

# pro ▶ EE

Public Procurement boosts Energy Efficiency

## 3. OFFICE EQUIPMENTS

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### 3.1. BACKGROUND

Each year European public authorities spend the equivalent of 16% of the EU Gross Domestic Product on the purchase of goods.<sup>1</sup> Through investing in energy efficient office equipment, public authorities are able to contribute directly to the reduction of greenhouse gas emissions. In general, office equipment can be divided into two sets of products:<sup>2</sup>

- Computers (covering both PCs and notebooks) and monitors
- Imaging equipment – covering copiers, printers, scanners, faxes, and multifunctional devices (MFCs)

#### 3.1.1. STATE OF THE ART



The product categories dealt in this document are desktop PCs, personal computers (laptops/notebooks), monitors, printers, scanners, fax and copiers (and multifunctional devices combining these). The scope of products covered is



taken from the Agreement between the Government of the United States of America and the European Community on the coordination of energy-efficiency labelling programs for office equipment called Energy Star ([www.eu-energystar.org](http://www.eu-energystar.org)) and from the EuP Preparatory Studies for Imaging Equipment ([www.ecoimaging.org](http://www.ecoimaging.org)).

Procurement information requires reference to the manufacturing processes and materials (e.g. ISO 14000 or EMAS compliance), the energy consumption of products during lifetime and the disposal at end of life. Energy efficiency is the priority aspect to consider and is the focus of labelling and consumer information recommendations. Energy consumption is also closely linked to maintenance, particularly for equipment like copiers and



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<sup>1</sup> European Commission, 2008

<sup>2</sup> UNEP, 2008

printers with complex mechanical parts and variable consumption of toners. Procurement can be extended to comprehensive provision of maintenance and supplies, which can generate significant benefits when combined with economies of scale from pooling of departments or local entities. For printers, the organisation Procuraplus<sup>3</sup> recommends defining the following parameters (example from City of Freiburg Department of School and Education):

- Machines must have a short warm-up time.
- Machines must enable the undisturbed processing of 80 g/sm recycling paper according to DIN 19309 and/or DIN V ENV 12281 or equivalent (standards for the compatibility of paper with machinery).
- Machines must be able to make double-sided copies of one or many original(s) – also on recycling paper - in large quantities, without affecting the copy quality.
- Machines must comply with EU Directive 2002/95/EC (RoHS Directive – Restriction of hazardous substances in electrical equipment).



For each type of tendered machine, statements on electricity consumption in copy or standby mode must be provided. In addition, the energy consumption standards set by Energy Star must be met.

For laptops, information about standby power consumption, material content and upgrade-ability is available to both professional and individual consumers e.g. from the European Ecolabel. Procurement in Europe requires compliance with Directives including the Waste Electrical Electronic Directive (WEE) although many labels provide additional performance information. Key labels for IT products include the following:



Ecolabel – [www.ecolabel.com](http://www.ecolabel.com)

Blue Angel (Germany) – [www.blauer-engel.de](http://www.blauer-engel.de)

GEEA Group for Energy Efficiency Appliances [www.efficient-appliances.org](http://www.efficient-appliances.org)

Nordic Swan [www.svanen.nu](http://www.svanen.nu)

Energy Star [www.energystar.gov](http://www.energystar.gov)



lus.org

TCO Development [www.tcodevelopment.com](http://www.tcodevelopment.com)

EPEAT (Electronic Product Environmental Assessment Tool) [www.epeat.net](http://www.epeat.net)

The European ecolabel (the "Flower") can be awarded to personal computers since 1999. The labeling criteria include requirements for maximum energy in different modes. The original criteria have been revised in 2001 and 2005. The table below depicts the development of energy consumption criteria for the Energy Star and the EU ecolabel for personal desktop computers.<sup>4</sup>

		Energy Star 1993	Energy Star 1999/2000	EU Eco-label 1999	EU Eco-label 2001	EU Eco-label 2005	Energy Star 2006
Operating mode (idle)	Monitor					23 W*	23 W*
Sleep mode	Monitor	30 W	15 W	10 W	10 W	2 W	2 W
	System unit	30 W	15-30 W**	27 W	5 W	4 W	
Deep sleep, standby or off-mode	Monitor		8 W	3 W	5 W	1 W	1 W
	System unit			5 W	2 W	2 W	

\* Higher value allowed if monitor has 1 mega-pixels or more.

\*\* Depending on Power Supply Output Rating (PSOR). If PSOR > 400 W, the criterion is 10% of maximum continuous PSOR.



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<sup>4</sup> Energy Efficient Office Appliances, IVM