

The following article was written by Lori Raineri

Energy efficiency programs — making them work means making money

In the world of the 1990s, the barometer of popular thinking—T-shirts and bumper stickers—tell us that we should be concerned about the limits of the Earth's natural resources. We need to use less and recycle more. Many of us already recycle cans, bottles and newspapers in our homes and schools. However, we also need to address the appetite of our school buildings for kilowatts and therms. Almost every building could benefit from an audit of energy use and analysis of efficiency improvements. By reducing our demand for energy and reducing operating costs we can conserve natural resources and the General Fund.

Some of the more widespread energy efficiency strategies include cogeneration (the simultaneous generation of electrical energy and low-grade heat from the same fuel), energy management (automatic provision of energy to match the optimum energy use), lighting replacement (shifting from incandescent to fluorescent, utilizing specular reflectors, installing electronic ballasts to stabilize current), and fleet conversion (from fossil fuels to natural gas). Energy efficiency is a field in which advancement is so rapid that there are new and more exotic strategies being developed every day.

"Think globally-act locally." We've all heard the phrase (maybe read it on a T-shirt or bumper sticker). It's a nice idea and it may even be good global public policy, but what does it mean for a local school district? California school districts are


already under so much financial strain, with too small an investment in facilities already, they can't afford an energy efficiency program if it costs money. Furthermore, even a revenue-neutral program would probably not inspire sufficient motivation for implementation. Therefore, an energy efficiency improvement program will only progress if it makes financial sense.

The implementation of an energy efficiency program is a capital investment and it should be evaluated as an investment—in terms of return. Timing and opportunity costs are crucial elements of this evaluation. For example, if a district were to spend \$100,000 to put in an energy efficient capital improvement and projected a savings in utility costs of \$11,000 each year for ten years (the estimated life of the capital improvement) it would ultimately save \$110,000 and have a nominal net gain of \$10,000. However, this needs to be compared to the alternative investments for that money. Perhaps the District could invest \$100,000 with the County Treasurer at four percent and consequently withdraw \$12,329 each year for ten years, totaling \$123,291, and therefore gain \$23,291. In this case, the better investment is not in the capital improvement, but with the County Treasurer. School districts need to resist the allure of new technology and ensure that proposed energy efficiency improvements are the best investment choice for the district.

Assuming, however, that a proposed energy efficiency program meets the basic investment criteria of producing the best return, the next issue to be addressed is feasibility. To make a capital investment start-up capital is needed. There are three sources of capital—one's own pocket, an investor, or a lender. A school district could simply make an allocation in the capital budget for the expenditure. However, most school districts do not have excess room in their capital budgets for something new. Investors are the best source of funds because there is no opportunity cost for a school district—investors do not have to be repaid. Two potential investors are the local public utility and the Leroy F. Greene State School Building Program. Several public utilities have rebate programs, particularly for large energy users such as school districts. The State School Building Program provides financial incentives for energy efficiencies in both new school construction and modernization projects. Finally, if a district doesn't have the money on hand and can't get anybody to give it the money, the last resort is to borrow the money. There are many private entities willing to lend for this type of project and they are the same ones that school districts already borrow from—vendors, leasing companies and banks. Lending for energy improvement projects is very competitive because of the high degree of financial security involved, due to the

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feasibility analysis. In order for the District to want to proceed with the energy improvement, the projected utility cost savings would have to exceed the payments on the borrowed money, which provides assurance to the lender that the borrowed money will be repaid. Additionally, in 1993 the State's lease-revenue bond program for

providing energy improvement loans became available to school districts.

As with any endeavor in which a school district deals with external organizations, there is a cast of characters whose goals are different from those of the school district (energy analysts, contractors, the State of California). It is important for the school district to maintain its business perspective in dealing with these other parties. Every

dollar of profit paid to a vendor, or dollar of interest paid to a lender is a dollar that doesn't hit the District's bottom line.

School districts are frequently asked why they don't operate like businesses. Of course, the answer is that school district success cannot be measured in dollars and cents. But in considering an energy efficiency improvement program, the bottom line is what counts.