



ENERGY SAVING MEASURES FOR OFFICE BUILDING TENANTS

As a result of the California Energy Crisis and the 40% rate increases, Prometheus Properties has retained ACC Environmental Consultants to assist us in identifying opportunities to reduce energy use in all of our buildings. The goal is for our buildings to become EPA Energy Star Certified which means they use 25% less energy than the average office building in the San Francisco Bay Area.

Tenants control 70% of the energy used in office buildings. For this reason, ACC recommended that we educate tenants on the ways they can reduce energy use.

Most of the energy reduction measures outlined in this document have no or very little cost, yet they can have an enormous effect on how much energy a building uses. Utility costs are passed on to tenants, so if tenants work together to reduce their energy use, they share in the savings.

None of the measures outlined in this manual will reduce the comfort of the building. As a matter of fact, the measures will probably increase comfort by reducing the heat generated by office equipment and lighting. They will also improve indoor air quality by reducing ozone and volatile organic compounds generated by office equipment.

There are a number of excellent reasons we should all care about saving energy.



Saving energy helps protect the environment.

Every 1,000 kilowatt-hours of electricity saved reduces the amount of carbon dioxide (a greenhouse gas) from entering the atmosphere by 1,000 pounds per year.

It has a dramatic effect on your company's bottom line. For every extra dollar your company spends on energy costs, your company needs to generate \$10.00 worth of revenue (assuming your company operates on a 10% profit margin). So if energy costs rise and you fail to reduce energy use, your company will need to generate an additional \$10,000 worth of revenue for every \$1,000 of increased energy costs.

It saves our non-renewable resources for future generations. The majority of the energy we use in this country comes from non-renewable sources such as petroleum, coal and natural gas. By failing to conserve energy and use it as efficiently as possible, we needlessly rob future generations of the fuels they will need.

It will help us reduce the amount we pay for electricity and natural gas. The main cause of

California's energy crisis was that demand was greater than supply, which caused the price to

increase dramatically. The inverse is also true. If we reduce demand and create a surplus of energy, the price will fall.

Office equipment uses a substantial amount of energy. This is why turning equipment off when it is not needed, and purchasing energy efficient Energy Star equipment, is so important. These measures can reduce your total energy use by up to 10%, with little or no additional cost.

The best ways to save energy is to:

- Purchase energy efficient office equipment,

- Make sure equipment has its energy management features activated,

- Install timers and occupancy sensors that will turn office equipment, lighting and HVAC systems off automatically when they are not needed; and

- Ensure that equipment is turned off each night when leaving the office.

COMPUTERS

Buy laptops

The best way to save energy on computers is to purchase laptop computers as you replace older machines. Laptop computers use 90% less energy than standard computers. They have the added benefit of being portable.

Switch to LED monitors

If you have a standard computer monitor, consider switching to a LED screen. They use 90% less energy and take up less space on your desk. The cost for these monitors has dropped significantly.

Don't buy large monitors

Don't buy large monitors unless you really need them. A 17" monitor uses 35% more power than a 14" monitor.

Buy Energy Star

Energy Star computers come with their power management features enabled.

Turn it off at night

Studies have shown that 30% of office workers leave their computers on at night. Turning off your computers and monitors every night can save \$75.00 per year per computer. Don't worry about the myth that turning a computer on and off will damage its chips. A computer will be obsolete long before there is damage to the equipment by cycling the power.

If you have difficulty getting coworkers to cooperate, provide reminders such as putting up posters, including reminders in newsletters and sending group e-mails.

To automatically shut down your monitor and other office equipment when it is not needed, consider plugging your office equipment into an occupancy sensor power strip. These devices automatically turn

off equipment whenever you leave the room for more than a few minutes. Occupancy power strips can control monitors, printers, fans, radios, and task lights.

Contact the building manager to order occupancy power strips for your space.

Make sure energy saving features are activated

Enabling a computer's power management features enables the computer to power down to about 15% of its full power after a designated period of nonuse, usually 10 - 20 minutes.

In older models, power management is set in a computer's BIOS settings. These can be modified through the computer Setup at start-up. You can activate the power management feature by watching the black screen of a computer just before Windows starts up for instructions on how to Enter Setup mode. In Setup, navigate to "Power Management" features and set to "enabled". Use your arrow keys (down and right) to navigate.

For a monitor and/or computer that has Energy Star features, adjustments are controlled through Control Panel/Display/Screen Saver. Set the "low power standby" to happen after 10 minutes and "shut off monitor" after 30 minutes.

It might be a good idea to have someone in your organization or IT department activate the energy management features for all the computers throughout your office.

COPY MACHINES AND PRINTERS

Make sure they are turned off at night and over weekends

Turn copiers and printers off at night and on weekends. Even in the "sleep mode" these devices burn 30 to 40 watts of electricity. Instead of relying on the last one to leave the office turning it off, consider installing a low-cost plug-in 7-day timer that can be easily overridden to automatically shut off printers at night and on weekends.

Contact the building manager if you would like to order 7-day timers.

Activate Power Management features

For copy machines, refer to the User's Manual or ask your service technician to determine if the Power Management features are enabled. The User's Manual should provide the necessary instructions. Check the period of delay for activating energy-saver mode or automatic shut-off.

For printers, refer to the User's manual or ask your service technician to check if your printer's Power Management features are enabled. Start-up delays from recovery from sleep mode should be minimal.

Purchase Energy Star Equipment

When purchasing new equipment, make sure it is Energy Star™. Energy Star™ equipment comes with power management features enabled, though it may be disabled by the time it reaches your desk.

Purchase Ink Jet Printers

If it works for your business or work group, consider Ink Jet printers, which use 90% less energy than laser printers.

LIGHTING

Lighting consumes 40% of the energy used in an office building. Fortunately, there are excellent technologies that have been developed to reduce the amount of energy needed to light an office building.

Reduce ambient light levels and use task lighting

Now that most reading and writing is performed on computers, light levels should be lower to eliminate glare and eyestrain. Consider leaving half the lights in private offices and partition areas off to reduce ambient light levels and installing an appropriate task light on desks for paperwork.

Turn unnecessary lights off

Make sure the last person out of the office is instructed to turn off all of the lights. If you are working late, use task and individual office lights and turn off the remainder of the office lights.

AIR CONDITIONING

In the San Francisco Bay Area, air conditioning accounts for 40% of a building's energy use. There are a number of no-cost ways building occupants can reduce a building's air conditioning use.

Close the shades or blinds in the summer

A major source of heat gain and cooling load for a building is the sun. In the summer, close your blinds or shades to keep the heat out during the hours the sun is on your side of the building.

Install programmable thermostats

Check with the building engineer or manager regarding how the air conditioning is controlled for your office building. If the system operates more hours than is needed in your space, install a programmable thermostat. It will automatically turn off the system when the space is unoccupied.

In the summer, set the thermostat to 74 degrees

For each degree you raise the cooling thermostat setting, up to 5% of cooling costs can be saved. Setting the thermostat at 74 instead of 68 degrees will save 30% on cooling costs.

SPACE HEATING

In the winter, let the sun shine in

The sun can help heat your office. Open your shades or curtains in the winter while the sun is shining.

In the winter, set the thermostat to 68 degrees

For each degree you reduce the heating thermostat setting, up to 5% of heating costs can be saved. Setting the thermostat at 68 instead of 72 degrees will save 20% on heating costs.

Don't use space heaters

Space heaters use a tremendous amount of energy and are also a fire hazard. The typical space heater will use \$240.00 worth of energy per year.

TENANT CHECKLIST

Computers:

- ✓ Buy laptops
- ✓ Switch to LED monitors
- ✓ Purchase Energy Star
- ✓ Turn off at night and when not needed during the day
- ✓ Activate Power Management Features

Copy Machines and Printers:

- ✓ Turn off at night
- ✓ Activate Power Management Features
- ✓ Purchase Energy Star
- ✓ Purchase Ink Jet Printers

Lighting:

- ✓ Reduce ambient light levels and use task lighting
- ✓ Turn unnecessary lights off

Air Conditioning:

- ✓ Close blinds or curtains to keep the summer sun out
- ✓ Install programmable thermostats
- ✓ Set cooling setting to 74 degrees

Space Heating:

- ✓ Open blinds and curtains to let the winter sun shine in
- ✓ Set heating setting to 68 degrees
- ✓ Don't use space heaters