

## **Energy efficiency leading to higher performing schools**

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By [Clay Morgan](#) / Published on Mon, 2011-02-07 12:14

A growing trend in the United States is high-performance schools. However, in this case, high performance does not refer to the students' testing results. Rather, it refers to energy efficiency, and that seems to be having a direct impact on students' grades.

The U.S. Environmental Protection Agency recognizes several characteristics of a high-performance school:

- They minimize pollutant resources, providing excellent air quality
- They are visually, thermally, and acoustically comfortable
- They utilize recycled and sustainable materials to the greatest degree possible
- They are energy efficient, maximizing day lighting and utilizing highly efficient heating, ventilation, cooling, and lighting systems
- They control external factors, particularly those related to erosion from water runoff
- They control water usage in an environmentally friendly manner

By meeting the standards listed above, the EPA predicts that school districts can save 30 to 40 percent on utility costs for newly constructed schools and 20 to 30 percent on renovated schools. The California Energy Commission estimates utility and energy costs to be about \$126 (U.S.) per student, so it is easy to see that the savings can add up.

What's more, the EPA has detected a benefit that does not involve savings in energy costs. An EPA study titled *The California Experience*, which looked at school districts in California, Washington, and Colorado revealed that students with more day lighting performed better academically. In California, for example, students in classrooms with the most day light progressed 20 percent faster on math tests and 26 percent faster on reading intensive tests than their peers.

Additionally, the improvements in air quality, which reduce stale air, pollutants, mold, and other contaminants, resulted in fewer absentees on the part of students and teachers. This directly impacted the revenue of schools, which is in part based on the average daily attendance of students.

The Collaborative for High Performance Schools indicated that meeting the standards set by the Environmental Protection Agency also reduces the load on the electric grid during peak hours, assists with teacher and employee retention by creating a more pleasant work environment.

There is also a direct economic benefit. The California Energy Commission estimates that the average energy cost per student is \$126 (U.S.) per year. The commission stated that high performance designs could save as much as \$50 per year per student.

<http://www.leonardo-energy.org/energy-efficiency-leading-higher-performing-schools>