



CALIFORNIA ENERGY COMMISSION
High Performance School at
Alder Creek Middle School, Truckee, CA

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The Challenge

Today's California schools are facing quite a list of challenges, which includes tight budgets, an ever increasing student enrollment (1 in 8 students in the United States are educated in CA schools), a growing need for the renovation and building of many schools, and most importantly a higher expectation of faculty and student performance among these compelling circumstances. Every year CA schools spend \$700 million a year on energy; nearly 3% of their total budget and about the same amount as on books and supplies.

Technology Demonstration

When the Tahoe Truckee Unified School District needed to add a middle school, they set a goal for the new campus to be as energy efficient as possible. Built on a 6,000 ft high plateau in the Lake Tahoe basin, Truckee is frequently one of the coldest spots in the nation averaging 17 ft of snow each winter.

The Tahoe Truckee Unified School District built the new Alder Creek Middle School using guidelines developed by the Collaborative for High Performance Schools (CHPS), a non-profit organization made up of utility and government representatives, architects and school facility managers who provide design information, services, training and incentives for creating energy efficient schools. The California Energy Commission contributed design support to make this school a CHPS Demonstration School.

Alder Creek Middle School

- 96,120 sq ft, 2-story building and 9.5 portable classrooms
- Construction cost: \$275 per sq ft
- 1,000 students
- Opened September 2004
- 1st yr energy costs per sq ft: \$1.06

**Energy Efficient/Environmental
Design Features**

- Daylighting
- Siting for daylighting and solar heat gain
- High efficiency ground source heat pump
- High efficiency boiler
- Triple pane operable windows
- Energy Star-compliant high-reflectance, high-emissivity roof
- Low-flow water fixtures
- Recycled-content products
- Minimized noise levels
- Low-Emitting building materials

Benefits

- Lower operating costs (20-40% less for energy and water)
- Improved student and teacher health and higher attendance
- Better student performance
- Onsite teaching opportunity in advanced technology and building design
- Frees up scarce resources for books, supplies, equipment

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