

## Environmental Purchasing Checklist

# Printers, photocopiers and multi-function devices

This checklist suggests environmental criteria for use by Australian Government departments and agencies when purchasing printers, copiers and multi-function devices. These environmental criteria would generally be considered together with price, quality and other purchasing criteria in accordance with the [Commonwealth Procurement Guidelines and Best Practice Guidance](#). The checklist also provides tips for purchasers and users and links to further information. A separate checklist is available for [Office equipment consumables](#). Purchasers may choose to amend the criteria and specifications to meet their own requirements.

### WHAT ARE THE ENVIRONMENTAL ISSUES?

All products or services have some impact on the environment, which may occur at any or all stages of the product's life cycle - raw material acquisition, manufacture, distribution, use and disposal. This checklist focuses on the environmental impacts that may be relevant to purchasers of office equipment.

Office equipment accounts for an estimated 15% of the Australian Government's tenant light and power, giving rise to about 60 thousand tonnes of carbon dioxide equivalent greenhouse gas emissions. Upgrading to energy-efficient equipment, and using it efficiently, can cut power consumption by office equipment by about 80% (see <http://www.ea.gov.au/industry/sustainable/greening-govt/pubs/green-office-guide.pdf>, p.19). Energy-efficient equipment produces less heat, reducing the loading on air conditioning systems.

Most paper waste generated in offices arises through use of printers, photocopiers and faxes. Equipment can be purchased that is efficient in paper use and supports use of recycled paper, which has lower environmental impact.

Well-designed equipment will reduce waste and use fewer resources. This can lead to financial savings. For example, most of the life-cycle cost of a printer is usually spent on cartridges and paper – costs that can be reduced by purchasing consumables-efficient equipment, which produces much less waste.

### KEY AUSTRALIAN GOVERNMENT POLICIES

The [Commonwealth Procurement Guidelines and Best Practice Guidance](#) state that the core principle governing Australian Government procurement is value for money, a concept evaluated on a whole of life basis of the goods or services being procured. Officials buying goods and services need to be satisfied that the best possible outcome has been achieved taking into account all relevant costs and benefits over the whole of the procurement cycle.

According to the [Commonwealth Procurement Guidelines and Best Practice Guidance](#), "officials should be aware of any relevant environmental legislation and targets set by the

Commonwealth, and ensure they take into account matters affecting the environment ... when formulating requirements. They should include relevant environmental criteria in specifications and requests for tender.”

A pre-qualification scheme has been developed for the procurement of major office machinery. It is mandatory to use the Endorsed Supplier Arrangement when purchasing major office machinery (<http://www.esa.finance.gov.au/>).

The Australian Government’s Energy Policy [Measures for Improving Energy Efficiency in Commonwealth Operations](#) requires:

- departments and agencies to purchase only office equipment that qualifies to display the ‘Energy Star’ label, where it is available and fit for purpose; and
- tenant’s light and power use in office buildings to achieve a target of 10,000 MJ per person per year by 2002.

As a signatory to the [National Packaging Covenant](#), the Australian Government has agreed to facilitate implementation of purchasing policies for recycled goods.

The Commonwealth, State and Territory governments endorsed the [National Government Waste Reduction and Purchasing Guidelines](#) at the November 1996 meeting of the Australian and New Zealand Environment and Conservation Council (ANZECC). Members agreed to a range of actions, including establishing purchasing policies to reduce waste.

## **SUGGESTED ENVIRONMENTAL PURCHASING CRITERIA FOR PRINTERS, PHOTOCOPIERS AND MULTI-FUNCTION DEVICES**

<b>Give consideration to printers, copiers and MFDs ...</b>	<b>Comments</b>
... qualified to display the Energy Star label.	Energy Star certification demonstrates that the energy consumed by the basic equipment is acceptably low when it is not in operational mode.
... with low overall energy consumption.	Energy consumption during operation and by peripherals such as collators and duplexers may vary considerably (these aspects are not covered by Energy Star certification). Ask suppliers for details.
... that reduce overall waste and use fewer resources.	<p>The following features should be preferred:</p> <ul style="list-style-type: none"> <li>• Duplex (double-sided printing) capability – can significantly reduce office paper consumption. Equipment should have provision to set duplexing as the default. If the added cost of a duplexing unit is not justified at the time of purchase, select products that allow for subsequent installation.</li> <li>• Print shrinkage capability (printing two-to-one pages) – can be used for draft documents.</li> <li>• Low consumables usage – for example, laser printers are available that use long-life components to greatly reduce consumables requirements.</li> </ul>

Give consideration to printers, copiers and MFDs ...	Comments
	<ul style="list-style-type: none"> <li>• Provision for use of remanufactured (preferably) or recycled consumables – some companies run a consumables remanufacturing or recycling program or endorse others to do so. Some other companies do not cooperate with remanufacturing – they may incorrectly imply that guarantees will be voided if such consumables are used, or may use contracts, licensing arrangements or financial incentives to discourage users from sending cartridges for reprocessing. No such restrictions should be accepted. See also the <a href="#">Office equipment consumables</a> checklist.</li> <li>• Light weight – to reduce the amount of materials used.</li> <li>• Long life – look for products that can be upgraded rather than replaced.</li> <li>• Remanufactured or recycled equipment components – for example, some photocopiers are available made largely from remanufactured product. These are lower cost, guaranteed and reportedly indistinguishable from 'new'.</li> <li>• Product take-back – some manufacturers may offer to accept products back for recycling at the end of their useful life. This practice is common in Europe and is starting to appear in Australia.</li> <li>• Design for easy recovery and recycling of parts at the end of the equipment's useful life, for example through use of fewer materials, simple fastenings and etching of components to describe their material composition.</li> <li>• Equipment guaranteed to be compatible with recycled paper - recycled paper use is encouraged (see <a href="#">Paper and cardboard</a> checklist). Good quality recycled paper performs well in most machines.</li> </ul>
... with low environmental impact packaging.	See <a href="#">Packaging</a> checklist
... with low operating noise levels.	The noise of office equipment may be distracting for staff working nearby. Ask manufacturers to provide information on operating noise levels because models vary.
... from companies that document additional environmental benefits of their products or superior environmental performance of their companies.	Documentation for products could include external verification of claims, e.g. certification of the product through a reputable environmental labelling program. (Imported products may be certified under an overseas program.) Documentation for companies could include environmental management systems certified to ISO 14001, public environmental reporting, Design for Environment (DfE) policies etc.

## TIPS FOR PURCHASERS

Undertake life cycle costing of your purchase options incorporating cost of consumables, power and paper.

Ask for products to be delivered with their Energy Star capability activated or enabled and tested.

Good quality recycled office paper should not cause problems in office equipment. The poor quality of early recycled paper often led to equipment blockages and dust problems. Modern recycled copy papers are of much higher quality and such performance problems are generally confined to lower quality papers (both recycled and virgin) in older and higher speed equipment. If in doubt, run a trial. Any general claim that use of recycled office paper will increase service costs or violate product warranties is likely to represent a violation of the *Trade Practices Act 1974*.

You can require suppliers to include the take back of all packaging in their bids and specify how they dispose of that material.

You can request that suppliers specify what, if any, recycled content is used in the equipment.

## TIPS FOR USERS

Energy Star functionality must be enabled. Ask your IT or maintenance staff to help, or follow the instructions given with the equipment or at the Energy Star website.

Switch off equipment overnight and when not in use. Some photocopiers can be programmed to shut down at certain times or when unused for a certain length of time.

Set up duplexing as the default setting where possible.

Office equipment that is no longer needed should be reused or recycled wherever possible. Often these items contain heavy metals and other hazardous materials that can find their way into the environment from discarded equipment in landfills. Asset management companies associated with auction houses offer disposal services for computers and other office equipment. These repair, reuse or recycle equipment to best financial return and will often provide a good environmental outcome by avoiding landfill.

## SUCCESS STORIES

The National Aeronautics and Space Administration (NASA) operates around 2000 copy machines over 14 facilities. Through a “cost per copy” contract (leasing copy services rather than copiers) NASA saved \$4.5 million over a 5-year contract.

Further success stories can be found at the [Greening of Government website](#).

## LINKS TO FURTHER INFORMATION

The **Greening of Government** website provides the policy framework for Greening of Government, as well as a range of Green Procurement Tools and other useful information. <http://www.ea.gov.au/industry/sustainable/greening-govt/index.html>

**Energy Star** – The website of the Australian Energy Star program explains the program and advises how to buy and use Energy Star equipment (see criterion no. 1).

<http://www.energystar.gov.au/>

**Working Energy** – This is the Australian Government website for energy management by Australian Government agencies. It includes a training kit to help you implement energy efficiency and a methodology to help you assess the energy efficiency and quality of energy service in your buildings. It also has specific reference and guidance on office equipment at:

[http://www.greenhouse.gov.au/government\\_op/workingenergy/office/index.html](http://www.greenhouse.gov.au/government_op/workingenergy/office/index.html)

**Design for Environment** - Reducing environmental impacts through better design (such as using less toxic components, or making the product easier to disassemble and recycle or reuse) is referred to as Design for Environment or DfE. Many manufacturers, suppliers and industry associations may be able to provide information on their DfE activities. The [Australian Information Industry Association \(AIIA\)](#) has a “Designing for Environment” publication available from their [website](#).

The Department of the Environment and Heritage has an introduction to DfE in business available at <http://www.ea.gov.au/industry/finance/publications/producer.html>

**Green office guide** – A guide to help you buy and use environmentally friendly office equipment, focusing on energy consumption.

<http://www.ea.gov.au/industry/sustainable/greening-govt/pubs/green-office-guide.pdf>

NSW Nature Conservation Council **ecoOFFICE** website – aims to give practical advice on green office practice. It includes a section on green office equipment at <http://www.ecooffice.com.au/equipment/>

**Office products – guide to sustainable purchasing and use** – addresses environmental purchasing issues relating to a range of office products including office equipment: [http://www.resource.nsw.gov.au/data/office\\_guide.pdf](http://www.resource.nsw.gov.au/data/office_guide.pdf).

## Environmental Specification

# Printers, photocopiers and multi-function devices

Purchasers should request information from potential suppliers at the time of requesting a quotation. This environmental specification is intended to provide assistance in obtaining environmental data from suppliers. The information that would be requested from suppliers is shown in the Information required column. Items in this specification are based on the criteria in the Environmental Purchasing Checklist for printers, photocopiers and multifunction devices.

Consideration will be given to printers, copiers & MFDs ...	Information required from companies	Weighting
... qualified to display the Energy Star label.	Confirm that the equipment is Energy Star compliant.	Required
... with low overall energy consumption.	Specify the power consumption rate of the equipment in watts (including all peripheral items such as duplexer and collator) while the machine is a) operating b) in sleep mode c) on standby and not in sleep mode d) switched off, but power point still on.	45-55%
... that reduce overall waste and use fewer resources.	Specify whether the equipment has double-siding (duplex) capability.	25-35%
	Specify whether the equipment can copy/print two pages to a page.	
	List all components that would normally need replacing during the product's working life. For each item, state: <ul style="list-style-type: none"> <li>• the frequency that the item normally needs replacing given the specified usage rate;</li> <li>• the unit cost; and</li> <li>• the unit cost of remanufactured versions of the consumable, if supplied.</li> </ul>	
	Confirm that use in the equipment of third-party remanufactured consumables meeting required standards will not affect service agreements or warranties (note - any blanket statement to the contrary may contravene fair trading laws).	
	Confirm that there are no restrictions on users recycling equipment consumables.	
	Specify the weight of equipment in kilograms, including all add-ons required to meet performance requirements.	
	State any ways that the equipment can be upgraded subsequent to purchase.	

Consideration will be given to printers, copiers & MFDs ...	Information required from companies	Weighting
	<p>State the percentage weight of the equipment that is made up of remanufactured or recycled components and materials.</p> <p>State whether the equipment can be returned to manufacturer at end of its lifespan for guaranteed remanufacturing or recycling, and provide details of associated guarantees, costs and logistics.</p> <p>Specify any ways that the equipment is designed for easy recovery and recycling of parts at the end of its useful life, including whether or not components are etched to describe their material composition.</p> <p>Confirm that the equipment is guaranteed to be compatible with high quality recycled paper.</p>	
<p>... with low environmental impact packaging (use this criterion only when packaging is significant).</p>	<p>List the types of packaging used in delivering your product, including bulk delivery packaging. Specify:</p> <ul style="list-style-type: none"> <li>• the total weight per unit product,</li> <li>• the proportion of recycled material used, and</li> <li>• whether the packaging can be recycled locally.</li> </ul> <p>State whether you will take back the packaging for reuse or recycling after delivery.</p> <p>Describe any disposal advice provided on your product packaging, including the size, location and colour of the advice.</p> <p>Specify whether your packaging includes any loose fill material.</p> <p>Specify whether your company is a signatory to the <a href="http://www.ea.gov.au/industry/waste/covenant/signatories.html">National Packaging Covenant</a>. See <a href="http://www.ea.gov.au/industry/waste/covenant/signatories.html">http://www.ea.gov.au/industry/waste/covenant/signatories.html</a>.</p>	<p>0-10%</p>
<p>... with low operating noise levels.</p>	<p>Specify the noise level during printing / operation.</p>	<p>0-10%</p>
<p>... that document additional environmental benefits of their products or superior environmental performance of their companies.</p>	<p>Provide appropriate documentation to support any environmental claims made.</p>	<p>5-15%</p>