

Draft
Background Document

Criteria document for the
Ecolabelling
of Imaging Equipment
Version 5.0

February 2007

Table of contents

- 1. INTRODUCTION..... 3**
- 2. GENERAL FACTS ABOUT THE CRITERIA 3**
- 3. CRITERIA DEVELOPMENT / REVISION..... 8**
- 4. JUSTIFICATION OF THE REQUIREMENTS..... 8**
- 5. CHANGES FROM THE PREVIOUS VERSION..... 14**
- 6. NEW CRITERIA 15**
- 7. REFERENCE LIST 15**

1. Introduction

This criteria document (revised from version 4.1) provides a brief background to the requirements for Imaging Equipment (copiers, printers, fax machines, multifunctional devices and scanners), version 5.0 (date - xxx) and describes the changes introduced since the previous criteria document (version 4.1).

2. General facts about the criteria

Products that can be labelled

The name of the criteria, Imaging Equipment, is the same as Energy Star has for this product group but Nordic Swan exclude Mailing Machine in this group. Copier, Digital Duplicator, Facsimile Machine, Multifunction Device (MFD), Printer, Scanner are eligible for a Swan label. The machines may be equipped with external or internal scanners. In this document we collect all of these products under the name Imaging Equipment.

The criteria do not apply to computer equipment, for which separate criteria apply.

Copier

A commercially-available imaging product whose sole function is the production of hard copy duplicates from graphic hard copy originals. The unit must be capable of being powered from a wall outlet or from a data or network connection. This definition is intended to cover products that are marketed as copiers or upgradeable digital copiers (UDCs).

Digital Duplicator

A commercially-available imaging product that is sold in the market as a fully-automated duplicator system through the method of stencil duplicating with digital reproduction functionality. The unit must be capable of being powered from a wall outlet or from a data or network connection. This definition is intended to cover products that are marketed as digital duplicators.

Facsimile Machine (Fax Machine)

A commercially-available imaging product whose primary functions are scanning hard copy originals for electronic transmission to remote units and receiving similar electronic transmissions to produce hard copy output. Electronic transmission is primarily over a public telephone system, but also may be via computer network or the Internet. The product also may be capable of producing hard copy duplicates. The unit must be capable of being powered from a wall outlet or from a data or network connection. This definition is intended to cover products that are marketed as fax machines.

Multifunction Device (MFD)

A commercially-available imaging product, which is a physically-integrated device or a combination of functionally-integrated components, that performs two or more of the core functions of copying, printing, scanning, or faxing. The copy functionality as addressed in this definition is considered to be distinct from single sheet convenience copying offered by fax machines. The unit must be capable of being powered from a wall outlet or from a data or network connection. This definition is intended to cover products that are marketed as MFDs or multifunction products (MFPs).

Note: If the MFD is not a single integrated unit but a set of functionally integrated components, then the manufacturer must certify that when installed correctly in the field, the sum of all energy or power use for all MFD components comprising the base unit will achieve the energy or power levels provided in Section 3 to qualify as an ENERGY STAR MFD.

Background memo
Criteria for copiers, printers, fax machines and multifunctional devices, 4.0
June 2005

Printer

A commercially-available imaging product that serves as a hard copy output device, and is capable of receiving information from single-user or networked computers, or other input devices (e.g., digital cameras). The unit must be capable of being powered from a wall outlet or from a data or network connection. This definition is intended to cover products that are marketed as printers, including printers that can be upgraded into MFDs in the field.

Scanner

A commercially-available imaging product that functions as an electro-optical device for converting information into electronic images that can be stored, edited, converted, or transmitted, primarily in a personal computing environment. The unit must be capable of being powered from a wall outlet or from a data or network connection. This definition is intended to cover products that are marketed as scanners

Extra equipment

The above products also include various consumer durables, such as OPC (Optical Photosensitive Conductor) kits, drums, toner powder and residual toner cartridges.

If extra equipment such as desks, sorters, feeder and units for double-sided printing are to be included, the individual parts must meet the requirements as to design, materials, chemical requirements during production, requirements as to packaging and requirements as to recycling.

Justification for swan labelling

Nordic Ecolabelling has developed a common criteria document for Imaging Equipment (copiers, printers, fax machines, multifunctional devices and scanners) because the structures of these products are similar. The foundation for the development of the criteria for Imaging Equipment has many features in common with the Swan criteria for PCs. The requirements are in many ways similar to the requirements developed by other ecolabelling organisations, i.e. TCO, Blue Angel, and Eco Mark, though the levels of the requirements differ.

Typically Nordic Ecolabelling uses an RPC analysis (relevance, potential, and controllability) to determine what parameters the ecolabel can influence in order to achieve the maximum environmental gains possible, i.e. the parameters in respect of which requirements should be imposed.

First, Relevance is determined, i.e. what environmental problems (environmental impact) are associated with the product group and how great is the problem. Is there an environmental threat, and, if so, how great is the threat? Secondly, Potential is considered, i.e. what dynamic developments would allow environmental gains to be made within a particular product group? Can we do anything with the environmental problem? Finally, Controllability is determined, giving information about the extent to which the ecolabelling can influence the activity, problem or requirement. Can the Swan label do anything about the environmental problem?

What finally determines whether we give priority to a requirement is the overall assessment of RPC, not whether each individual point is great or small.

The impact of Imaging Equipment on the environment comes from the extraction of natural resources, from the manufacturing of materials, parts and components, assembly of the finished product, from transport, the use of the product, from waste disposal and from the level of recycling technology.

Table. The criteria focus on following environmental impacts in the product life cycle

Life cycle Impact	Resource extraction	Design and manufacturing	Use	Disposal	Recycling	Transport and distribution
Resources and energy consumption	√	√	√	√	√	
Emissions to air, water and soil		(√)	(√)	√	√	
Working conditions and health		(√)	√			
Packaging		√		√	√	

Resource extraction

Calculation of the resource consumption involved in the extraction of raw materials and manufacturing of parts used by the product group is difficult. As is acquiring information about the country of origin of raw materials and manufacturing methods, because the trade paths between the extraction of raw materials and the final product are complicated. The traceability is poor and it is difficult for the criteria to affect the choice of sub-suppliers.

The use of reused and recycled plastic parts in the products as well as of materials such as metals reduces resource extraction, i.e. saves resources. The requirements as to design also affect resource extraction, since easy separation into different materials promotes the reuse and recycling of materials and product parts.

Design and manufacturing

Requirements regulating design and manufacturing reduce the use of resources and prolong product life before disposal. In other words, ecolabelled products have inbuilt potential system longevity reflecting the principles of recyclable design and allowing for the reuse and recycling of used products or product components.

It is also during the product design stage that the materials used in the product are selected. The environmental burdens associated with the use of chemicals harmful to health and the environment derives mainly from the deposition of waste or incineration. Accordingly the criteria document sets requirements as to absence of dangerous additives such as flame-retardants, heavy metals, chlorinated plastic materials and softeners.

The use of ozone depleting chemicals, e.g. so called CFCs (cf Montreal protocol), is environmentally harmful because they may be emitted to the atmosphere during manufacturing. Use of such chemicals is regulated in the criteria document.

Use

Energy consumed during operation of the equipment is the environmental impact factor on which Nordic Ecolabelling focuses most attention in relation to this product group. Environmental impact

Background memo
Criteria for copiers, printers, fax machines and multifunctional devices, 4.0
June 2005

depends on how the electricity used is produced. Important negative impacts include emissions of carbon dioxide. The criteria document sets strict requirements as to energy consumption and the products must fulfil the Blue Angel criteria for energy consumption.

Extensive requirements as to working conditions during use are included in this document. Emissions to the working environment from printing equipment can be harmful to health e.g. ozone, noise, styrene, dust, VOC (volatile organic compounds) in ink. In addition heat emitted as a result of high energy consumption can influence working conditions in a negative way.

Double-sided printing/copying has been selected as a criterion to reduce the volume of paper used. The use of double-sided printing will also reduce energy consumption.

Waste and recycling

Discarded copying equipment represents a considerable waste problem. Large amounts of waste containing hazardous substances such as flame-retardants and lead are generated. The authorities and suppliers have injected extensive resources into finding systems for processing this waste.

Recycling and re-using product parts and materials allow natural resources to be conserved, and the quantity of waste disposal or combustion to be reduced. The purpose of the WEEE Directive (2002/96/EC) is to force manufactures and distributors of electronic equipment to take back disposed products for recycling or/and reuse of materials and product part. Ecolabelling do not set requirements in accordance with WEEE since the Directive is implemented legislation.

Transport and distribution

Transport and distribution are not a part of this criteria document. Most manufacturers of copiers, printers, fax machines and multifunctional devices supplied to the Nordic market are located in Japan and Asia, thus transport involves long distances. Requirements as to transport and distribution will be considered in future criteria documents.

Criteria version and validity

The criteria document for the ecolabelling of copiers, printers, fax machines and multifunctional devices version 3.3 (June 6th 2001-January 7th 2007) was a merger of two criteria documents: Copiers, version 2.2 and Printers/Fax Machines, version 2.1. Version 4.0, sets criteria for the same type of products as version 3, but the document has a new structure and simpler criteria while still maintaining a strict focus on the environmental improvements achievable by ecolabelling printing devices.

In version 3, the Board of Nordic Ecolabelling and Japan Environmental Associationa decided to develop the so called core criteria following a harmonisation program. For the licence applicant this means that a product that has been approved by the Japan Environmental Association and awarded the Eco Mark will need no further documentation regarding requirements encompassed by the cooperation agreement. In version 4.0 the harmonisation process has been continued with Eco Mark and also with Blue Angel^b (the German national ecolabel).

In this present draft of criteria document (version 5) the purpose is to keep our harmonisation together with EcoMark and Blue Angel. Blue Angel released revised criteria for Office Equipment (RAL-UZ 122 Edition June 2006). EcoMark has in their revision the intention to harmonise with Blue Angel

^a www.ecomark.jp/english/

^b www.blauer-engel.de

and release their new criteria for Copiers and Printers in May 2007 (117 Copiers, version 2.1 and 122 Printers, version 1.0).

The Nordic market

The interest for environmental issues, in particular the climate, is growing rapidly throughout the whole world. Ecolabelling is a tool for a producer to market their environmental adjusted product. It is expected an increasing interest for ecolabelling from producers since the demand of environmental adjusted products will increase.

Almost all manufacturing takes place outside the Nordic region. The product group encompasses two market segments: products sold as office equipment, and products sold for home use through home electronics stores. The quality of the machines manufactured for office use is higher than those designed for the consumer market. For business users, factors such as low energy consumption, print speed, cost per page, and working environment requirements are important. For the consumer market, purchase price is the decisive factor.

The Swan-labelled products are all designed for offices and professionals. There are until yet no Swan-labelled products for the consumer market.

Other labels

Eco Mark, www.ecomark.jp/english/	The Eco Mark is the Japanese third-party certificate corresponding to the Nordic Swan. Eco Mark has criteria for Copiers Multifunctional devices and Printers
The Blue Angel www.Blauer-Engel.de	The Blue Angel ecolabel is the German third-party certificate corresponding to the Nordic Swan. Blue Angel has criteria for Copiers, Multifunctional devices and Printers.
TCO www.tcodevelopment.com	The TCO label is a third-party certificate. TCO has issued criteria for Printers only. The requirements cover the external environment and work environment.
Energy Star www.energystar.gov	Energy Star is a self-declaration scheme run by the US Environmental Protection Agency with the aim of promoting energy-efficient products. Virtually all companies on the market are affiliated to Energy Star .
GEEA www.efficient-appliances.org	GEEA is a collaborative project between the energy authorities in France, Switzerland, Sweden, Denmark, Finland, Germany and the Netherlands. The GEEA label is a self-declaration scheme. The organisation has the right to withdraw a licence if it is revealed that the criteria are not fulfilled. Denmark is the only Nordic country that actively markets the GEEA label.
IT Ecodeclaration www.itecodeclaration.org	IT Ecodeclaration is a collaborative initiative between IT enterprises in Denmark, Norway and Sweden. IT Ecodeclaration is a self-declaration scheme that covers external environmental and working environment parameters.
EU Flower www.eco-label.com	The Ecolabel Flower is the EU third party certificate corresponding to the Nordic Swan. They have until yet no criteria for Copiers and printers.

Japanese Energy Saving Law	Manufacturers are required to endeavour to meet the energy efficiency criteria for copiers.
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3. Criteria development / revision

Purpose of the revision

The aim of this revision is to keep our harmonisation with Japanese ecolabel Eco Mark and German ecolabel Blue Angel. It is important in the context of harmonisation to recognise that the majority of the world's manufacturers are located in Japan and elsewhere in Asia. Manufacturers of copiers and printers are often large global-thinking companies and may be interested in using other ecolabels to conduct green marketing on a global market.

Eco Mark and Blue Angel has many licenses in their countries and with harmonised criteria it will be easier for manufactures to apply for the Swan. In this way we will increase the potential for offering more ecolabelled product to the end-users in the Nordic Region.

In setting the stringency of the criteria, it will be assumed that the market share of the products that are expected to fulfil the requirements will not exceed a maximum of one third of the total market in the Nordic countries.

About this revision

The revision has been performed by the secretariats in contact with representatives from Blue Angel and Eco Mark.

The participants from the Nordic ecolabel were:

Ove Jansson Project manager
Thomas Christensen Representative from Ecolabelling Denmark

Björn-Erik Lönn has been area coordinator

A meeting has been hold in October 2006 together with representatives from producers in Japan (JBMIA - Japan Business Machine and Information System Industries Association) to discuss issues concerning harmonisation between Eco Mark and Nordic Swan.

4. Justification of the requirements

Like the previous criteria, this draft, of version 5 is imposed with the objective of reducing the environmental impact caused by copiers, printers, fax machines, multifunctional devices and now also scanners during their life cycle. In addition, the structure of this criteria document has been simplified, e.g. making it easier for manufacturers or distributors to apply for the Swan if they already hold ecolabels issued by Eco Mark or Blue Angel. If the applicant already has one of theses ecolabels they just have to fulfil the requirements in chapter 4 which contain requirements concerning mainly administrative issues specific for the Nordic organisation of the company.

The following description outlines the background to the requirements contained in the criteria document.

Energy consumption

Energy consumption is a very important property of the device from an environmental point of view. The Nordic Swan has through the years always tried to harmonise their requirement as much as possible with worldwide well known standards as for example Energy Star. In the time of our last revision Energy Star was just in time to revise their criteria. Nordic Swan wanted the most stringent requirement that was in force at that moment which was the energy requirement of Blue Angel. Still Nordic Swan had the intention to revise their energy requirement as soon as Energy Star had their new criteria in force.

As Energy Star now introduce new criteria for Imaging Equipment, Nordic Swan propose in the present draft document that the applicant must fulfil the energy requirement in actual Blue Angel criteria (RAL-UZ 122, June 2006) or in actual Energy Star criteria (The new Version 1.0 May 3 2006, specification is scheduled to go into effect on April 1, 2007)^c.

Design and materials

Discarded printing equipment represents a considerable waste problem. Large amounts of waste are generated containing hazardous substances such as flame-retardants and heavy metals. Requirements as to recycling and re-using parts and materials increase material recycling and reuse, thus allowing natural resources to be conserved and the quantity of waste sent to landfill sites or incineration to be reduced. This requirement supports the WEEE Directive and also provides a scope for up-grading and ease of repair.

Recycled and reused parts reduce negative environmental effects from manufacturing. The advantage in reusing and recycling is expected to be large compared with the disadvantages related to the fact that reused materials may contain hazardous chemicals regulated by other requirements in this criteria document.

One advantage in our criteria is that the producer can use our requirements in the product development process. This new requirement is partly harmonised with Blue Angel and Eco Mark.

In general, the requirements focus on plastic casing parts over 25 g as the significant level for material reuse or recycling. The product must have an environmentally friendly design, using few plastics materials (e.g. homopolymer, copolymer or polymer blends), which are separable and have a minimum of coating. To promote post-consumer recycling at least one part >25g must be made of reused or recycled plastic. This requirement will speed up the trend towards increased plastics recycling. All plastic parts must be marked to promote easy separation of the various materials used.

Products with combined toner cartridge

Some printing devices use a combined toner cartridge instead of one separate and removable unit. These combined toner cartridges may be accepted if the cartridges have been designed for reuse. Products must also accept remanufactured cartridges.

^c Energy Star, Version 1.0 Specification for Imaging Equipment, May 3, 2006

Plastics in casings and their components

The requirement as to dangerous substances, i.e. chlorine based plastics, halogenated flame-retardants and heavy metals in plastic parts is intended to stimulate the phasing out of these environmentally dangerous substances.

Numerous and complicated process stages are required to produce the electronic parts for a printing device. Large volumes of chemicals are used and the volume of waste products often exceeds the number of finished electronic components.

Many substances are used in the production of printing equipment and some have properties that are hazardous to health or harmful to the environment, e.g.:

Chlorinated solvents used as cleaning agents during production

Cadmium, for example in nickel cadmium batteries.

Lead, for example, in solder and lead oxide in cathode ray tubes.

Copper, for example, in cables and circuit boards.

Halogenated flame retardants in circuit boards and in plastic materials.

Chlorine based plastics

The requirement as to chlorine-based plastics (halogenated) prohibits all use of chlorine-based plastics (for example PVC). The presence of chlorine atoms in materials affords a number of technically desirable properties, but also the formation of dioxin and other persistent organic pollutants during production and disposal.

Flame-retardants

As in the case of chlorinated plastic materials, halogenated flame-retardant are not permitted in plastic materials unless they are close to electrical component or are in cables that require fire safety protection. The use of some flame-retardant are regulated by RoHS-Directive from July 1st 2006. That is PBB (polybrominated biphenyls), PBDE (polybrominated diphenyl ethers). Beside as additive to plastic materials flame-retardant are used on circuit boards and can technically be used as an additive or as a reactive. It is best for the environment to use reactive flame-retardants compared to flame-retardant used as additives to circuit boards. When reactively bound the flame-retardant is physically prevented in leaking to the environment i.e. on land fills.

PBB , PBDE or chlorinated paraffins (with a certain chain length) are prohibited and cannot be used even in smaller plastic parts (< 25g) because of their well documented hazardous effects on health and the external environment. The flame-retardant deca-BDE and its hazardous effects are still questioned why the flame-retardant is prohibited in line with e.g. PBB. There exist data supporting that deca-BDE can degrade to shorter chained brominated biphenyls having high toxicity i.e. giving effects like the chlorinated dioxins and PCB. Many chlorinated paraffins are persistent and bio accumulative.

It is important to have strict requirements in place applicable to those flame retardants, which still are used even though halogenated flame retardants are prohibited. Nordic swan has in this version of the criteria harmonised with Blue Angel and permit only flame retardants, which have not been assigned any of specified risk phrases at the time of application: R 40 (possible risk of cancer), R45 (may cause cancer), R46 (may cause heritable genetic damage), R 48 (danger of serious damage to health by prolonged exposure), R49 (may cause cancer by inhalation), R60 (may impair fertility), R61 (may

^d Restriction of the use of certain hazardous substances in electrical and electronic equipment 2002/95/EC

cause harm to unborn child), R62 (possible risk of impaired fertility) and R63 (possible risk of harm to unborn child)

Limit values for impurity concentrations of halogenated flame-retardant have been added in accordance with the proposal for permissible concentrations in the RoHS-Directive

Materials - Other dangerous substances

Heavy metals

The scope of the requirement as to heavy metals cover all parts, also plastic parts < limit 25 grams. Limit values for concentrations of cadmium, lead and mercury have been added in accordance with the RoHS Directive. Heavy metals are used as stabilisers e.g. in PVC and are primarily used in cables or other plastic materials. Lead stabilisers represent approximately 70% of total stabiliser use in Europe. In the past cadmium stabilisers were used in large quantities. However, the European PVC industry undertook to discontinue use of cadmium stabilisers during the course of 2001. Nevertheless cadmium is still found in "old" products. Organic tin compounds are used in some applications of stiff PVC. A large proportion of the above stated stabilisers is persistent, bio accumulative and toxic to waterborne organisms, but may also be damaging to humans i.e. carcinogenic and/or harmful to the reproductive system or have immunotoxic properties. Lead is also widely used in solders

Batteries

The requirements aim at phasing out batteries containing the heavy metals cadmium, mercury, lead, and their compounds. The working group decided to harmonize the requirement with BA, which means that with the exception of technically unavoidable impurities batteries and accumulators must not contain any lead, cadmium or mercury. Such impurities must not exceed the limit values specified in the EU Battery Directives^e.

If we consider the entire life cycle of a printing device from an environmental perspective, the impact from batteries is not very significant. Our main goal is to prevent the use of nickel-cadmium batteries. This aim will be achieved by setting the limits provided for in the Battery Directives.

Chemicals used in production

To prevent emissions to the atmosphere ozone depleting substances must not be used in production. Applicable substances were specified as CFCs (five types), other CFCs, carbon tetrachloride, 1,1,1-trichloroethane, and HCFCs based on the Law concerning the Protection of the Ozone Layer through the Regulation of Specified Substances and Other Measures. Though it is assumed that none of these substances are used in the manufacture of copiers at present, in view of the fact that certain countries and regions where copiers are manufactured may not have laws and regulations or have moratoriums on these substances, it was decided that this item should remain as a criteria to ensure that the use of ozone layer depleting substances is prohibited.

Packaging

^e EU Battery Directive (91/157/EEC and 98/101/EEC)

Background memo
Criteria for copiers, printers, fax machines and multifunctional devices, 4.0
June 2005

The requirement is intended to prevent the use of chlorinated plastic materials in packaging to prevent the formation of dioxins and other persistent organic pollutants in production and disposal (see Chlorine-based plastics).

Other environmental requirements

Supply of spare parts

This requirement is included to secure the supply of spare parts for repairs to extend the commercial life of the product. This contributes to a reduction in resource consumption.

Double-sided copying

The requirement as to double-sided copying for printing devices is an important means of reducing the volume of paper used in printing. A significant part of the energy consumption involved in making one print is connected to the manufacturing of the paper. Using double-sided printing will therefore reduce the total energy consumption involved in printing.

Since some users do not require the double-sided copy function and the introduction of this function into all models is questionable, it was decided that as with Energy Star, the double-sided copy function is not required in models with a copy speed of less than 20 sheets and large-size copiers, but is required in models with copy speeds of above 20 A4 sheets but less than 44 sheets or can be added on later. This requirement is harmonised with Eco Mark. For models with copy speeds of above 45 sheets, the double-sided copy function is required to maintain consistency with Blue Angel.

Legislation and regulations

The licence holder must guarantee adherence to safety regulations, working environment legislation, environmental legislation and conditions/concessions specific to the operations at all sites where the Swan-labelled product is manufactured. No documentation is required when the licence is granted, but Nordic Ecolabelling may revoke the license if the requirement is not fulfilled.

Performance properties

Emissions

The Federal Institute for Materials Research and Testing (BAM), Germany, has improved their new test method for determining emissions from hardcopy devices. This test method is the basis for emission tests in the framework of the BA requirements for office devices.^f The revised test method adds Total Volatile Organic Compounds (TVOC) and benzene to the scope of application products. Blue Angel lists more than 20 substances such as styrene and benzene as VOCs that may be discharged. This broadening of the scope was to meet the growing focus on the indoor environment. According to our harmonisation program Nordic Swan also accept the requirements in the criteria for Eco Mark.

Noise

The noise requirement requires measurements and displays conforming to the ISO standards and are harmonised with Eco Mark and Blue Angel.

^f Test method for the determination of emissions from hardcopy devices, Appendix 2 to the Basic Award Criteria RAL-UZ 122 June 2006

Quality and regulatory requirements

Information to the consumer

It is important that consumers be given instructions on how to reduce the environmental impact of the printing device by for example utilizing the available energy saving setting or using the double-sided function to minimize the paper use. A new requirement includes a recommendation using ecolabelled paper. We have removed our ink requirement because we cannot control the selection of cartridges for the machines. Instead we recommend using ink with less than 5% Volatile Organic Compounds (VOC), in consistency with our requirement in the criteria document for toner cartridges, version 3. Important environmental benefits from this requirement are lower energy consumption from printing and lower levels of VOC in the working environment.

Producers / local distributors may adjust the national instruction manual to fulfil the requirement as to how to minimise the environmental impact associated with using the machine. Requirements in accordance with Nordic Ecolabelling should be implemented in the instruction manual.

The requirement as to eco and quality management for ecolabelled products is intended to ensure that the licence holder fulfils the criteria and that the requirements are verifiable during the period of validity of the licence. This requirement is found in all Nordic Ecolabelling criteria documents.

Recycling and reuse of consumer durables and parts that wear out

Waste is also generated as a result of the replacement of parts that wear out, e.g. combined toner cartridges. As a consequence, enhanced recycling of waste electrical and electronic equipment should be a major factor in preserving resources, in particular energy.

The requirement provides information for the user or service personnel about the procurement of spare parts and that scrapped parts must be taken back by the applicant or distributor to ensure reuse and recycling.

Marketing

The requirement as to marketing has been set to ensure that the ecolabelling criteria are fulfilled and that they are verifiable during the period of validity of the licence. The requirement is common to all Nordic Ecolabelling criteria documents.

5. Changes from the previous version

Most important change is that the criteria is fully harmonised with Eco Mark and Blue Angel and that we only have some unique requirements on the organisation that import and sell the imaging equipment in the Nordic countries. The requirement of energy consumption is also a change where the applicant can choose between the requirement of Energy Star or Blue Angel. For other changes please see Table below.

Table. Summary of the differences between criteria versions 4.0 and 5.0

Requirement Title in version 4.0	Chapter in version 4.0	Correspond with chapter in version 5.0	Change
Valid Eco Mark license	-	R1	New requirement that make it easier to work with the harmonised criteria.
Valid Blue Angel license	-	R2	New requirement that make it easier to work with the harmonised criteria.
Description of the product	R1	R3	-
Energy consumption	R2	R4	Requirement is stricter and harmonised with actual Blue Angel or actual Energy Star.
Design and recycling	R3 – R9	R5 – R10	Requirements “Labels” has been removed since it has been irrelevant.
Special requirements as to products with combined toner cartridges	R10	R11	NS has harmonised with BA and Eco Mark
Chlorine-based plastics	R11	R12	-
Additives	R12	R13	-
Heavy metals in materials	R13	R14	-
Batteries	R14	R15	-
Chemicals during production	R15	R16	-
Packaging	R16 + 17	R 17+18	-
Supply of spare parts	R18	R19	-
Double-sided copying	R19	R20	-
Information to consumers	R20	R25	Requirements has been moved to the part which concern the Nordic organisation of the applying company
Traceability	R30	R21	This requirement is important even for the production and can't be valid only for the Nordic organisation.
Legislation and regulation	R31	R22	This requirement is important even for the production and can't be valid only for the Nordic organisation.
Emissions	R21	R23	NS has harmonised with BA and Eco Mark
Noise	R22	R24	NS has harmonised with BA and Eco Mark
Recycling and reuse of consumer durables and parts that wear out	R23	R26	Requirements has been moved to the part which concern the Nordic organisation of the applying company

Requirement Title in version 4.0	Chapter in version 4.0	Correspond with chapter in version 5.0	Change
Quality and regulatory requirements	R24 – R31	R27 – R35	Requirements has been moved to the part which concern the Nordic organisation of the applying company
Marketing	R32	R35	-
Analysis and control	Chapter 1	Chapter 2	-
Chapter 4		Chapter 4	These requirements are specific for the Nordic organisation of the company that applies for a license.

6. New criteria

In the harmonisation process The Nordic Ecolabelling organisation will be an active part in developing new requirements together with both Eco Mark and Blue Angel.

7. Reference list

Energy Star, Version 1.0 Specification for Imaging Equipment, May 3, 2006

Blue Angel RAL-UZ 122 Office Equipment with Printing Function, June 2006

Eco Mark (117 Copiers), version 2.1

Eco Mark (122, Printers), version 1.0

Test method for the determination of emissions from hardcopy devices, Appendix 2 to the Basic Award Criteria RAL-UZ 122 June 2006

EU Battery Directive (91/157/EEC and 98/101/EEC). (<http://europa.eu.int/>)

EU Directive, Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) 2002/95/EC. (<http://europa.eu.int/>)

EU Directive, Waste of electrical and electronic equipment WEEE 2002/96/EC. (<http://europa.eu.int/>)