

Saving Energy the No-Cost Way at County Line Elementary

CASE STUDY

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County Line Elementary in Germantown reduced their energy use by making simple no-cost changes that any school can incorporate into their daily operations.

From November 2004 to October 2005, County Line Elementary School in Germantown, WI reduced energy costs by more than \$4,500 and had better energy usage per square foot than 85 percent of Wisconsin schools who participated in a Focus on Energy sponsored energy benchmarking study—all without upgrading or investing in a single piece of equipment.

How did the school achieve these impressive results? With a committed staff and the help of Focus on Energy, Wisconsin's energy efficiency and renewable energy program.

"With the rising cost of energy it was critical that we increase our energy efficiency. But our funds are extremely limited and we couldn't install more efficient equipment—we had to save energy with our current systems," said Pat Seghers, County Line principal.

Two Focus on Energy resources helped the school do just that: the Commercial Practical Energy Management (CPEM) program and the Best Practices Preventive Maintenance program.

"These are excellent tools that any school could benefit from using," said John Berget, the Focus energy advisor who worked with County Line. "The Best Practices guide gives field-tested maintenance suggestions, and CPEM is a tool for creating and implementing an energy management program."

To optimize use of the CPEM tool, the school district sent key employees to Focus-sponsored training

sessions, which are held at locations throughout the state. "CPEM helps you develop energy savings policies and allows you to take control of your utility usage. It also provides tools so you can inventory your equipment, and includes spreadsheets that let you calculate your savings from various equipment upgrades," said Berget. "The system stores data about your school so that you can easily run different scenarios as your needs change."

Based on suggestions from the two resources, district utilities conservation guidelines were developed and County Line staff immediately put several of the no-cost measures into place. The district guidelines include:

- **Custodians monitor building for unnecessary energy usage:**
 - Turn off outside lights during daylight hours
 - Update light timers monthly to reflect changing sunrise/sunset
 - Turn off all possible electrical equipment at the end of day
 - Close windows and doors
 - Maintain weather stripping on doors/windows
 - Fix leaks
 - Verify that water well pump is off each night and that there are no water leaks
 - Verify thermostat set point each evening
 - Set water heater at low and maintain proper insulation
 - Shut down HVAC systems early when outside temperatures/routine operations permit
 - Shut down air handlers over the weekend
 - Complete scheduled preventive maintenance

- **All computers, monitors and printers are turned off when not in use for two hours or more.**
- **All staff restroom, storage and lunchroom lights are turned off when leaving.**
- **All classroom lights are turned off when leaving.**
- **All doors and windows are kept closed when air-conditioning or heating systems are in operation.**
- **Thermostats are set at district-required set points.**
- **All equipment is unplugged when the school is closed for one week or longer.** (This includes all TVs, VCR/DVDs, copiers and printers.)
- **Cold water is used for rinsing and food service disposal.**
- **Outside organizations that use the school site must pay in advance (or set up a utility impound account) for the utilities consumed.** This includes refrigerators, coolers/freezers and lighting.
- **Vendors must supply 'Vending Misers' at no cost to the site for all vending machines located on school property.** No frozen candy machines are authorized.
- **Intercessions, summer school and all after-school programs are consolidated in one zone of the building.**
- **Non-authorized electrical appliances are not permitted in the school.** This includes all refrigerators not located in the nurse's office, food service or staff lounge areas; personal space heaters, microwaves and coffee pots not located in the staff lounge; hot plates, toasters, electric frying pans, fish tanks and terrariums not directly related to instruction; and any other electrical device not required for daily activities.
- **Marquees and all exterior lighting are turned off after the building is vacated.** Lights are turned off on whenever the building isn't occupied (except for emergency lights).

"Our efforts do involve a lot of manual oversight—such as going from room to room and checking thermostats—but the results are worth it," said Rick Krueger, County Line's lead custodian.

Seghers attributes the school's success to an across-the-board commitment by staff and students. "They know that every dollar we save is a dollar that we can use in some other way for our kids. They understand the reality of budget cuts, and there's a true feeling that we're all in this together. This is a fiscally conservative community—people aren't wasteful."

To encourage staff participation in an energy saving program, Seghers recommends three things: "Keep it simple, offer positive feedback publicly and negative feedback privately, and share results. When we first started this program, I'm sure that some people doubted we could achieve big results with little things. Now they know we can."

Of the \$4500 that the school saved, roughly 80 percent of the savings were in natural gas and 20 percent in electricity. And because these savings were achieved without equipment upgrades, the payback was, said Berget, "As immediate as turning off a switch."

HOW CAN FOCUS ON ENERGY HELP YOU?

"Focus on Energy helped County Line see that they could save money without expensive equipment upgrades. With our help, Germantown School District discovered that even small changes can really make a difference."

John W. Berget
Energy Advisor
Schools and Local Government

No budget for equipment upgrades? You can still improve your energy efficiency with low- and no-cost changes. These free tools can help:

Commercial Practical Energy Management program

<http://www.focusonenergy.com/cpem>

Preventive Maintenance: A Practical Guide for Schools and Government Buildings.

To get your copy call 800-762-7077.

For additional resources, visit us at www.focusonenergy.com.