



# Energy Answers for Retail

A typical retail store in a strip mall expends \$2 per square foot on electricity each year and in Arizona, most of these energy dollars are spent on lighting and cooling. Retailers can dramatically reduce these costs by implementing simple energy efficiency measures. **Every dollar saved through efficiency goes straight to the bottom line.** This fact sheet provides an overview of typical energy efficiency strategies and a list of resources for more information.

## Boost Your Bottom Line – With No Money Down

You really can get something for nothing. Create energy savings simply by turning off equipment that's not in use. Turn off lights in break rooms, restrooms, and storage areas when unoccupied. Computers, televisions, audio equipment and other electronics continue to use energy in standby mode so be sure to shut them down at night. Don't forget about vending machines, water coolers, cash registers, and anything else that's plugged in. Add these quick steps to your nightly store closing protocol.

## Cash In On Lighting Savings

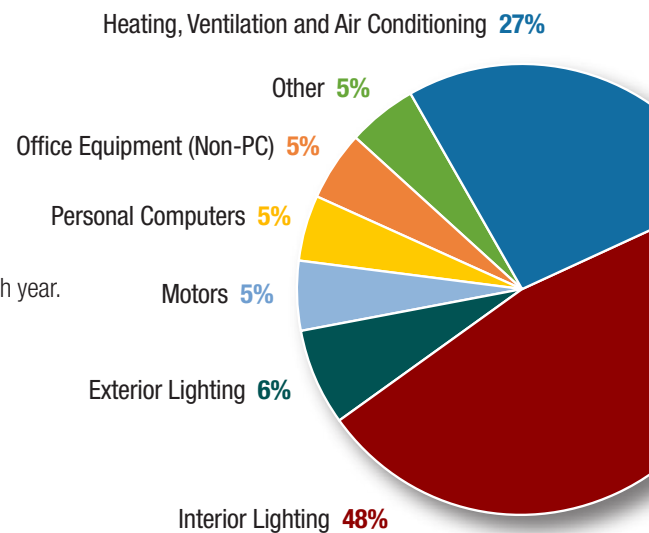
Lighting is the ultimate multi-tasker in retail. It plays critical roles in sales, safety and daily operations. As a result, lighting comprises more than half the typical electricity costs for a small retailer in Arizona. The average small retail building runs lighting for more than 3,700 hours each year.

Making a few simple improvements to your lighting can generate significant savings—without sacrificing quality or performance. Energy-efficient lamps and fixtures are available in a variety of styles and functions—from chandeliers and sconces to recessed cans and spotlights. Many are dimmable. Keep in mind that the least efficient lights may be the cheapest to purchase but will cost the most to operate.

A lighting upgrade can also lighten the load on your air conditioning system by up to 30%. Consider these strategies:

- Replace incandescent bulbs with ENERGY STAR® qualified compact fluorescent lamps (CFLs). By changing one incandescent bulb that burns 6 hours a day with a CFL, you can save \$9 on electricity and \$3 on maintenance costs each year. The more lamps you change, the more you save. CFLs produce 75% less heat and they last 10 times longer, so you'll also save on cooling and replacement costs.
- Replace old overhead T12 tubes with more efficient T8s and electronic ballasts to save 15-25% of lighting energy use.
- Install occupancy sensors in restrooms, break rooms and storage areas to save 30-75% of lighting energy in those rooms.
- Save \$20 per year for each incandescent exit sign you replace with an ENERGY STAR qualified model. These products also last up to 10-times longer.
- Replace exterior incandescent lamps with high-pressure sodium lamps and save up to 75% of lighting energy use.
- Reduce lighting maintenance costs by 25% or more by replacing all lamps (group relamping) when they reach 70% of their expected life, rather than on a spot basis.

**Fig. 1 Typical Electricity End-Use in Small Arizona Retail Business**



## Cut Your Cooling Costs

Effective air conditioning is crucial for maintaining customer comfort during hot summer months. If your store is too hot, customers will exit quickly. But if it's too cold, they may depart just as fast. Consider these strategies for cutting cooling costs and maintaining comfort:

- Use a programmable thermostat to adjust the temperature based on occupancy. Set the thermostat at 79°F or higher during the day and use fans to feel five degrees cooler.
- Program the thermostat to raise the temperature even higher when your business is closed and to cool it down before employees arrive. For each degree you raise the temperature, you'll save 2-3% on your cooling costs. Inform staff about the settings and seek feedback on comfort levels.
- Don't wait until it breaks! Schedule regular maintenance and tune-ups to keep air conditioning equipment running smoothly. Change filters regularly.
- Replace your aging or inoperable air conditioning system with an ENERGY STAR qualified model. Be sure the system is properly sized. Bigger isn't always better.

## Find Bargains in the Back Room

The equipment that supports business operations and employee breaks is often an overlooked source of big energy savings. Don't miss these potential bargains:

- Look for more efficient models when replacing or purchasing new office equipment, such as copiers and fax machines. ENERGY STAR qualified products use 30-75% less electricity than standard office equipment.
- Save \$10-\$30 per monitor and \$15-\$45 per computer each year just by activating the sleep settings.
- Add energy-saving devices to beverage and snack vending machines to reduce the machine's consumption up to 80%.
- Replace old refrigerators and dishwashers with ENERGY STAR qualified products, which use 15-40% less energy than other models.
- What about your water cooler? A standard hot and cold bottled water cooler can use more energy than a large refrigerator. An ENERGY STAR qualified model requires about half as much energy.

## Stop Your Losses

Don't let your profits sail out the door. Apply your loss prevention strategies to energy use. Instead of propping doors open on sizzling summer days, consider stationing a greeter at the door. You'll keep conditioned air inside the store and create a personal connection with your customers. Also, fix leaky pipes, sinks and water fountains. These little drips can drain your operating budget quickly, especially when they draw hot water.

## SELL YOUR STORY

Tell your customers and the community about your efforts to save energy and help the environment. Encourage employees to find ways to save energy at home. Become an ENERGY STAR partner.

### Can We Help?

APS offers incentives for qualified efficiency measures. Learn more about the Solutions for Business program at [aps.com](http://aps.com)

## Recommended Resources

APS: Solutions for Business, Energy Survey and "Ways to Save" Technology Fact Sheets  
[aps.com](http://aps.com)

ENERGY STAR: Find appliances, HVAC, lighting, office equipment, and partner resources  
[www.energystar.gov](http://www.energystar.gov)

DEPARTMENT OF ENERGY:

Cost calculators for energy-efficient products  
[www1.eere.energy.gov/femp/procurement/eep\\_eccalculators.html](http://www1.eere.energy.gov/femp/procurement/eep_eccalculators.html)

Operations & Maintenance Best Practices Guide  
[www1.eere.energy.gov/femp/operations\\_maintenance/om\\_bpguide.html](http://www1.eere.energy.gov/femp/operations_maintenance/om_bpguide.html)

NEW BUILDINGS INSTITUTE:  
Advanced Lighting Guidelines  
[www.newbuildings.org/ALG.htm](http://www.newbuildings.org/ALG.htm)