

Working Energy Smart Office Accommodation

Small changes in our behaviour at work can lead to significant energy and cost savings. By reducing energy use you also help protect the environment by reducing greenhouse gas emissions.

Simple tips

- Turn off unused computers, lights, TVs and radios when not needed.
- Turn off urns, coffee pots and refrigerators not being used.
- Install timers on water boiling units.
- Consider energy costs in all purchasing decisions - the additional cost of an energy efficient appliance is often repaid many times through reduced running costs over the life of the appliance.
- Consider energy efficiency when planning office fit-outs and refurbishments - efficiency improvements are most cost effective when combined with other work.
- Arrange for cleaners or security to turn off any lights or equipment left on after hours.

Energy efficient offices save money and protect the environment.

Fluorescent light myth destroyed

It is better to turn fluorescents lights off when you leave the room or work area for more than 10 minutes. Switching them off has minimal effect on the lifetime of the lights and can save a lot of energy and money.

Lighting

In a typical commercial office building, lighting accounts for around 15-20% of the energy used. This is an area where everyone can make a difference.

Reducing heat generated by lighting can also lower air conditioning costs in summer.

- Open blinds and curtains to let in natural light rather than using electric lighting. Making use of natural light can save 10 - 20% in some buildings of lighting costs.
- Turn lights on only when needed.
- Turn lights off in rooms that are not in use (including store rooms, cupboards and corridors).
- Consider using sensors.
- Turn lights off after hours or install timers to automatically switch off lights or movement sensors.
- Consider replacing standard light globes with compact fluorescent lamps. Although they initially cost more, they last longer and use about 75% less energy for the same light output.

Turn off lights when not needed to reduce lighting costs.



Easy savings from lighting

Operating Hours	Operating Costs per Year (2 X 36 watt fluorescent light fitting)
Continuously (Worst case scenario) (24 hrs/day, 365 days/year)	\$ 102
Office Hours (10 hrs/day, 5 days/week, 52 weeks/year)	\$ 30
Energy Smart (5 hrs/day, 5 days/week, 52 weeks/year)	\$ 15

*Based on typical energy consumption per fitting (including control components) of 90 watts.

The above table shows the difference between using lights continuously (worst case scenario) and being Energy Smart which could save you around \$87 a year per fitting. This is a significant amount, for example 100 fittings would equate to a saving of \$8,700 a year.

In addition to saving energy, turning lights off means that they need to be replaced less often, resulting in lower maintenance costs.

Screen saver myth exploded

Screen savers do not save energy. Most computers need about twice as much energy to light up the screen as they do for processing. In addition to lighting the screen, many screen savers require processing energy.

Screen savers were initially designed to stop screens being burnt by a constant image, but they are not needed for modern screens. A much better option is to activate the powerdown feature after a given time, or use a black screen saver.

Easy savings from computer equipment

	Consumption of one computer		Savings in an office with 50 computers		Saving
	kWh/year	\$/year	kWh/year	\$/year	%
Computer on for 9 hours per working day	238	\$31	0	\$0	0%
Energy saving features activated during lunchtime (1 hour)	221	\$29	854	\$111	7%
Energy saving features activated during lunchtime and during one 2 hour meeting	179	\$23	2,944	\$383	25%
Energy saving features activated during lunchtime and during three 1 hour meetings	169	\$22	3,416	\$444	29%

Savings are calculated using typical energy consumption for a desktop computer of 110W (CPU 50W and monitor 60W), energy costs of \$0.14/kWh and typical usage of 9 hours/day, 5 days/week, 48 weeks/year.

In addition to energy savings, switching off equipment will help prolong its life and reduce greenhouse gas emissions.

Further information about saving energy through efficient use of office equipment and the ENERGY STAR® program is provided in the Energy Smart Toolbox under "Energy Saving Manual".

This is available from the Energy Smart Business section of SEDO's website at www.sedo.energy.wa.gov.au

Office equipment

Office equipment can account for up to 10% of energy used in an office. Using office equipment more efficiently can make significant energy savings.

- Purchase ENERGY STAR® compliant equipment and enable the energy saving features.
- Use timers to turn off equipment — a simple 7 day timer on a photocopier to switch it off outside working hours can reduce equipment/photocopier costs by around 70%.

- Switch the monitor off if the computer is being used as a server.
- Use equipment effectively - if you are unlikely to receive faxes outside business hours switch a fax machine off and forward faxes through to another machine.

- Turn computers and monitors off after hours and turn off your monitor when you are away from your desk. Modern computers are designed to handle 40,000 on/off cycles, so switching your computer off will not cause damage.
- Disable screen savers as they use more energy than a blank screen and are not needed (see myths section above).

Bring to work the energy saving practices you use at home.



Did you know?

If all the compatible computers in Australia were ENERGY STAR® enabled, in one year it would save companies and households more than \$200 million in energy costs and reduce greenhouse gas emissions by over 2 million tonnes. That is equivalent to taking 500,000 cars off the road.



Save energy by improving comfort

Work area temperatures should be controlled between 21 and 25 degrees Celsius. Over heating or over cooling by 1 degree Celsius within this band can result in a 10% increase in energy use and reduced comfort levels.

Heating and cooling

In a typical commercial office building, heating and cooling can account for 60 - 70% of the energy used. This is an area where the most energy savings can be made.

- Minimise air conditioning run times by asking the facilities manager to set operating times to match occupancy hours.
- If your building has an after hours heating or cooling option, only use it when necessary.
- Use the energy rating labels when selecting window/wall or split system air conditioners. Selecting a high efficiency system will save 20% or more system energy compared to a low efficiency system.
- Specify high efficiency equipment when purchasing larger heating and cooling systems.
- Keep windows closed in air conditioned rooms (except when evaporative cooling is used).
- If possible turn off air conditioning to unused rooms and spaces or close them off from controlled areas by shutting doors.
- Report over heated areas (in winter) and overly cooled areas (in summer) to the facilities' manager.

Set appropriate temperature limits and save energy.



More information

If you would like more information please visit the Sustainable Energy Development Office's web site at www.sedo.energy.wa.gov.au or contact the Energy Smart Line on 1300 658 158.

The Sustainable Energy Development Office can also provide the following support material to assist organisations to save energy:

- "Turn off before you take off" equipment stickers (7 x 2.5 cm rectangle)
- "I've switched off to save the planet" stickers (4 cm diameter circle)
- "Work Energy Smart" A4 posters
- "Work Energy Smart" A2 posters.

Brochures on saving energy in:

- "Commercial Heating, Cooling & Ventilation Operations"
- "Commercial Lighting Operations"
- "Commercial Refrigeration Operations"



Sustainable Energy Development Office
Government of Western Australia