Plug In To Greater Energy Savings: With Smart Plug Load Management

Simple low- or no-cost steps could reduce your plug load energy use by up to 40%[1].

A typical business these days uses an ever-increasing array of electronic devices that plug into a wall outlet, and which have multiple power modes. The resulting "plug loads" are now one of the fastest growing uses of energy.

Once you've determined your energy goals, understanding and managing plug loads can help you reach them and may substantially lower your energy usage.

We offer this handy guide to assist you in that effort.

Office Equipment Plug Loads as a Percent of Total Office Electricity[2]

Plug load energy use for computers and office equipment is increasing. In office buildings that have improved the efficiency of lights, heating and cooling it can represents as much as 50% of the total electricity use.
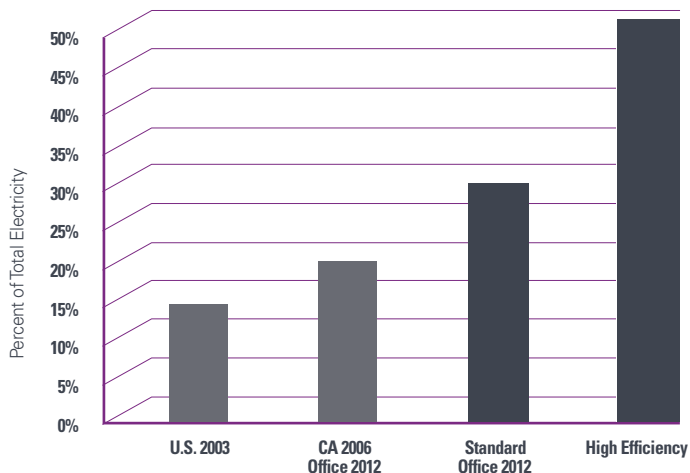
How and When Plug Loads Use Energy

Today's electronic equipment operates in a variety of power levels or modes. Switching from a higher to lower power mode is an easy way to save energy. Yet, the very best way to save energy is to always ensure devices are turned off or unplugged when not in use for long periods, or at the end of the work day.

Know Your Power Modes

Understanding and adjusting machine settings to take advantage of different power modes can help your business save a significant amount of energy every year.

- ✔ **Active Mode** – Equipment is on and performing its intended function

- ✔ **Idle Mode** – Equipment is on, ready to perform work, but not active. Surprising amounts of energy can be used in this mode.

- ✔ **Sleep or Standby Mode** – Equipment has been powered down, but is not fully off, drawing reduced power. Equipment is also ready to wake up and return to active mode in response to demand.

- ✔ **Off Mode** - Equipment draws no power. This is the ideal mode for maximizing energy savings.

Knowledge Is Power!

The **"vampire"** or **"phantom"** load is the energy a device consumes while in the Sleep or Standby mode. It can be substantial.

[1] *Plug Load Best Practices Guide.* New Buildings Institute (NBI), 2014.
[2] US-Energy Information Agency; CA-CEUS; 2012 offices–NBI Measured Data

Advanced Power Strips Can Help

Advanced power strips (APSs) can be an effective means for managing plug loads. They're a lot like regular power strips, but with built-in "intelligence" that shuts off the supply power to unused or idle devices based on various situations.

Along with reducing plug loads, APSs can also save you time by eliminating the need to retrain staff or keep adjusting power modes on office equipment.

Manage Your Server Loads

For many office-based organizations, 30 to 70% of electricity use stems from powering and cooling servers than run 24/7.[3] Start saving energy by measuring or estimating the energy consumption of your server room.

Switch off unused servers or set them to go into a low power mode when inactive. Also consider optimizing server use through consolidation and virtualization.

Consider Your Computers

Computers are becoming more and more energy-efficient every year. So, it's very possible that replacing old equipment with new models could reduce energy demand in your business. Something else to think about: laptops with dockings station use less energy than most desktops, and enable a more mobile workforce as well.

Energy Star® recommends setting computers and laptops to sleep after 15 to 60 minutes of inactivity. By doing so, savings up to $50/computer/year are possible.

Talk To SCE

Contact your Account Manager about our energy incentive programs for your industry. Or check with your local contractor who may also have access to incentive programs.

Help Us Help You—and Our Community

Managing plug loads is not only good for your business and bottom line; it's also good for our community as a whole.

The information we've provided in this guide can aid you in achieving your energy goals and assist SCE in better managing the electric grid—which benefits everyone.

Just What Is a Plug Load?

A plug load is the energy consumed by any electronic device plugged into a wall outlet, i.e., computers and peripherals, printers, television monitors, break room equipment (coffee makers, microwave ovens) or any other equipment you may use for your specific industry.

Additional Resources

Sheppy, Michael, et al. *Assessing and Reducing Plug and Process Loads in Office Buildings*. National Renewable Energy Laboratory (NREL), November 2014. apps1.eere.energy.gov/buildings/publications/pdfs/alliances/20111121_webinar_assessing_ppls.pdf

***Plug Load Best Practices Guide. New Buildings Institute (NBI).* 2014.** advancedbuildings.net/index.php?q=plug-loads

Interested In Learning More?

Choose from the many topics in our Energy Conservation Series:

- LED Lights: A Bright New Way to Conserve Energy
- Switch To a More Energy-Efficient Business—With Smart Lighting Controls
- Manufacturing Motors & Compressors: Start Your Energy-Efficient Engines
- On The Menu: Major Energy Savings With Restaurant Refrigeration
- Cold Hard Facts About Refrigeration and Energy Conservation for Grocery and Convenience Stores
- Energy Efficiency Is In the Air: Optimizing Your HVAC
- Agricultural Pumping: Pumped and Primed to Save Energy

[3] Natural Resources Defense Council (NRDC)