



CAMAS SCHOOL DISTRICT LEVERAGES BOND FUNDS TO BOOST ENERGY EFFICIENCY

SCHOOL INVESTMENT SAVES AN ESTIMATED \$42,300 ANNUALLY AND ENHANCES THE LEARNING ENVIRONMENT

When voters in Camas, Washington, approved a school bond measure in 2016, it opened the door for Camas School District to build new schools and upgrade existing ones. The district, a customer of NW Natural, opted to make energy efficiency a big part of that effort. In less than three years, Camas School District invested \$485,500 in energy-efficiency improvements at seven schools—slashing annual natural gas use by an estimated 53,400 therms and energy costs by an estimated \$42,300. “That’s money we can put to better use providing core services for students and staff,” said Jessica Beehner, operations supervisor, Camas School District. “The investments have also made our schools healthier and more comfortable, enhancing the learning environment.”

New buildings, such as Lacamas Lake Elementary School and Discovery High School, benefited from high-efficiency natural-gas-fired condensing boilers and water heaters. Existing schools received a variety of improvements. “We found ample room for efficiency gains, even in schools built as recently as 15 years ago,” said Beehner. “Today’s HVAC equipment and digital controls are much better, and in one school, we discovered fans that had been installed backwards. No wonder it was always too warm and stuffy.”

At Camas High School, the district installed variable frequency drives (VFD) on the air handlers serving the gymnasium, cafeteria and other large areas where occupancy varies widely throughout the day. In combination with custom building controls, VFDs adjust the speed of fans—ramping them up when a lot of students are present and slowing them down when occupancy is low.

PROJECTS-AT-A-GLANCE

Improvements

- High-efficiency natural-gas-fired condensing boilers and water heaters
- Variable frequency drives
- Demand control ventilation
- CO2 sensors
- Custom building controls

Benefits

- Energy cost savings
- Consistent temperatures
- Healthier indoor air
- Enhanced learning environment
- Fewer help tickets for maintenance staff

Financial Analysis

- \$485,500 project cost
- \$165,900 cash incentive from Energy Trust
- \$42,300 estimated annual energy cost savings

Benefits

- 53,400 therms
- 313 tons of carbon dioxide





At Skyridge Middle School, a new demand control ventilation system uses carbon dioxide sensors to continuously fine-tune the amount of outside air. “This was a great upgrade,” said Beehner. “Skyridge teachers often combine classes, and the system automatically makes adjustments for occupancy. We’re not only saving energy, but indoor air quality has improved.”

The district replaced aging boilers at Liberty Middle School and Prune Hill Elementary School with high-efficiency natural gas condensing models. Liberty, as well as Hayes Freedom High School, also benefited from custom building controls that optimize the operation of equipment. “Gone are the days when buildings are cold when students and staff arrive,” said Beehner.

Camas School District worked closely with Energy Trust of Oregon throughout the process and received \$165,900 in Energy Trust cash incentives, made possible by NW Natural ratepayers in Washington. “Energy Trust estimated the savings for us upfront. Understanding how much we’d save, plus knowing we’d receive cash incentives, helped the district move forward on these projects.”

To help keep the momentum going, Beehner and maintenance staff have also taken advantage of Energy Trust’s incentive for Building Operator Certification® (BOC), a nationally recognized program that gives building operators the skills and knowledge to improve the energy efficiency of their buildings. “The BOC course helped us better understand our building systems and technologies,” said Beehner. “It also connects us with a network of building operators who share ideas and strategies.”

Although the bond measure provided the funds to invest heavily in recent efficiency upgrades, Camas School District is no stranger to energy improvements. The district has been working with Energy Trust since 2010 to reduce energy use in schools, and administration and maintenance buildings. Including the savings from above projects, Camas School District has decreased annual energy costs by an estimated \$73,300.



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As stewards of our taxpayers’ money, we’re committed to doing all we can to improve energy efficiency in our schools.

Jessica Beehner,
operations supervisor,
Camas School District

