that included electricity, natural gas and water use at all city facilities. The audit was submitted to City staff and in June of 2009, the City Council approved a series of energy conservation and renewable energy projects as Phase I, with the remaining projects approved in September of 2009 as Phase II.

Truly a community effort, Ameresco employed local labor, vendors and subcontractors for both phases of this project.

Accolades

"Working with Ameresco on this project has been great. They worked as a true partner on the project. We met weekly and discussed the projects as they moved forward and adapted throughout the process as new opportunities and problems became known. The staff was truly responsible and responsive."

*- Jason Geddes, Ph.D.
Environmental Services Administrator
City of Reno*

Environmental Benefits

Through the City's partnership with Ameresco, Reno is expected to save the equivalent of 5,403 tons of CO₂ per year. The green benefit from this carbon reduction is roughly equal to:

- ▶ 1,059 cars taken off the road for one year
- ▶ 1,152 acres of pine forest absorbing carbon

Services Provided

Ameresco provided energy conservation measures for the City, including a comprehensive lighting upgrade, HVAC and motors upgrades, chiller/tower replacement, boiler plant replacement, pumping variable frequency drives installation, direct digital controls (DDC) upgrade, network power management, swimming pool covers installation, solar photovoltaic installations (210 kW AC), solar thermal hot water heating systems, wind generation turbines (51 kW) and a digital green energy dashboard.

Ameresco completed three solar photovoltaic installations. The solar PV systems were installed at the Reno Events Center (180 kW AC) and Parking Gallery (30 kW AC). The 180 kW AC Watts California Energy Commission (CEC) and 30 kW AC Watts CEC ratings were chosen to optimize the available rebates. The electricity generation is monitored from the Alerton controls system and a graphic is included on the Corp Yard computer for tracking output and monitoring the system. This information is also displayed on the City of Reno Green Energy Dashboard that monitors all Ameresco solar and wind energy generation installations throughout the City. The energy efficient work related to Phase I included lighting retrofits at the police department storage warehouse and lighting in a 7-story parking garage.

Ameresco installed nine wind turbines at four separate sites throughout the City for a total of 51 kW energy. The locations of these installations included City Hall, Stead Water Treatment Plant, Mira Loma Park, and Parking Gallery. Eight different mounting

About the City of Reno

Reno is the county seat of Washoe County, Nevada, United States. The city has a population of about 220,500 and is the most populous Nevada city outside of the Las Vegas metropolitan area. It sits in a high desert valley at the foot of the Sierra Nevada Mountains. Reno, known as "The Biggest Little City in the World," is famous for its casinos and is a tourist destination for seasonal and year-round outdoor activities. Situated near three major lakes and the mountains, Reno is also home to several higher education institutions.

Learn more at www.reno.gov.

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 <http://www.ameresco.com> and <http://southwest.ameresco.com>.



Ameresco installed two wind turbines at the City of Reno Stead Waste Water Treatment Plant.

Services Provided (cont.)

and installation methods were utilized to suit the various project sites.

With equipment at City Hall dating back to the 1960s, several construction crews replaced chillers, boilers and mechanical equipment which assisted the City in reducing the backlog of their deferred maintenance, thus reducing their overall maintenance budget. The environmental retrofit projects, part of the Energy Efficiency and Renewable Energy Initiative, were a matter of dollars and cents in a time when government budgets could use every penny available, officials said.

Phase II of this partnership is entirely focused on energy efficiency and energy savings. The City was struggling with budget shortages and cuts that were taking money away from maintenance in the form of staff and material purchases. Ameresco was able to identify more than the standard quick payback work and opportunities for larger changes to implement. The HVAC equipment at the 17-story City Hall was original to the building, which was erected in 1960. Ameresco replaced boilers, chiller, motors, pumps and control systems at the location. The upgrades at this building alone are expected to generate energy savings of at least 40%. With all the equipment located on the top floor, work on the project had to take place while the building was unoccupied and accessible by a large crane. Ameresco met the tight schedule and logistical challenges of this building without compromising the safety and comfort of the occupants.



The retrofits at City Hall are expected to reduce operating expenses to \$2.54 per square foot from \$4.54. Local subcontractors assisted in performing these upgrades. Employing local companies for these projects was a priority for the City as the region looks to recover from the economic recession, officials said. One of the more notable components of the project included completely re-lighting the famous Reno welcome arch with energy efficient LED bulbs. A ribbon cutting ceremony was held at the arch where the Mayor of Reno installed the final bulb. The ceremony was attended by local media, city council and the local mascots from University of Nevada, Reno and the Reno Aces.

This project also included the development and implementation of the City of Reno Green Energy Dashboard. This web-based energy information system (EIS) is accessible to the public and allows regionally-based renewable energy system owners to display their data on a regional geographical information system map. This map displays the City of Reno's renewable energy sites including the technology type, generation output, subcontractors involved and location. This system is the first of its kind in Northern Nevada.



Screenshots from the City of Reno Green Energy Dashboard developed and implemented by Ameresco.