



Contract Details

Contract Type:

Energy Efficiency; Energy Savings Performance Contract; Guaranteed Energy Savings; Photovoltaic System; Renewable Energy

Contract Value:

\$14.8 million

Energy Savings:

\$1.8 million annually

Summary

NARA is solely responsible for safeguarding records for all three branches of the United States government. The records are preserved at Archives I in Washington, DC, Archives II, College Park, MD, and 13 Presidential Libraries across the country and in Regional Record Service Facilities. Ameresco partnered with NARA on both energy efficiency and renewable energy projects. In 2008, NARA was a recipient of the prestigious Presidential Energy Award.



Customer Benefits

Ameresco implemented an Energy Savings Performance Contract (ESPC) at the National Archives and Records Administration (NARA) Archives II facility in College Park, Maryland. Energy Conservation Measures (ECMs) included a facility-wide energy management system (EMS) upgrade; lighting upgrade; water conservation; chiller optimization; air handling unit (AHU) re-balancing; and heating optimization.

Ameresco's implementation of the EMS upgrade supported the mission of the Archives by extending the life of the records, increasing the Time Weighted Preservation Index (TWPI) by exposing the records to colder temperatures. The endpoint of the life span of the records was increased by the decrease in temperature in the areas of the facility where the records are kept. Ameresco was made part of the NARA Energy Management team. This team was a recipient of the 2008 Presidential Award for Leadership in Federal Energy Management.

Accolades

"NARA prides itself on being a leader in operational efficiency and energy conservation at all its facilities. The initiatives we've launched in collaboration with Ameresco have established us as a leader among all Federal agencies on energy conservation. In addition to saving taxpayers money, we have become a resource for our peers. Now, other organizations are looking to NARA for ideas and innovations."

*— Mark Sprouse, Director
National Archives Facilities and Personal
Property Management Division*

Environmental Benefits

Through NARA's partnership with Ameresco, they have reduced their carbon footprint.

The annual green benefits from this carbon reduction equal:

- ▶ the removal of 1,767 cars from the road
- ▶ the removal of 3,223 tons of CO₂
- ▶ the planting of 236,877 trees
- ▶ the powering of 786 average-size homes

Services Provided

The National Archives in College Park, Maryland, opened for research on January 3, 1994. Records held there include the cartographic and architectural holdings; the Nixon Presidential Materials; electronic records; motion picture, sound and video records; the John F. Kennedy Assassination Records Collection; still pictures; the Berlin Documents Center microfilm; and textual records from most civilian agencies and military records dating from World War II.

Ameresco performed an in-depth review of the facility's systems to identify measures that could reduce energy and operating costs. The recommended program significantly upgraded the infrastructure, reduced energy use, addressed specific building operational issues and reduced operations and maintenance (O&M) costs. Ameresco developed and implemented seven energy conservation measures (ECMs).



About NARA

The National Archives and Records Administration is an independent Federal agency that preserves and shares the public records that trace the story of our nation, government and people. From the Declaration of Independence to accounts of ordinary Americans, the holdings of the National Archives directly touch the lives of millions of people. The National Archives is a public trust upon which our democracy depends, ensuring access to essential information that protects the rights of citizens, documents the actions of the government, and reveals the evolving national experience.

Learn more at www.archives.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 www.ameresco.com.



Services Provided (cont.)

The first measure involved a significant energy management control system (EMCS) upgrade, derived from the implementation of eight recommended strategies. These upgrades/strategies included upgrading existing outdated processors and software, new front-ends with the latest graphics, upgrading associated HVAC controls, replacing a limited number of pneumatic actuators with electronic actuators, converting constant-volume air distribution systems to variable-air-volume systems in most non-archival space areas, adding mixed air sensors, replacing defective humidity sensors and thermostats, re-commissioning, and establishing preventive and predictive diagnostic procedures on the EMCS. Miscellaneous control measures included the resetting of the condenser water temperature entering the chiller and the reduction of bathroom exhaust fan runtime.

The lighting retrofit measure followed North American Free Trade Agreement (NAFTA) guidelines for equipment purchase with lighting levels meeting or exceeding existing light levels (with the exception of over-lit spaces.) This measure addressed lighting types that included fluorescent, metal halide, exit lights, incandescent, occupancy sensors, and timer switches, and it affected most spaces throughout the facility and parking garage.

The Heating System Optimization measure included the installation of an Oxygen Control System and the reduction of steam distribution system losses, both of which affected the efficiency of the heating system at Archives II. The savings resulted from minimizing the quantity of excess air and by maintaining a tighter air-fuel ration under all normal operating conditions.

Ameresco installed new high-efficiency motors, adjusted inlet guide vane, and rebalanced the existing air handlers to compensate for the decreased pressure drop from the installation of the new filters installed by the maintenance staff. The fan speeds were optimized for operating cost savings, and fan life was extended.

Archives II used water at the cooling tower, for irrigation, boiler make-up water, and for domestic purposes. To reduce consumption, Ameresco installed low-flow aerators, toilets, showerheads, kitchen sprayers, and we changed valves on urinals.

Additionally, Ameresco has completed a solar roof installation at Archives II and is in the process of developing a second ESPC for NARA at their flagship Archive I facility in Washington, DC. The PV installation was completed in three phases, with a total installed capacity of 103.94 kW. The installation features BP Solar panels manufactured in Frederick, MD, a ballasted RapidRack mounting structure by Unirac, Inc., and SunnyBoy Inverters, all in compliance with the Buy American Act. The panels are mounted at a tilt angle of 10 degrees. Considering NARA's mission, a key design parameter called for no roof penetrations. The ballasted frame attachment method means that there are no roof penetrations required to secure the panels.

As part of the Quality Control Program, the system design was verified by NABCEP Certified Solar PV Installers on the Ameresco team according to the design principles of NABCEP, the National Electrical Code, and other certification organizations and standards.