

Contract Details

Contract Type:

Energy Savings Performance Contract;
Energy Efficiency; Guaranteed Energy
Savings; Water Conservation

Facility Size:

20 school buildings; 16 campuses;
approximately 1.5 million sq. ft.

Energy Project Size:

Phase 1: \$736,345

Phase 2: \$1,797,283

Phase 3: under development

Energy Savings:

Phase 1: \$85,308

Phase 2: \$132,518

Phase 3: under development

Summary

Like many school districts in Washington, the Battle Ground School District is contending with shrinking state support for K-12 education – all the more reason, in their view, to utilize an Energy Savings Performance Contract (ESPC) to make needed infrastructure improvements while saving energy and money. The District initially selected Ameresco Quantum to identify energy conservation measures (ECMs) and develop a pilot ESPC project at Prairie High School. This project included lighting, water conservation, and building automation control upgrades. Pleased with the success of the pilot project, the District had Ameresco Quantum develop a Phase 2 project at additional schools. This project benefitted from an \$850,000 Washington State Energy & Operational Efficiency Grant. In the Fall of 2011, the detailed energy audit will begin for Phase 3.



Dating back to 1909, the Battle Ground School District has a proud history serving its communities and now serves 13,000 students in Southwest Washington. Administrators wanted to upgrade the facilities and lower energy and water use.

Customer Benefits

Under an ESPC, Ameresco Quantum identifies, engineers, and installs conservation measures that reduce consumption of electricity, natural gas and water—improving the learning environment for Battle Ground School District students, faculty and staff while simultaneously improving the District's control of its' buildings, and reducing operational expenses for utilities and maintenance.

Accolades

"Having previously done energy efficiency projects, we were very careful in selecting the best firm with whom to collaborate. In our first project with Ameresco Quantum, they identified and implemented significant energy savings opportunities that resulted in much needed cost savings. Our second project also went well, and now we're auditing additional schools for a third project. It's been a true partnership and the results have exceeded our expectations."

*- David Klemetsrud, Maintenance Supervisor
Battle Ground School District*

Environmental Benefits

Through the District's partnership with Ameresco, they also reduced their carbon footprint. The environmental benefits for phase 1 and 2 include an annual reduction in CO₂ emissions (based on Washington's mix of energy sources) of 2,351,911 pounds, which is equivalent to:

- ▶ the planting of 75 acres of trees
- ▶ the removal of 205 cars off the road

Services Provided

In 2006, the District selected Ameresco Quantum for the first phase of an energy savings performance contract (ESPC) at the Prairie High School. Originally constructed in 1977 with a major remodel and addition in the 1990s, the school includes eight buildings totaling 217,000 square feet and is an all-electric facility. Utilizing its proprietary process, Total System Evaluation, Ameresco Quantum's team of energy experts measured and monitored all significant energy consuming equipment for a month during the heating season, interviewed staff, and reviewed plans, time schedules and facility use. With this detailed energy baseline, the team had a clear picture of how the buildings operated and focused conservation measures on three key areas: lighting, building automation controls and water.

A comprehensive lighting program included retrofitting or replacing all T-12 lights, replacing 400 watt metal halide fixtures with T5 fluorescent lighting, and replacing incandescent exit signs with LED fixtures. Light levels were maintained or improved while lighting energy consumption was reduced by more than 50% – along with the District's utility and maintenance expenses.

A comprehensive building automation controls upgrade was developed and implemented. The audit revealed that parts of the old hybrid building controls had failed and equipment was running constantly. A new direct digital control (DDC) energy management system was designed and installed to take advantage of better occupancy controls, night set-back and

About Battle Ground School District

The Battle Ground School District in northeast Clark County, Washington, has 20 schools spread over 271 square miles. The district celebrated its Centennial in 2009-2010. A hundred years earlier, during the presidency of William Howard Taft, two one-school districts – Maple Grove and Dublin – merged and consolidated into what is today the Battle Ground district. During the first six and a half decades, 54 small, rural districts were folded into it, the last one – Yacolt – in 1975. Today, Battle Ground Public Schools serve more than 13,000 students.

Learn more at
www.battlegroundps.org.

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://quantum.ameresco.com>.



Above is one of the boilers inside the boiler room at the Captain Strong Primary School. The partnership with Ameresco under an ESFC will enable the District to upgrade old equipment and become more efficient without imposing constraints on local taxpayers.

Services Provided (cont.)

demand control ventilation. Additionally, the new system allowed the maintenance staff greater access to monitor the energy systems, including remote access during the times no one is on-site.

Thanks to the new energy management system, energy consuming equipment starts up only for occupied spaces and varies start times throughout the facility to reduce demand charges. The new CO₂ occupancy sensors and ventilation controls bring in only the amount of outside air that's needed, greatly reducing energy consumption associated with mechanical equipment and improving indoor air quality.

Due to the District's high water and sewer costs, water conservation measures were implemented. These included adding tamper-proof aerators to hand washing faucets and retrofitting toilets and urinals with low flow devices or installing new fixtures.

Ameresco established a construction schedule that ensured work did not interfere with school activities and the District was kept apprised of progress in bi-weekly meetings. The District approved all plans, equipment and sub-contractors, including the selection of the building controls vendor. This approach provided the District both transparency and control throughout the entire project.

Phase 1 energy savings has exceeded the District's

expectations. In part because of the local electric utility's confidence in the accuracy of the Total System Evaluation process, the District was awarded \$108,911 in rebates to help fund the project. Subsequently, the project received an Energy Star rating from the U.S. EPA.

The results of Phase 1 lead to the development of two more projects that encompass additional schools within the District. Phase 2 was developed on a compressed timeline to take advantage of Energy and Operational Efficiency Grants available from the State of Washington. Ameresco completed the audit and assisted the District in securing an \$850,000 grant from the Department of Commerce, and well as additional utility incentives to fund Phase 2.

The Phase 2 lighting retrofit and replacement program focuses on interior and exterior lighting fixtures at various sites throughout the Battle Ground School District. Although most of the District's T12 lighting had been previously retrofitted, Ameresco is retrofitting remaining T12s and replacing inefficient HID lighting in gyms, cafeterias, multi-purpose rooms and other spaces. Outside lighting, including wall packs and parking lot lighting is also being replaced. In addition to saving energy, the District will benefit from greater consistency in the lighting fixtures and replacement parts.

The grant also afforded the District the ability to retrofit or replace aging plumbing fixtures to reduce water consumption. In total the Phase 2 water saving measures are expected to save over 40% of water consumption as well as significant energy used for domestic hot water.

Phase 3 will start baseline measurement, monitoring and audit work in the Fall during the heating season. It is anticipated the audit will encompass the heating and related system at the remaining District facilities.