

### Energy Management For Retail Building

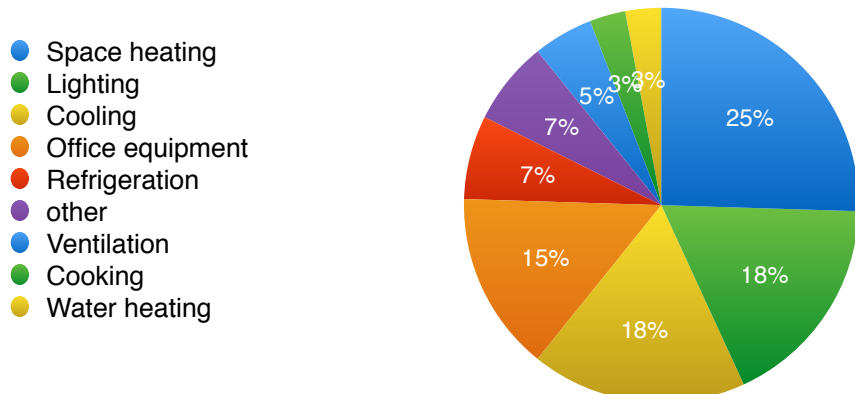
Sources: [www.eia.gov/oog/info/ngw/ngupdate.asp](http://www.eia.gov/oog/info/ngw/ngupdate.asp)  
[www.xcelenergy.com/](http://www.xcelenergy.com/)  
[www.energystar.gov/](http://www.energystar.gov/)

A typical Retail Building energy usage is as follows in the U.S.A.

Office equipment	15%		
Lighting	18%		
Cooling	18%		
Sub total	<u>51%</u>		
Cooking	3%		
Space heating	26%		
Sub total	<u>29%</u>		
Ventilation	5%		
Water heating	3%		
Refrigeration	7%		
Other	7%		
Sub total	<u>22%</u>		
Total	<u>100%</u>		

		Space heating	26%
		Lighting	18%
		Cooling	18%
		Office equipment	15%
		Refrigeration	7%
		other	7%
		Ventilation	5%
		Cooking	3%
		Water heating	3%
			14
			31
			102%



Energy cost account for 15% of a Retail Building's operating budget.  
 Retail Building in the U.S. use on average

14 Kilowatt-hours (kWh) / square foot / year  
 31 Cubic feet of natural gas / square foot / year  
 Based on \$ .10 / kWh  
 \$6.50 / mmBtu

\$1.60 / Square Foot / year  
 79 kBtu / Square Foot / Year

#### No- and low-cost energy saving tips

Many Retail Buildings can benefit from low- or no-cost measures to reduce energy consumption.

#### TURNING THINGS OFF

- \* **Lights.** Turn off lights when they are not in use.
- \* **Electronic displays.** Many stores have electronic displays that get left on even when the store is closed. Consider shutting off the displays during closed hours either manually or with simple timers.

#### TURNING THINGS DOWN

- Some equipment cannot be turned off entirely, but turning it down to minimum levels where possible can save energy.
- \* **HVAC temperature setbacks.** During closed hours, turn temperature settings down in warming seasons and up in cooling.
  - \* **Peripheral and back rooms.** Make sure that HVAC settings in stockrooms, offices and other peripheral rooms are at minimum settings.

#### CLEANING AND MAINTENANCE

- \* **Check the economizer.** An economizer that's stuck in the fully open position can add as much as 50% to a buildings energy bill.
- \* **Check air-conditioning temperatures.**
- \* **Change Filters.** Change air conditioner filters every month.
- \* **Check the cabinet panels.** On a quarterly basis, make sure the panels to your rooftop air-conditioning unit are fully attached.
- \* **Clean condenser coils - Clean evaporator coils.**
- \* **Check for airflow.** Hold your hand up to air registers to ensure that airflow is adequate. If there is little airflow or dirt and dust are found at the register, have a technician inspect your unit and duct work.

#### LIGHTING MEASURES

- Lighting is critical, both in creating an ambiance and in make the merchandise attractive to shoppers.
- \* **Display Lighting.** Proper display lighting is critical for driving retail sales and preventing merchandise returns.
  - \* **Fluorescent lamps.** If your facility uses T12 fluorescent lamps, relamping with modern T8 lamps and electronic ballasts can reduce your lighting energy consumption by 35%.

#### REFLECTIVE BUILDING ROOF COATING

If the roof needs recoating or painting, consider white or some other highly reflective color to minimize the amount of heat the building absorbs.

#### REPLACE WINDOWS

Modern, reflective glazing makes it possible to maintain good visibility through a window while limiting solar gain, which can heat a store and fade clothing colors.