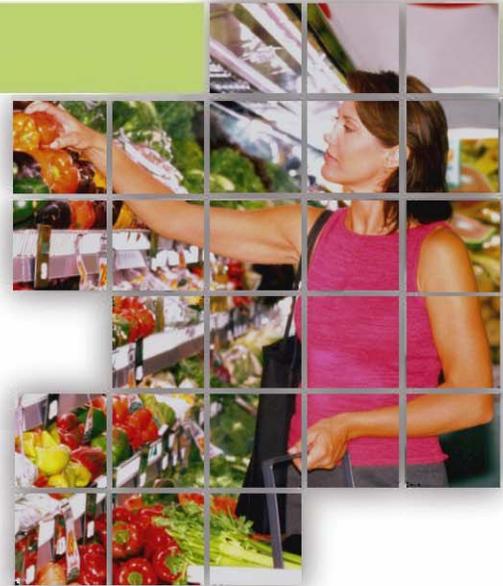
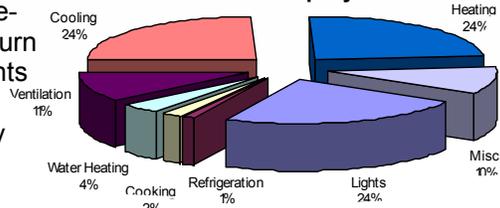


## Commercial

Many commercial buildings cannot afford a fulltime engineering staff. As the result, the electrical systems may require a periodic tune-up in order to maintain their optimum operational status. Lighting represents a relatively large percentage of electrical use in commercial facilities, and the best opportunities for savings are achieved through the retrofit of fluorescent fixtures using electronic ballasts and T8 lamps. Replacing or retrofitting incandescent fixtures using linear fluorescent, compact fluorescent, HID or LED fixtures or components not only saves energy but also reduces maintenance costs which is particularly important in the absence of a permanent maintenance staff. Also, a major benefit in such situations is the installation of automatic controls such as timers and sensors. Office and retail staff do not like to turn lights off, and often lights will stay lit at night even though the facility is closed.

**Electricity Usage in Office Buildings**  
16.5 kWh/sq.ft./year



## Case Study — DeConcini Building, Tucson, Arizona



The DeConcini Building is a distinctive commercial office building in Tucson, Arizona. In order to find a solution to rising costs, the management company decided to undergo a complete lighting retrofit of the entire facility. This retrofit effectively reduced energy and maintenance costs while increasing the quality and performance of the lighting system.

The scope of work called for Earth Savers to install new electronic ballasts and lamps, new linear fluorescent fixtures, new compact fluorescent fixtures, exit signs and occupancy sensors. The Howard Industries low power HEX electronic ballast and the GE high color rendering SPX, ECO, 4100K T8 lamps were used to maximize light output with the lowest input wattage possible. Combining these high quality products with occupancy sensors provided savings of 50% or more in the typical linear fluorescent fixture. In addition, the office staff has noticed a marked improvement in both light levels and quality.

### Summary:

<b>Annual Energy Savings</b>	<b>\$8,100</b>
<b>Annual Maintenance Savings</b>	<b>\$675</b>
<b>Total Annual Savings</b>	<b>\$8,775</b>
<b>Project Cost</b>	<b>30,500</b>
<b>Payback of Investment</b>	<b>41 Months</b>