



School Dist:.....Mitchell 55J
Project Type:.....Lighting Retrofit
Stimulus Funds: ...\$11,670
Savings/yr:\$1,241

Small school district knows how to get the job done

When opportunity knocks, Sue Horton is ready.

Horton, superintendent of tiny Mitchell School District in rural North Central Oregon, was the first in Oregon to file an application for American Recovery and Reinvestment Act (stimulus) funds when they became available.

She wanted money to replace the old inefficient lights in the Mitchell School classrooms and gymnasium.

Horton said it was a matter of perfect timing. In 2008, a district teacher got the students interested in finding ways to conserve energy at the school. This prompted her to request help

from their utility, Columbia Power.

The local electric cooperative got Bonneville Power Administration (BPA) to complete an energy audit in December of 2008. The audit revealed that the school gym built in 1952 had the original 750 Watt incandescent bulbs and the classrooms and shop/annex had outdated T-12 fluorescents.

The recommendation was for a total lighting replacement with energy-efficient T-8 fluorescent lamps and new electronic ballasts. The audit showed the expected reduction in electricity use for lighting would be an impressive 81 percent for the gym, 66 percent for the classrooms and 37 percent for the shop/annex.

But, even with this tremendous reduction in electrical usage and the availability of some

Columbia Power funds, the tiny school district with a total of 70 kids in K-12 didn't have enough available funds to go forward with the energy project.

"We were at the point where we could no longer get the incandescent bulbs for the gym lights," said Horton. "We knew what needed to be done to upgrade the lights, but in this community there was no budget for an upgrade."

In the summer of 2009 the Oregon Department of Energy announced the availability of funds for energy projects in public buildings. BPA notified their utilities who in turn notified Horton.

With the audit already completed, Horton wasted no time. Her application was the first to arrive in the door at the Oregon Department of Energy for the American Recovery and Reinvestment Act (ARRA) stimulus funds through the State Energy Program (SEP).

"One of the criteria for energy projects is that the project should be 'shovel ready'" said Paul Egbert, lead SEP Project Manager. "Sue completed the application herself and didn't waste any time getting it in. She beat out all the bigger school districts and other public entities."

"This project could have just died or sat for many years," said Horton. "But the timing of the ARRA grant was just perfect."

In September 2009, the Oregon Department of Energy announced that Mitchell School

District in Wheeler County would receive \$11,670 of stimulus funds.

With Columbia Power contributing \$14,590, Mitchell School District had the funds to complete their \$26,260 lighting upgrade project.



Mitchell School District Superintendent Sue Horton (left) shows Paul Egbert, Oregon Department of Energy Project Manager, the new energy-efficient lights in the Mitchell School library.

"The timing of the ARRA grant was just perfect."
- Sue Horton
Mitchell Superintendent



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The district selected M&W Electric out of Bend to do the work which was completed over the Christmas break.

Horton has received many compliments on the project, especially in the school gym which is used by the entire community. The lights now illuminate the entire space evenly. Occupancy sensors ensure that lights are off when it is unoccupied.



Mitchell School District has a dorm building to board eight students

from surrounding school districts and eight from international locations.

“The international students bring diversity to this school that we don’t have,” said Horton.

It also means that 16 teenagers are living next to the gym and use it after school hours.

“We have a school board member who opens it for the community on Sunday afternoons,” said Horton. “It gets a lot of use.”

For a community that supported 13 logging operations in the 1950s and none today, Mitchell’s economy and its 175 residents are surviving primarily on ranching today.

“It’s gratifying to see these small towns use the stimulus money for school projects that will benefit the kids and the greater community,” said Egbert.

Lighting Considerations for School Gyms

There are a number of issues that should be kept in mind when considering linear fluorescent lighting for school gyms (or other high ceiling spaces) lighting, according to JP Batmale, Energy Analyst with the Oregon Department of Energy’s School Team

Pros for linear fluorescents

- Linear fluorescents can reach full light output quickly when they are first turned on and after the light is turned off then on again. Metal halide or mercury vapor lights take time to warm up. Linear fluorescents can even be controlled using occupancy sensors to save more energy.
- The light output from the linear fluorescents degrades slightly over time while the metal halide light levels drop significantly.
- Custodial staff can wait for several linear fluorescents to fail before replacing lamps. When one metal halide fixture fails it needs to be replaced immediately.
- Linear fluorescents provide better color output (referred to as color rendition) than metal halide or mercury vapor lights. Poor color rendition can make people and objects look dull.
- Cracked linear fluorescents do not emit UV radiation that can burn the eyes of students and staff. Broken metal halide lights with R-type bulbs can present a health hazard and, as of June 2007, are prohibited in Oregon public schools. Mitchell School had the T-type self-extinguishing bulbs in their metal halides.

Cons for linear fluorescents

- Staff must change several linear fluorescents compared to one metal halide.
- T-5 linear fluorescents can be more expensive compared to T-8s and metal halides. In addition, the lamps for most T-5 fixtures are not interchangeable between manufacturers like they are in T-8 fixtures. However, prices for T-5s are expected to drop over time as they did with T-8s after they were introduced.

The Oregon Department of Energy (ODOE) awarded this energy project with American Recovery and Reinvestment Act (stimulus) funds through the State Energy Program. These funds are designated for energy efficiency and renewable energy projects. The U.S. Department of Energy administers the funds, approves the projects and reviews the state’s progress. The Oregon Department of Energy has \$42.1 million in SEP funding. All projects must be completed by February 15, 2012.

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