

Custom Efficiency

for Complex Projects



Caldwell School District

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"We are committed to energy efficiency and teaching children the importance of reducing their carbon footprint in the world and caring for the environment."
—Jennifer Swindell, Caldwell School District Public Information Officer

Energy Efficiency Upgrades Help Improve Learning Environment and Save Money for Taxpayers

The Business

The Caldwell School District is the largest employer in Caldwell, Idaho and provides jobs for 800 people. There are 10 schools in the district with approximately 6,000 children in attendance.

The Challenge

Many of the Caldwell School District's buildings are dated and inefficient. The oldest school is more than 100 years old.

Caldwell Superintendent Roger Quarles is committed to creating a high-quality learning and teaching environment while reducing energy consumption. He believes that green schools provide a healthy place for students and teachers.

Three years ago, the Caldwell community helped the district develop a comprehensive strategic plan. They examined the strengths, weaknesses, opportunities, and trends in Caldwell. One recommendation of the plan was to improve on the inequities among the school buildings.

The Solution

The Caldwell community proposed major conservation and mechanical upgrades in some schools, and, in October 2008, the community overwhelmingly approved the bond to perform these upgrades.

The Caldwell School District chose seven schools for major energy efficiency upgrades. The design was created in 2007 and early 2008, and project construction commenced in the summer 2008.

All projects were completed before the start of classes in early September 2008.

Exterior doors were weather-stripped to reduce infiltration and unneeded heating and cooling conditioning. Direct digital controls (DDC) were installed, including night setback, an economizer, and other scheduled setpoint controls that reduce space conditioning requirements.

In addition, lighting fixture upgrades reduced lighting, heating, ventilation, and cooling consumption. More than 1,000 energy-efficient light bulbs were installed to replace older, energy-consuming bulbs. Occupancy sensors were also installed to reduce the number of lighting hours used. Improved window glazing reduced solar heat gain and therefore reduced cooling demand. Retroactive commissioning

was performed to tune-up and calibrate heating, cooling, and ventilation systems for optimum performance.

The Savings

The project energy savings are the equivalent to the total average energy use of 123 typical Idaho homes per year or the planting of 311 acres of trees. Projections suggest more than \$1,313,419 worth of savings on district electric bills per year.

The Outcome

Labor and materials for the projects totaled \$5 million. Swindell said, "There was a great savings on heating and cooling energy efficiency and an impact on learning within the schools because the classrooms are now more comfortable. In addition, there is a large savings in tax dollars for our community."

The Bottom Line

Idaho Power's Custom Efficiency program provided the Caldwell School

District with a \$281,362 incentive for the energy efficiency upgrades. "We are committed to spending taxpayer money wisely and efficiently. Our schools are now healthier, safer, and cheaper to operate in the long run," Swindell said.

The Caldwell School District is building two new "green" elementary schools in 2009, which are scheduled to open in the fall and are expected to save millions of dollars in electricity bills.

If you are looking for similar energy-saving success for your business, Idaho Power can help. Idaho Power offers a complete suite of energy efficiency programs for commercial and industrial businesses. The Custom Efficiency program assists large commercial and industrial customers in identifying and paying for energy efficiency improvements. Easy Upgrades offers incentives of up to \$100,000 for energy-saving retrofits within existing commercial and industrial buildings. The Building Efficiency program offers

incentives of up to \$100,000 per project to offset part of additional capital expenses for more efficient lighting designs, cooling systems, controls, and building shells in new commercial and industrial construction projects. FlexPeak Management, a demand-response program, offers commercial and industrial customers recurring payments for reducing a set amount of electricity consumption in response to Idaho Power's peak demand and other system needs.

Go to www.idahopower.com/business or call 208-388-5624 for more information on how Idaho Power can help you save energy and money.

This success story was produced in cooperation with, and approval from, Idaho Power customer Caldwell School District.