



ENERGY SAVINGS TIPS

Schools spend more on energy than any other expense besides personnel. Implementing energy efficient maintenance strategies and purchasing **energy efficient equipment can lower a school district's energy expenses by 25 percent or more.**

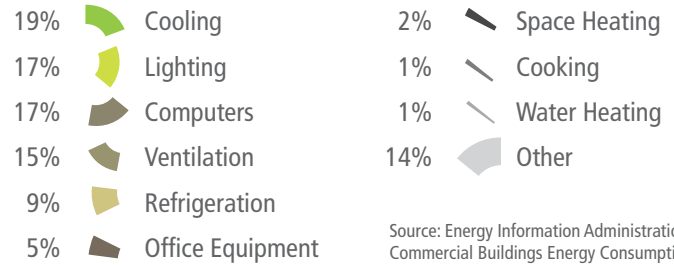
Most energy efficiency upgrades also improve:

- Learning environment
- Visual appeal
- Safety
- Indoor air quality
- Equipment life

SCHOOLS



Electricity Use in U.S. Schools



Source: Energy Information Administration, Commercial Buildings Energy Consumption Survey - 2016.

HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

- Install a Building Automation System (BAS) to control HVAC systems. This allows for greater zone control by continuously monitoring and adjusting lighting and HVAC equipment based on occupancy, environment and weather. According to the Department of Energy, BAS' can save 5 to 15 percent of the building's energy use with a cost of \$2 to \$4 per square foot.
- Keep thermostats at 68° to 72°F in the winter and 78° or greater in the summer while the building is occupied. Use temperature setbacks when the school is unoccupied, raising the temperature in the summer and lowering it in the winter.
- Have a licensed professional check, clean, calibrate and lubricate your economizers once a year. Consider installing economizers on units that don't currently have them.
- Portable classrooms are good candidates for high efficiency heat pumps because they are independent structures that tend to have electric heating.
- Regular maintenance should include cleaning air conditioner coils, cleaning or replacing air filters and checking ducts and pipe insulation for leaks that can be sealed.
- Perform annual tune-ups on boilers to lower energy use by 10 to 20 percent.
- Keep hot water storage temperature around 130° to 140°F.
- Insulate hot water heaters and pipes to increase efficiency.
- Turn down heat in the hallways and keep classroom doors closed to prevent heat loss.
- Re-caulk and weather-strip around leaky windows and doors.
- Install window films.
- Install reflective roof coating to reduce energy use.
- Close or tilt blinds to reduce the sun's heat on warm days and open them in winter to let the sun's warmth in.
- Proper placement of trees and other shade saves energy and enhances the school grounds. Install a Building Automation System (BAS) to control HVAC systems.

LIGHTING

- Lighting upgrades can save 25 to 90 percent in lighting costs and can easily fit into routine maintenance.
- LEDs can last up to 25 years. If you haven't upgraded to LEDs, get a quote from a lighting vendor or contractor. Idaho Power has incentives available and can lead to project paybacks of one to three years.
- Turn parking lot and outside security lights off during the day and upgrade to LEDs.
- Upgrade exit signs to LEDs.
- Install occupancy sensors in classrooms and spaces that are frequently unoccupied, like bathrooms, break rooms and storage areas.
- Daylighting uses natural ambient light to reduce electric lighting needs. However, without lighting controls, daylighting may not save energy. Automatic photosensor controls that sense ambient daylight ensure that electric lighting is reduced when enough daylight is available.
- Open blinds when possible. Studies show that students score better on tests under natural light.
- Many schools leave their lights on for an extra hour or two after school. This can raise electrical costs for lighting by 12 to 15 percent. Turn lights off as soon as school is out.

The average school uses over **150 computers**.

Schools have reported reductions of as much as **25%** in utility bills through behavioral and operational measures alone.

Educational facilities use an average of **11 kilowatt hours** per square foot.

K-12 school districts spend over **\$6 billion** annually on energy – more than computers and textbooks combined.

CLASSROOM AND OFFICE EQUIPMENT

- When possible, purchase high efficiency equipment and ensure that equipment is shut off or in sleep mode when not needed. Enable power management features on all devices.
- Smart power strips have built-in occupancy or load-sensing devices that will shut off devices plugged into the power strip when no activity is present. These typically come with constant-on outlets as well for devices that need to remain on at all times.
- Purchase ENERGY STAR® certified devices. These devices have met certain energy use standards and often require less upkeep than standard efficiency devices.
- Buy a plug load power meter to find out which devices use the most energy. These are available for as low as \$20 and are easy to use.



Other Opportunities

- Benchmark your energy use against similar facilities. The EPA's ENERGY STAR performance standards benchmark similar buildings and offer certification for the top quartile of buildings in each category. Use EPA's Portfolio Manager to measure and track energy performance and improve your operations.
- Encourage students and teachers to get involved by forming a student energy patrol, having students make signs and stickers to build energy awareness, or integrating energy activities into the science, math and other class curriculum.
- Retro commissioning is the evaluation and optimization of operating systems in a building. Whole building retro commissioning can help optimize systems and ensure the building is functioning as intended. At a typical 100,000 square foot school, retro commissioning can uncover about \$10,000 to \$16,000 in annual utility bill savings. You should consider investing in commissioning every two to five years.

Additional Resources

Register for **My Account** at idahopower.com/myaccount to pay your bill, get account information, understand your use and find more ways to save.

Visit energystar.gov/schools for more information on ENERGY STAR resources, certification and energy related information.

Idaho Power has programs available to help customers just like you save energy and money. To learn more, visit: idahopower.com/business.



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