

The Australian Ecolabel Program

Good Environmental Choice Australia Standard

Computers



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Use of This Standard

This voluntary environmental labelling standard may be used by competent environmental assessors to establish product compliance to the Australian Ecolabel Program. Products that are certified with the mark of conformity, the “Good Environmental Choice Label” have been independently tested and demonstrate compliance to the environmental and social performance criteria detailed in this standard. The overall goal of environmental labels and declarations is the communication of verifiable and accurate information, which is not misleading, on environmental aspects of products and services. This encourages the demand for, and supply of, those products and services that cause less stress on the environment, thereby stimulating the potential for market-driven continuous environmental improvement.

This standard identifies environmental, quality, regulatory and social performance criteria that products sold on the Australian market can meet in order to be considered as good “environment practice”. Products that have been certified as complying to this standard may gain greater market recognition and a marketing advantage in government and business procurement programs, as well as broad consumer preference.

This standard can be used by Australian producers to guide their designs for environment programs by using the environmental criteria as key performance benchmarks to reduce the environmental loads of their product. The standard is necessarily restricted in its identification of environmental loads from the product life-cycle. Producers should consider other environmental measures along the product cycle, which are not included in this standard, in their environment program designs for and aim for even higher levels of environmental performance where technically possible.

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Abstract

This Standard specifies environmental performance requirements of computers for the Australian Ecolabel Program. The Australian Ecolabel Program complies with ISO 14024: "Environmental labels and declarations - Guiding principles" which requires environmental labelling specifications to include criteria that are objective, reasonable and verifiable.

1 INTRODUCTION

1.1 Purpose

This Standard seeks to define good environmental performance benchmarks for both desk top and portable computers. The voluntary environmental labelling standard implemented by Good Environmental Choice Australia (GECA) as part of the Australian ecolabel program specifies environmental performance criteria for desktop and laptop computers, servers, and other computer equipment. This standard stipulates the environmental load of such products throughout the major aspects of their life cycle.

1.2 Background

The environmental loads from the production and use of personal computers are widespread and numerous. The primary purpose of this standard is to define environmental performance criteria for the most harmful environmental and human hazards of IT equipment and to use these criteria as indicators of general environmental performance of the product.

2 STANDARD CATEGORY SCOPE

This standard is applicable to the following categories of IT Equipment.

- Desktop (or desk-side) computers
- Display Devices (e.g., LCD Screens)
- Portable or laptop computers
- Servers

Other categories of IT equipment may be considered for certification provided that the product fulfils the requirements of all relevant sections of this Standard.

3 ENVIRONMENTAL PERFORMANCE CRITERIA

3.1 Fitness for Purpose

Certified products should be good performers in their intended application. Certain standards of quality and durability are implicit in the Label. The manufacturer must ensure that the product is fit for its intended purpose and:

3.1.1 Applicable Standards

The product meets or exceeds the requirements of the relevant Australian or industry Standard, or the product meets the applicable and accepted standard in its target market if it is to be exported, or

3.1.2 Demonstrated Performance

If there is no relevant Australian Standard, the product can demonstrate sufficient quality by providing testing reports from an independent organisation or case studies from installations demonstrating suitability and quality, and,

3.1.3 Warranty

The manufacturer shall offer a commercial guarantee on the quality of the product provided the product is used for its intended purpose. The period of this guarantee must be at least:

3 years for desktop computers
2 years for laptop and palmtop computers
3 years for display devices

The guarantee shall be valid from the date of delivery to the consumer.

3.2 Material Requirements

3.2.1 Plastics

Plastic parts must not contain polybrominated biphenols, polybrominated diphenyl ethers, brominated paraffins or short chain chlorinated paraffins.

Plastic parts weighting greater than 25g shall satisfy the following criteria:

- Parts consist of one single type of polymer (homopolymer or copolymer) or recyclable plastic blend that may be recycled in mainstream recycling systems.
- Parts do not contain metal inlays that cannot be separated from the plastic.
- Parts do not have cadmium or lead intentionally added (e.g., catalyst or stabilizer).
- Parts do not contain halogens (exemptions for a maximum 0.5% by weight fluoroaditive may apply in some cases).
- Each individual plastic part is marked with an appropriate resin identification code promulgated by the Plastics and Chemical Industry Association (<http://www.pacia.org.au>) or in accordance with ISO 11469.

Exemptions may be made for products where the nature of the manufacturing process or the size and shape of the product restrict the application of the plastics resin identification code on the product. Exempt products will ensure that appropriate information describing disposal methods for the product, including the relevant resin identification code, are provided at the time of sale of the product to encourage further recycling.

3.2.2 Heavy Metals

3.2.2.1 Batteries and Accumulators

The content of certain heavy metals in batteries and accumulators may not exceed the following limits:

Table 1: Maximum heavy metal content in batteries and other specified parts

Metal	Max Concentration (ppm)
Mercury	1
Cadmium	10
Lead	100

3.2.2.2 Displays

The background illumination for flat displays (e.g., LCDs) must not contain more than 3 mg of mercury per lamp.

No display may contain more than 5 g of lead.

3.3 Design Requirements

The product should have a modular structure and should be accessible with commonly available tools. One qualified person, alone, must be able to dismantle the product.

The product design should take upgradeability and exchangeability of modules into consideration. The user must be able to change modules without any special tools.

At least 80% (by weight) of plastic and metal materials in the housing and chassis shall be technically recyclable.

Incompatible and hazardous materials shall be clearly labelled, easily found and removable before recycling.

3.4 Energy Consumption and Noise

3.4.1 Energy Consumption

The energy consumption of computer units shall meet or exceed the following requirements:

Table 2: Energy efficiency requirements for computers.

	Sleep mode Power Consumption (W)	Power Management Max Preset Time(minutes)
Stationary	5	30
Portable	3	15

Servers and units with a power supply with a maximum continuous power output greater than 400 W shall have a sleep mode power consumption of less than 5 % of the maximum continuous power consumption and a default power management sleep preset time of less than 30 minutes.

The energy consumption of portable computer power supplies shall be less than 0.75 W when plugged in to a power outlet and disconnected from the computer.

The energy consumption of display devices shall meet or exceed the following requirements:

Table 3: Energy efficiency requirements for displays.

Low-Power Mode	Power consumption (W)	Power Management
	Low power state	Preset Default (minutes)
First Low-Power "Sleep" Mode	5	30
Second Low-Power "Deep Sleep" Mode	2	60

No display may have an "off" mode power consumption of greater than 1 W.

Displays must have an off switch that is obvious and easily accessible.

3.4.2 Noise

The declared sound level according to ISO 9296, shall be measured and not exceed:

- 48 dB in the idle operating mode
- 55 dB when accessing a disk drive

3.5 Product Custodianship

3.5.1 Spare Parts

Spare parts for product repair shall be made available for at least 5 years following the termination of production. This requirement only applies to parts that may be expected to fail with extended normal use (e.g., moving parts). Parts which normally exceed the life of the product need not to be provided as spares.

3.5.2 Product Take Back

Manufacturers must offer to take back their products at no cost (excluding transport) at end of life. The manufacturer must have in place an acceptable recycling or refurbishment system, or arrangements with a reputable computer recycler, for products returned under this scheme. Material collected under the scheme must not be disposed of in landfill or by incineration.

Manufacturers are not obliged to take back items contaminated by users (e.g. medical or nuclear related use).

3.6 Product Information

The following information must be provided with the product:

- Power Management information including minimum and maximum energy consumption of the control unit in operation; sleep, deep sleep, and off-modes.
- A statement that the product consumes zero power only while it is not physically connected to any power outlet, unless independent testing is able to prove otherwise.
- Upgradeability or exchangeability information giving advice on how the user can upgrade or exchange modules, and that the system has been designed to allow this.
- Information on service information giving advice on how the user can make use of the take-back guarantee at end of life.
- A statement that the computer should not be disposed of in household waste or sent to landfill.

- Environmentally preferable cleaning recommendations.

Printed user instructions should be enclosed with new products so that information on the product or service is easily available to users.

3.7 Transference of Environmental Loads

Many aspects of manufacturing or product life cycle are not covered under this standard. It is expected that significant environmental risks or environmental load are managed by the manufacturer and that compliance to this standard does not result in transference of environmental loads. If an aspect of the product life cycle is grossly mismanaged, but is not directly covered by the above environmental performance criteria, assessors may issue a certificate of major non-compliance and recommend against certification under this Standard.

4 COMPLIANCE TO ENVIRONMENTAL REGULATIONS

The applicant is required to comply with relevant environmental legislation and government orders at the Local, State, and Commonwealth levels, if these have been issued. An applicant's compliance with these criteria may be established by undertaking a series of random checks; and/or by gathering samples of applicant operational procedures and documents from approved assessors as evidence to support compliance during the verification. Where an applicant is from an overseas jurisdiction, that jurisdiction's environmental regulations apply. Where the applicant is subject to a guilty verdict by a legally constituted court in the last 24 months on the basis of a breach of any environmental legislation or permits, there must be evidence of corrective action.

5 COMPLIANCE TO LABOUR, ANTI-DISCRIMINATION AND SAFETY REGULATIONS

An applicant shall demonstrate that all employees are covered by a Federal or State award or a certified industrial agreement or a registered workplace agreement as determined by the Industrial Relations Commission, the Employment Advocate or a State or Territory Workplace Relations Agency or a workplace agreement in compliance with Workplace Relations Act 1996 Part 7 – The Australian Fair Pay and Conditions Standard.

An applicant shall demonstrate general compliance to the terms of State or Territory Legislation concerning Occupational, Health and Safety and/or the *Commonwealth Safety, Rehabilitation and Compensation Act 1988*, where applicable. Where the applicant is subject to a breach order by a government agency, or a guilty verdict by an Australian Court within the last 24 months, on the basis of a breach of State, Territory or Commonwealth Occupational, Health and Safety Legislation, there must be evidence of corrective action.

The applicant shall demonstrate general compliance to the requirements of the Racial Discrimination Act 1975, Sex Discrimination Act 1984, Disability Discrimination Act 1992, Equal Opportunity for Women in the Workplace Act 1999, and complementary State Legislation. Applicants cannot be in the list of 'named' or non-compliant employers under the Equal Opportunity for Women in the Workplace Act 1999. Where the applicant is subject to a breach order by a government agency, or a guilty verdict by an Australian Court in the last 24 months on the basis of a breach of these Acts, there must be evidence of corrective action.

Where an applicant is from an overseas jurisdiction, the applicant shall demonstrate general compliance to that jurisdiction's anti-discrimination, occupational health and safety, and workers' compensations regulations. Where the applicant is subject to a breach order by a government agency, or a guilty verdict by a legal court in their respective country within the last 24 months on the basis of a the breach of anti-discrimination, occupational health and safety, and workers' compensation regulations, there must be evidence of corrective action.

An applicant's compliance with these criteria may be established by undertaking a series of random checks; gathering samples of applicant operational procedures and documents from approved assessors; and/or by providing a self-declaration document signed by an executive officer of the applicant organisation as evidence to support compliance during verification.

6 EVIDENCE OF CONFORMANCE

6.1 Audit Methodology

Conformance with this standard shall be demonstrated by undertaking an assessment under the above criteria by an approved assessor, following the certification and verification procedures detailed in the Good Environmental Choice Australia Ltd Documented Quality Management System, which generally follows the environmental auditing requirements of ISO 19 011.

6.2 Assessor Competency

The Australian Ecolabel Program classifies approved assessors as:

- a. Assessors registered by Good Environmental Choice Australia Ltd as environmental professionals that hold expertise relevant for an assessment, and who have undertaken training in the procedures of the Australian Ecolabel Program; or
- b. Environmental auditors accredited with the RABQSA.

6.3 Suitable Sources

Audit evidence should be of such a quality and quantity that competent environmental auditors, working independently of each other, will reach similar audit findings from evaluation of the same audit evidence against the same audit criteria.

Suitable sources of information to establish compliance may be, but are not limited to:

- a. Technical specification of the product.
- b. Obvious characteristics of the product under examination.
- c. Scientific test results and reports.
- d. Environmental management system and audit reports and results.
- e. Life-cycle assessment of each stage of the product life-cycle via a physical audit and examination.
- f. Life-cycle assessment via scientific testing.
- g. A statement of confirmation by an executive officer.
- h. An assessment of company or government records.
- i. Other material that can be considered objective evidence.

6.4 Laboratory Testing

New testing shall be undertaken by a laboratory accredited by the National Association of Testing Authorities (NATA), or similar overseas accreditation agents who can conduct the relevant tests and/or provide documentation detailing environmental performance against the criteria of this standard. The test results should be presented on NATA-endorsed reports or from a laboratory acceptable to Good Environmental Choice Australia Ltd.

If test results or environmental auditing results are not available, and/or there is insufficient data to establish full compliance with the criteria required by this standard, then certification cannot be awarded.