



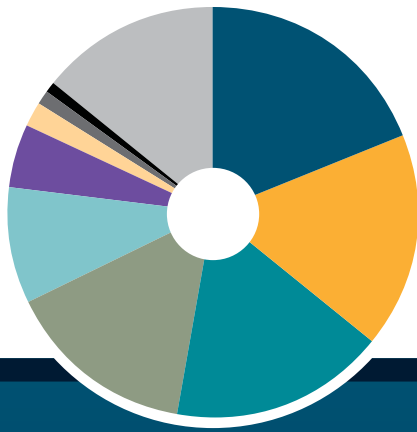
ENERGY-SAVINGS TIPS SCHOOLS

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% or more.

Most energy efficiency upgrades also improve:

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

Electricity Use in U.S. Schools



19%	Cooling	5%	Office Equipment
17%	Lighting	2%	Space Heating
17%	Computers	1%	Cooking
15%	Ventilation	1%	Water Heating
9%	Refrigeration	14%	Other

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% of the building's energy use with a cost of \$2.50 to \$7 per square foot.
- Set the HVAC thermostats at 68 degrees Fahrenheit (F°) in the winter and cooling at 75° 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.
- Clean air conditioner coils, clean or replace air filters, and check ducts and pipe insulation for leaks that can be sealed as part of regular maintenance.
- 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 during the winter to let the sun's warmth in.
- Place trees and other shade properly to save energy and enhance the school grounds.

CLASSROOM AND OFFICE EQUIPMENT

- Purchase high-efficiency equipment when possible and ensure 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 also typically come with constant-on outlets 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.



ENERGY FACTS

The average school uses over
300 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
10 kilowatt-hours (kWh) per square foot.

K-12 school districts spend over **\$8 billion** annually on energy – more than computers and textbooks combined.

LIGHTING

- Lighting upgrades can save 25 to 90% 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 that 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 electric lighting is reduced when enough daylight is available.
- Open blinds when possible. Studies show that students score better on tests under natural light.
- Turn lights off as soon as school is out. 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%.





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 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 (ft²) school, retro commissioning can uncover about \$10,000 to \$16,000 in annual utility bill savings. You should consider investing in retro-commissioning every two to five years.

Additional Resources

- Interested in taking your savings deeper? Consider joining Idaho Power's Cohort for Schools where energy model-based improvements are tracked over time, supported by training, resulting in monthly energy-reducing activities. Ask your energy advisor or email: **customprojects@idahopower.com** for more information.
- Visit **energystar.gov/schools** for more information on ENERGY STAR resources, certification, and energy related information.
- Register for **My Account** at **idahopower.com/myaccount** to pay your bill, get account information, understand your use and find more ways to save.
- Contact your local area energy advisor for support at **idahopower.com/energyadvisor**.
- Idaho Power has various programs available to help customers just like you save energy and money. To learn more, visit: **idahopower.com/business**.



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