Office buildings account for approximately 28 percent of all commercial energy demand, and 30 percent of a building’s operating costs may be attributed to energy usage. Energy efficiency measures can reduce energy consumption resulting in lower utility bills by up to 30 percent or more.

In addition to the financial benefits, most energy efficiency measures also improve the comfort and attractiveness of the indoor environment. Lighting retrofits reduce energy consumption and improve visual acuity. Upgrades to heating, ventilating and air conditioning equipment improve indoor air quality.

**Lighting**

Retrofits to lighting systems can yield savings from 20 to 40 percent of current lighting costs and can easily fit into routine building maintenance.

- Switch out T12 fluorescents for efficient T8s or T5s: These fixtures last longer and require less maintenance. They also provide better lighting quality so fewer fixtures per square foot are needed, making de-lamping possible.
- Replacing magnetic ballasts with basic electronic ballasts can save a minimum of 12 percent of energy consumption.
- Install occupancy and/or photosensor controls to dim or shut off lights when natural light renders them unnecessary.
- Remember to consider benefits derived from daylighting and reflective surfaces.

**Central HVAC System**

Climate control is typically the largest energy cost for office buildings. This is a great area to focus on to get the most bang for your buck.

**Get your system inspected:**

Central HVAC systems tend to be oversized and often aren’t set for optimal efficiency. Before investing in new equipment, have a qualified engineer inspect the system to see if a redesign or tuneup may be needed. Companies have realized significant reductions in their energy consumption by adjusting control set points and modifying existing equipment.

**Optimize HVAC performance:**

- Install an enhanced automated control system along with compatible control equipment on building mechanical and electrical systems. Enhanced automation allows greater zone control by continuously monitoring and adjusting lighting and HVAC equipment based on occupant densities and environmental factors.
- Lighting retrofits, building envelope improvements and use of energy efficient office equipment all reduce air conditioning cooling loads.
Office Equipment

Office equipment is one of the fastest-growing electricity uses in commercial buildings in the United States. It directly consumes seven percent of total commercial electric energy, which translates into $1.8 billion in electricity costs to businesses.

- Purchase ENERGY STAR® equipment.
  - Think in terms of total life-cycle costs, which include purchase price, annual energy costs and other long-term costs associated with the equipment. Ask dealers about maintenance. In some cases, energy-efficient equipment may require less upkeep than standard-efficiency equipment.

- Activate equipment power management features.

- Evaluate your needs and avoid purchasing more or less power and capacity than you need, particularly when buying copiers.

- Think small:
  - The most efficient computer is a laptop, which typically draws only 15 to 25 watts during use compared to the 150 watts used by a conventional PC and monitor.

- Encourage employees to turn off their computers at night and on the weekends.

- Use ink jet printers; they use less energy than many of the current energy-efficient laser printers.

Electricity Use in U.S. Office Buildings

Total annual consumption: 211 billion kWh

- Space Heating 10 kWh
- Water Heating 2 kWh
- Other 27 kWh
- Cooling 30 kWh
- Lighting 82 kWh
- Ventilation 18 kWh
- Refrigeration 10 kWh
- Office Equipment 31 kWh

Source: Department of Energy, Energy Information Administration, Building End-Use Consumption Survey, 2003

Idaho Power has a number of commercial programs to help your business become more energy efficient. To learn more, visit www.idahopower.com/business.