Oregon Stimulus Funds at Work:

Condon

School Dist:.....Condon
Project Type:.....Lighting Retrofit
Stimulus Funds: ...$7,350
Savings/yr: $1,134

Tough economy nothing new for rural Oregon schools

The economy has been tough in recent years on Condon High School. In the 70s, a nearby air base stimulated the economy and brought in families to the North Central Oregon town. The high school had 200 kids; graduating classes hovered around 60 students. In 2010, the air base is long gone. Wind turbines now dot Gilliam County wheat fields like stars in the country sky. But, wind turbines don't bring people. In 2010, Condon High School (9th through 12th grade) has a total of 35 students, seven teachers, one counselor and 10 staff members.

Condon School District Maintenance Manager Dallas Harsin, right, shows Paul Egbert, Oregon Department of Energy Project Manager, the new energy-efficient Condon High gym lights.

"We've made cuts and more cuts," said Maintenance Manager Dallas Harsin whose wife is a teacher with the district. "We have blended classrooms in the elementary school. We combined our sport teams with Fossil's. We once had four janitors. Now it's just two of us for the high school, elementary school and the swimming pool."

Harsin's cell phone rings: "I'm busy for the next few minutes. Put a bucket under it and I'll come take care of it when I finish here."

It was pretty clear from the phone call that facility improvements haven't been in the Condon School District budget for quite awhile.

Harsin points to the new energy-efficient lights T-8 fluorescent lights in the high school gym. "I'm sure glad for all the help with these," he said.

> **"...we appreciate the money to do this."**
> *- Dallas Harsin*
> *Condon Maintenance Manager*

The new gym lights were paid for in part from a grant from the Oregon Department of Energy with the American Recovery and Reinvestment Act (stimulus) funds through the State Energy Plan. The total cost, $10,230 was paid for with $7,350 of stimulus funds and $2,880 from the school's electric utility, Columbia Basin Electric Cooperative. The new T-8 fluorescent lights replaced 24 metal halide 400 Watt fixtures. (See information on back concerning metal halide lighting.)

The new T-8s are expected to use 50 percent less electric energy for lighting and save an estimated $1,134 a year. Harsin and the janitor were able to install the lights themselves in March saving on installation costs. The school district purchased the product from Keith Illumination Corp in LaGrande, helping the Oregon economy east of the Cascades.

Harsin has found other benefits to the new lights in addition to energy savings and economic stimulus. Previously, only he or the custodian could access the panel box to turn on the gym's metal halide lights. The lights were slow to turn on and made a distracting noise when they did come on. The new lights can be switched on by anyone, come on bright and are quiet.

Harsin originally expected that the new T-8 fluorescent lights might be blocked by the beams that run the width of the gym. He was pleasantly surprised to find that doesn't happen. The new fixtures produce a light that is brighter and illuminates the gym far better than the metal halides that dropped down from the ceiling.

"It worked out well and we appreciate the money to do this," he said. "We could never have done it without those funds."

Harsin is looking forward to next basketball season when the community will really see the visual improvement that the gym lights bring.

In the meantime, Harsin has a leak to take care. Comes with the territory when you work for a small school district in rural Oregon.

OREGON DEPARTMENT OF ENERGY

Metal halide lights can be hazardous if using R-type bulbs

Metal halide or mercury vapor lights are commonly found in public school gymnasiums, especially in older facilities. If the metal halides or mercury vapor fixtures have R-type bulbs, the outer portion of the R-type bulb can break (as frequently happens in gymnasiums), but the inner bulb will continue functioning exposing unsuspecting people to excessive UV radiation.

In June 2007, Governor Ted Kulongoski signed into law Senate Bill 479 which prohibits the use of R-type metal halide or mercury vapor light bulbs in public schools. Senate Bill 479 was introduced after several teachers suffered burns, fever and eye damage as a result of being exposed to excessive UV radiation during a teacher in-service training at a Lake Grove school gymnasium.

The four teachers were sitting directly below a broken R-type bulb and received the equivalent of a month's worth of sunlight exposure compressed into a five-hour timeframe. Neither the school district nor the teachers knew they were being exposed to radiation since the halide bulb continued to function even though the safety cover had been shattered by a stray ball a few days earlier.

The law requires public school districts to replace all metal halide or mercury vapor R-type lamps with a T-type self-extinguishing lamp or replace the metal halide or mercury vapor lighting fixture with an alternative lighting source. (Condon High School's metal halide gym lights had the safer T-type self-extinguishing bulbs for the past four years.)

The Oregon Department of Energy Schools Team recommends that public schools replace metal halide or mercury vapor light fixtures altogether with linear fluorescent lighting.

The linear fluorescents will save the school district considerably on energy use and costs and have none of the hazard exposure from UV radiation.

School districts that currently have metal halides can contact the Oregon Department of Energy Schools Team at 1-800-221-8035.

OREGON DEPARTMENT OF ENERGY

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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