

ENERGY-SAVINGS TIPS

OFFICE BUILDINGS



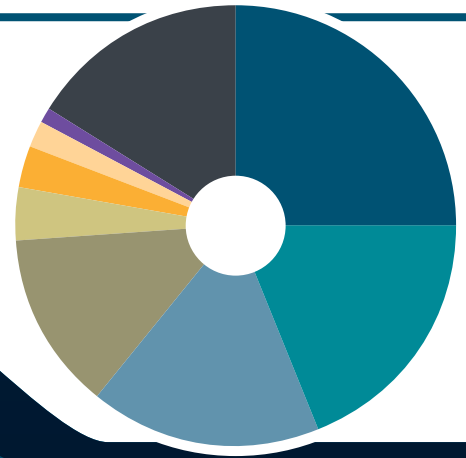
Energy efficiency makes office buildings more appealing and affordable. Energy efficiency upgrades improve tenant retention, occupancy rates, and lease revenue for building owners.

Most energy efficiency upgrades also improve:

- Customer and employee comfort
- Visual appeal
- Safety
- Indoor air quality
- Equipment life

Electricity Use in U.S. Office Buildings

25%	Ventilation	3%	Refrigeration
19%	Computers	2%	Heating
17%	Lighting	1%	Water Heating
13%	Cooling	16%	Miscellaneous
4%	Office Equipment		



HEATING, VENTILATION AND AIR CONDITIONING (HVAC)

- Install a Building Automation System (BAS) to control equipment in your facility. This allows for greater zone control by continuously monitoring and adjusting lighting and HVAC equipment based on occupant densities, environmental factors, and weather. The average energy savings from a BAS is 5 to 15% of building energy use with a cost of \$2.50 to \$7 per square foot.
- When the facility is unoccupied, raise the temperature during the summer and lower it during the winter. You can also try small temperature changes during working hours. A one-degree change may not impact comfort and is frequently unnoticed.
- Economizers can save energy if they operate properly. These systems reduce mechanical cooling by using a vent to draw in cool outside air. Have a licensed professional check, clean, calibrate, and lubricate your economizers once a year.
- Most climate control systems use conditioned air to heat or cool buildings. Ensure you have adequate airflow at the registers for each space in your building. Check your filter for anything that may affect airflow, like dirt and dust in the register. Replace filters regularly to avoid filter pressure drops that waste energy and reduce performance.
- New, high-efficiency HVAC units can reduce cooling energy use by 10% or more over a standard unit. If your equipment is more than 10 years old, consider replacing it with more efficient equipment.
- Lighting retrofits, building envelope improvements, and the use of energy-efficient office equipment all reduce HVAC system loads.
- Participate in Idaho Power's Find n' Fix program to optimize your central HVAC controls and ensure your building is as energy efficient as possible!

LIGHTING

Turn it off

The easiest way to save energy is to turn off lights when they are not in use.

- Display posters, stickers, or signs reminding occupants to shut off lights when not in use.
- Use occupancy sensors, timers, and building automation systems to automatically shut off lights when not needed.
- Install lighting controls that use photosensors to cycle lights on or off to meet an indoor light level and reduce energy use.

Turn it down

Sometimes you can't shut off the lights entirely, but you can dim lights to reduce energy use. Dimming technology has improved over the last decade, and new LED lighting often comes with this capability.

Upgrade

Lighting upgrades can save 25 to 90% on lighting costs and easily fit into routine building maintenance.

- LEDs can last up to 25 years and reduce energy use up to 90%. If you haven't upgraded to LEDs, get a quote from a lighting vendor or contractor. Idaho Power has incentives available and can help reduce your project payback.
- Parking lot lights typically run about half of the day, and energy use adds up in a hurry. LEDs direct the light precisely, and certain lights can minimize light pollution. Consider controls that dim or shut off exterior lighting when it is not needed.
- Daylighting takes advantage of natural ambient light and reduces the amount of electric lighting needed. However, without lighting controls, daylighting may not save energy. Automatic photosensor controls that sense daylight help ensure electric lighting is reduced when enough daylight is available.

Up to **25%** of office buildings' operating expenses are spent on energy bills (often the largest operating expense).

Commercial buildings account for around **1/3** of all energy use in the United States.

Offices have higher energy costs than any other commercial building sector, spending **\$21.4 billion** each year.

Office buildings make up **18%** of the floor space and **18%** of the energy use by commercial buildings in the United States.

Office buildings use an average of **16 kilowatt-hours** per square-foot.

OFFICE EQUIPMENT

- Purchase high-efficiency equipment, and ensure the equipment is shut off or in a sleep mode when not needed.
- Check to see if power management features are enabled on your equipment. Most electronics can be set to a low-power sleep mode after a specified period of inactivity; however, users rarely use these features.
- Use smart power strips. They have built-in occupancy or load-sensing devices that shut off devices when energy isn't being used. These typically come with constant-on outlets for devices that need to always remain on.
- 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 see which devices use the most energy. These are available for as low as \$20 and are easy to use.
- Let building occupants know saving energy is important and have them help. This can come in the form of training, letters or emails, signage, videos, incentives for energy-efficient activities, requesting employee ideas for saving energy, and more.





Other Opportunities

- Commissioning is a process where building systems are observed and tuned up to ensure they are working efficiently. Studies have shown commissioning can save a building 10 to 15% of its energy costs. Consider investing in commissioning every three to five years.
- Office buildings may use unnecessary energy during off-hours. Idaho Power provides hourly energy information to allow you to see how much energy you use and start investigating ways to reduce energy use.
- The EPA's ENERGY STAR performance standards benchmark similar buildings and offer certification for the top quartile of buildings in a given category. Benchmark your building's energy use against similar buildings.

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.
- Building Operator Certification (BOC) provides ongoing training for building operators that focuses on electricity, HVAC, lighting, indoor air quality, and energy savings. Learn more at theboc.info/nw.
- Contact your energy advisor for support at idahopower.com/contact-your-energy-advisor.

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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