



national centre for  
sustainability



# Sustainable Office Equipment



## Why is developing a “GREEN” approach to office equipment use important ???

Many people don't realise that operating office equipment can be costly and place unnecessary pressure on our environment. Office equipment energy use has increased 2.3 times in the last ten years, and is expected to double in the next ten years. Office equipment that didn't exist 15 years ago are penetrating the office environment and now accounts for up to 80% of office energy use, not to mention additional running costs.

Source: <http://edis.ifas.ufl.edu/EH316>

## Your help is needed !!!!

Improving your work habits by considering your environmental impacts is important. Office equipment is vital to today's workforce however, by understanding what options are available to reduce their environmental impact, we can achieve the same productivity while saving resources.

Below are some easy to follow steps to send you well on the way to **greening** your office equipment.

# Green Computers

Computers are essential tools in the work place, commonly being used for at least 8 hrs per day. Considering there are over 10,600,000 computers in Australia it is essential that they are managed correctly to reduce harmful affects on our environment.

Source: [www.aneki.com/computers.html](http://www.aneki.com/computers.html)

## REDUCE

POWER SAVE MODE can be activated if you are using Windows by following the prompts below:

- Select "Start"
- Select "Settings"
- Select "Control Panel"
- Select "Display" from the list
- From "Display Properties" select the "Screen Saver" tab
- Select "Power" and under "Turn off monitor" select a time period such as 10 minutes

\*\*\* NOTE - shutting down the hard drive may cause network problems and is not advised

SWITCH OFF monitors if not expecting to use the computer in the next half hour or so

- Monitors are the most energy intensive component of your PC
- An average monitor uses 60 watts when fully on, 6.5 watts when asleep and **1 watt when switched off**

SWITCH OFF your computer whenever you are away from your desk for more than an hour

## REUSE & RECYCLE

COMPUTER RECYCLING processes that exist at Swinburne include:

- Old TAFE computers are reused or sold to staff or students
- Higher Ed leases computers so at the end of their life they go back to the supplier

\*\*\*\*NOTE Formal computer recycling processes will involve infrastructural changes within the university, processes are currently in place to facilitate these changes. Computer recycling will therefore be explored in more detail in a later session

## MYTHS & FACTS

SCREEN SAVERS do not save energy

- Screen savers are energy wasters and use twice as much energy to light up the screen compared to normal processing

TURNING OFF COMPUTERS doesn't crash the hard drive

- Provided that computers are shut down correctly from the 'Start' menu and not switched off, there will be no damage done to the hard drive

A computer that is not ENERGY MANAGED is capable of producing 300kg of carbon dioxide each year

- This is the equivalent of traveling from Sydney to Perth by car (4,100 km!!!!!!!)

Source: [www1.sedo.energy.wa.gov.au/pdf/office.pdf](http://www1.sedo.energy.wa.gov.au/pdf/office.pdf)



# Green Photocopiers & Printers

Photocopiers have a surprisingly big impact on the environment. If a photocopier is run continuously for 7 years it will consume \$1,500 in electricity bills, \$24,000 in paper, \$15,000 in toner and a total of 80 tonnes of carbon dioxide. This carbon dioxide is the equivalent of the amount produced by an average Australian home over 7 years.

Although printers are undeniably useful, these machines tend to encourage our habit for excessive paper and power consumption and so it is important and relatively easy to get them under control.

Source: [www1.sedo.energy.wa.gov.au/pdf/office.pdf](http://www1.sedo.energy.wa.gov.au/pdf/office.pdf)

## MYTHS & FACTS

Most of the **ENERGY** used in photocopiers is used to heat components which fuse the toner to paper which are kept hot while the machine is idle.

- Keeping components ready to photocopy can use up to 400 watts of energy

## REUSE & RECYCLE

Use **ONCE USED PAPER**

- When printing drafts/internal documents etc
- Keep a once used paper tray next to the printer

**RECYCLE** used paper

- Place 'Paperaway' boxes next to printers
- Empty into blue and red paper recycling wheelie bins located in corridors when appropriate

## REDUCE

Photocopy in **BATCHES**

- This saves the repeated charge up energy expenditure required for the machine to warm-up, not to mention your time

**SWITCH OFF** photocopiers and printers at the end of the day

Use the **PRINT PREVIEW FUNCTION** to check the layout and style before printing

Don't forget to **DOUBLE SIDE** your documents when ever possible

- REFER to previous theme "Paper" for more detail by visiting

[www.swin.edu.au/ncs/research-projects/greenoffice/reps.htm](http://www.swin.edu.au/ncs/research-projects/greenoffice/reps.htm)

**STORE** information electronically where possible rather than in hard copy format – Think about it!!

- Minutes/agendas from meetings
- Use PowerPoint presentations rather than hand outs
- SAVE PAPER and burn your documents on to CDs or copy them to an external hard drive

**POWER SAVE MODES** may be activated to reduce energy consumption

- Set default sleep times to lowest possible settings

**THINK** before you print

- Where possible communicate via email
- Do you need to print draft copies at all?

Source: [www.egeneration.co.uk](http://www.egeneration.co.uk)



# Green Faxes / Scanners & Multifunction Devices (MFDs)

Fax machines, Scanners and MFDs provide fast communication and increase general efficiency in the workplace. However these types of equipment vary greatly in their energy and paper requirements and hence it is important to consider what your specific needs are.

## MYTHS & FACTS

When equipment is turned on or powers up from sleep there is often a CURRENT SURGE

- Surges are very short in duration and consume a fraction of average running time energy
- It makes sense when equipment is not being used to turn it off or switch to a lower power setting

Source: [www1.sedo.energy.wa.gov.au/pdf/office.pdf](http://www1.sedo.energy.wa.gov.au/pdf/office.pdf)

## REUSE & RECYCLE

PRINT faxes on once used paper before sending.

- You may also load the machine with once used paper to print received faxes

\*\*\*\*NOTE Formal equipment recycling processes will involve infrastructural changes within the university; processes are currently in place to facilitate these changes. This issue will therefore be explored in more detail in a later session.

Source: [www.ruf.rice.edu/~recycle/guides/faxmach.html](http://www.ruf.rice.edu/~recycle/guides/faxmach.html)

## REDUCE

ELIMINATE the use of separate fax cover sheets

- Items like stamps and stickers and handwriting the name of recipient and number of pages by hand

DISABLE fax features that print confirmation sheets

- If your fax machine does this by default, the manual should help you to disable that feature

AVOID using the faxes and MFDs unless absolutely necessary

- Is it possible to email instead?

POWER SAVING

- Faxes are mostly inactive hence, it is important to choose one with a low standby energy rating
- MFDs save in embodied energy (only one machine is required instead of several)
- Ensure MFDs are set to the lowest power sleep mode

USE YOUR COMPUTER to fax.

- Many computers are capable of sending and receiving high-resolution faxes
- This requires NO PAPER.

SWITCH OFF

- If you have many faxes, divert calls to a few units at the end of the day so other machines may be turned off.



## Consumables

Office consumables make up a significant part of the total cost of owning office equipment. Waste products from used computers and related equipment (**e-waste**) are a rapidly growing environmental problem. Used imaging consumables, such as printer cartridges, fax cartridges and drum units are a part of this problem. In 2004, Australians used more than 18 million toner cartridges per year resulting in 1,500 tonnes of non-biodegradable waste – enough to cover the MCG to a depth of 1 metre at least!!

By using the 'Cartridges 4 Planet Ark' service, Swinburne can rest assured that its cartridges are recycled or returned to the manufacturer for reuse.

### REDUCE

PRINT QUALITY FUNCTION is often underused and can dramatically prolong the life of printer cartridges

- This can be activated after selecting 'Print' from the 'File' menu then selecting the 'Paper/Quality' tab
- Function is often displayed as 'EconoMode' or in terms of dpi (dots per inch)
- Generally the ink will be lighter, this is acceptable for drafts or documents for personal use



## REUSE & RECYCLE

PLANET ARK provides a FREE cartridge collection system for businesses and households.

- What makes 'Cartridges 4 Planet Ark' different?
  - There are over 2,000 different types of printer cartridges and consumables currently used in Australia. 'Cartridges 4 Planet Ark' accepts **every one of these cartridges**.
  - All toner and inkjet cartridges or anything else that you periodically replace in your printer, fax, photocopier or multi-function centre can be put in the 'Cartridges 4 Planet Ark' recycling bin. This includes **drum units, toner bottles, fax cartridges, printer ribbons, laser cartridges and inkjet cartridges**.
  - ALL of the recovered component materials, including aluminium, steel, plastic, toner, ink and foam are recycled into new products or reused in new applications.

Visit the following site for more details:  
[www.closetheoop.com.au/c4pa/](http://www.closetheoop.com.au/c4pa/)

### MYTHS & FACTS

Will recycled cartridges VOID MANUFACTURERS WARRANTY?

- Some manufacturers tell us that using a recycled cartridge will void your warranty - **this is just not true**. Under the Trade Practices Act they cannot void your warranty - they can only insist that you buy an original cartridge before any work is carried out on your printer.



