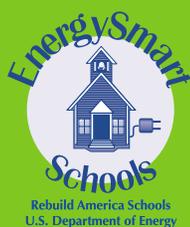




Rebuild America EnergySmart Schools Success Stories highlight schools and school districts that are making smart choices about energy, reducing energy and raising awareness of energy issues.

- New Building Design
- Existing Building Improvement
- Operation and Maintenance
- Renewable Energy Technologies
- Financing Building Improvements
- Energy Education
- Alternative Fuel Buses



The Dalles School District:

From Classes in a Supermarket to a High Performance School

School officials in The Dalles School District in Oregon are working to increase energy efficiency throughout the town's public school system. The school district's goal is to develop a resource conservation management program to reduce energy use, conserve water and explore renewable energy sources. The district's first project under this plan was the construction of an energy-efficient middle school.

The Challenge

The Dalles School District faced a number of obstacles in its efforts to build a new middle school in an area troubled by land-slides. The Dalles Middle School journey began in 1954 when a temporary school opened to accommodate children whose families moved to the area to construct a dam. While plans called for the school to last only two decades, it was used for more than 40 years.



The Dalles School District's new high performance middle school.

Over the years, underground water nearby created a landslide under the campus that caused cracks in the school walls. By the late 1990s, the School Board began closing the school buildings for safety reasons, a move hastened at the request of the state fire marshal.

The school district, which had not built a new school in 50 years, selected a site for building a replacement middle school. However, the community objected to the site's distance from residential neighborhoods. When engineers reexamined the original site they discovered that the city's attempt to stabilize the ground, by removing water through six wells, had succeeded. The site was then approved for a new school after a 30-foot-deep retaining wall or "key trench" was installed down to the bedrock and filled with 12,000 tons of rock to further stabilize the ground.

In August 2001, officials held a groundbreaking ceremony for the new school. With the closing of the original school buildings, the school district was hard pressed to find space to hold classes while waiting for the completion of the new school. The gymnasium, shower rooms and closets of a nearby high school and a vacant grocery store provided space for offices and classes. In just one year, the new high performance school was complete — on time and on budget.

Continued on back

Partnership Facts:

Name of Partnership:
Rebuild The Dalles Schools

Targeted Buildings:
K-12 school buildings

Space Completed:
94,400 square feet

The Dalles Middle School:
Enrollment: 600 Students
Cost of New School:
\$12.5 Million
Energy Savings: 45% less than
conventionally built school

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For more information about
energy-saving technologies,
visit the Business Partners
section of the Rebuild America
Web site: www.rebuild.gov
or contact Rebuild America
at: 252-459-4664.

For more information, visit the
EnergySmart Schools Web site:
www.energysmartschools.gov.

“The Dalles School District has created a high performance school that is an asset to the community, enhances teaching and learning, reduces operating costs and protects the environment.”

— Michael Grainey, director of the Oregon Office of Energy

The Solution

To advance energy-efficiency improvements throughout the school system, The Dalles School District teamed up with the U.S. Department of Energy's Rebuild America program. The partnership, known as Rebuild The Dalles Schools, was formed in March 2001. For the middle school project, Rebuild America provided analyses to verify the optimum energy-saving features to incorporate into the design.

The new school is designed to use 45 percent less energy compared to a conventionally built new school. Because the building includes sustainable building materials and energy-saving technologies, it is the first school in Oregon to apply for the prestigious gold certification under the Leadership in Energy and Environmental Design (LEED™) program.

Key Technologies

- Drainage system features a groundwater pump system so that the 58-60°F water that damaged the old school is now used with a heat exchange system to help heat and cool the new building, as well as to irrigate the school grounds.
- South-facing windows incorporate horizontal shelves that shade the lower two-thirds of each window, reducing the build-up of heat. The top shelves reflect sunlight into rooms which bounces off the ceilings, further brightening the rooms.
- Vertical sunscreens on west windows prevent harsh afternoon sunlight from overheating the building, without obstructing views.
- Skylights and large, energy-efficient windows deliver natural light throughout the school.
- Classrooms are equipped with tubular skylights, which reflect sunlight down metallic tubes.
- Sensors adjust light levels of T-5 fluorescent lamps to supplement natural light.
- Ventilation stacks, with adjustable dampers draw fresh air into the classrooms.

What the Future Holds

The partnership plans to explore a resource conservation management program to reduce energy use and to explore renewable energy sources for the school district.

To learn more visit: www.eere.energy.gov.

A Strong Energy Portfolio for a Strong America

Energy efficiency and clean, renewable energy will mean a stronger economy, a cleaner environment, and greater energy independence for America. Working with a wide array of state, community, industry, and university partners, the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy invests in a diverse portfolio of energy technologies.

EnergySmart Schools is a part of Rebuild America, a U.S. Department of Energy program that focuses on improving communities through energy-saving solutions.



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