

Contract Details

Contract Type:

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

Facility:

4 school campuses; 752,100 sq. feet

Energy Project Size:

\$1,999,256

Energy Savings:

765,350 kWh
45,000 gallons of fuel oil
1,022,000 gallons of water

Summary

With an average age over 65 years, and many buildings dating back to the 1910s, the Portland Public School District understands the challenges of operating and maintaining older facilities. Increasing utility rates pose an added challenge by “eating away” the financial resources available to maintain the facilities in good condition. Faced with these challenges, Portland Public Schools was looking for a way to capture utility cost savings to fund facility improvement projects. They decided to run a pilot program to evaluate energy saving performance contracting. With the success of the pilot project, Portland Public Schools has expanded the scope to address the entire District.



With the help of Ameresco and its proprietary process, Total System Evaluation, the Portland Public School District is updating infrastructure and reaping the benefits of cost savings with minimal capital investment through a multi-phase partnership. The Cleveland High School (above) was part of the pilot program.

Customer Benefits

By partnering with Ameresco Quantum, Portland Public Schools (PPS) was able to obtain almost two million dollars in facility improvements that were self-funded through tax credits and utility cost savings. Using Ameresco Quantum's proprietary Total Systems Evaluation method, the District was able to maximize the amount of tax credits and utility savings. Utilizing the Energy Saving Performance Contracting (ESPC) model enabled PPS to minimize the project's cost and risk, while retaining the flexibility to tailor the project to their needs.

Accolades

“Ameresco’s thorough approach and attention to detail have provided many energy savings opportunities throughout the Portland Public School District. Ameresco consistently provides transparent communication with the owner and the engineering competence to evaluate complicated building and control systems to tailor energy projects to meet our mission to reduce energy consumption. They have proven themselves as dedicated, thorough, and effective partners on every project we have worked with them on.”

*– Sharon Raymor, PE, Project Manager
Portland Public Schools*

Environmental Benefits

Through the District's partnership with Ameresco, Portland is expected to save the equivalent of 830 metric tons of CO₂ per year. The green benefit from this carbon reduction is roughly equal to:

- ▶ 350 acres of pine forest absorbing carbon
- ▶ 160 cars taken off the road for one year
- ▶ 72 households powered for one year

Services Provided

Faced with numerous challenges, Portland Public Schools was looking for a way to capture utility cost savings to fund facility improvement projects. They decided to run a pilot program to evaluate energy saving performance contracting. This project development and contracting method combines guaranteed savings and performance along with guaranteed maximum project pricing, resulting in a budget-neutral approach to improving facilities. A competitive selection process was conducted in 2007 to find an Energy Services Company (ESCO) that could best deliver the program based on their experience with ESPC, technical expertise, and cost-effectiveness. The District selected Ameresco Quantum, and asked them to design a pilot program for four schools including Beaumont Middle School, Cleveland High School, George Middle School and Wilson High School.

Ameresco Quantum applied their proprietary Total System Evaluation process to analyze the utility consumption of the facilities and to uncover cost-effective projects that would improve the schools and pay for themselves through utility cost savings. By installing instruments and recording values such as temperature, air flow, water flow, amperage, and kW, Ameresco engineers compiled an accurate energy baseline. This comprehensive and detailed model was used by Ameresco to identify and analyze over ninety projects to improve lighting, HVAC systems, building envelopes, and plumbing fixtures.

For the first phase of implementation, the district selected a package of projects that would provide the greatest impact and value at Beaumont and George



George Middle School



About Portland Public School District, OR

Originally established in 1851, the Portland Public School District serves about 47,000 students attending 85 schools. The goal at Portland Public Schools is that: By the end of elementary, middle, and high school, every student by name will meet or exceed academic standards and will be fully prepared to make productive life decisions. Portland Public Schools is an equal opportunity educator and employer.

Learn more at www.pps.k12.or.us.

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>.



Beaumont Middle School

Services Provided (cont.)

Middle Schools. This included a comprehensive indoor lighting retrofit including replacing lamps with new full-spectrum energy efficient lamps and more efficient ballasts. The new equipment maintains the lighting levels for the students, but provides a better quality of light and saves the District money. An additional lighting measure at the two middle schools included the installation of occupancy sensors in the gymnasiums to turn off the lights automatically when the gym is not being used.

Both schools employed outdated pneumatic controls for the HVAC systems. A new direct digital controls (DDC) system was installed to take advantage of better occupancy controls, load shedding strategies, temperature set-back and demand control ventilation. Both middle schools were over-ventilating with 100% outside air, which is very expensive to heat in the winter. The new controls are designed to bring in the proper amount of outside air. Additionally, the new system enabled the maintenance staff greater ability to monitor the energy systems and have remote access during the times when no one is on-site.

Ameresco realized the District could also save a considerable amount of money by converting the fuel oil-fired boilers at the George and Beaumont Middle Schools to natural gas-fired boilers. Ameresco worked with the local utility to bring natural gas to the two campuses. During the summer months, Ameresco upgraded the burners on the boilers and abated and filled the buried tanks to mitigate their

environmental impact. Because water and sewer costs are so high in the District, toilets and faucets were replaced with low flow models, and new controls were added to the urinals to eliminate continual flushing. To help pay for all of this work, Ameresco Quantum helped the District to qualify for over \$100,000 in funding from the Oregon Business Energy Tax Credit.

The second phase of the pilot program included comprehensive lighting improvements at Cleveland and Wilson High Schools. The third phase of the pilot provided improvements to the HVAC systems at Wilson High School during the summer of 2011.

The District's confidence in the proven results of the pilot program has led to the development of two more projects. Phase Two includes the Blanchard Education Service Center, the District's 380,000 square foot administration building. Phase Three will encompass six additional school campuses and several district-wide energy and water efficiency measures.



Wilson High School