Guidelines for Front Runner Public Procurers

Laser printers

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Courtesy of silicon.com

Why follow Topten criteria?

- Topten.eu Pro (**www.topten.eu/pro**) is a European web portal helping buyers, professionals, public procurers and large buyers to find **the most energy efficient products available in Europe**. The products are selected and updated continuously, according to their high energy and environmental performances, independently from the manufacturers.
- All laser printers displayed on **www.topten.eu** meet the criteria contained in these guidelines. Procurers can therefore use the website to check the availability and assortment of products currently on the market, which meet the **Topten selection criteria**.
- Topten.eu Pro links to national partners Topten Pro websites and is developed under the Topten Act project, supported by the European Union through the Horizon 2020 programme.

How much can you save?

The category includes laser printers able to print colour and monochrome, on standard paper size (A4 and A3). Energy and cost savings can be achieved by choosing an energy efficient printer. However, the higher part of the impacts and the costs over the lifetime of the product result from the use of paper and toner/ink cartridges.

- Recycled paper has a lower environmental impact than white paper and it is also cheaper. Printers that do not allow the use of recycled paper force users to purchase only white paper.
- The cost of a printer over its lifetime depends also of the cost of the toner or ink cartridges. These are expensive and in some cases are bundled so that when one colour is empty, the user is forced to replace all cartridges at the same time even if they still contain ink.

The “Blauer Engel” (Blue Angel) certification considers all aspects in the life-cycle of the product from its production to its disposal including its use of resources during the use phase.

The certification, among other criteria, requires the printers to:

- Offer duplex printing
- Be able to print on recycled paper
- Allow for the change of a single ink cartridge
- Be energy efficient in the use mode and during sleep/standby mode.

Considering the models listed on www.topten.eu and the following assumptions, it is possible to achieve the savings indicated in the next table.

Assumptions
- Lifetime expectation: 5 years
- Energy consumption according to Energy Star's typical energy consumption (TEC)
- Electricity cost: 0,20 €/kWh

	Topten model	Inefficient model	Topten model	Inefficient model
Type of device	A4, 55 ipm, monochrome	A3, 51 ipm, monochrome	A3, 45 ipm, colour	A3, 45 ipm, colour
Electricity consumption	104 kWh/year	380 kWh/year	93 kWh/year	322 kWh/year
Use cost (electricity in 5 years)	104 €	380 €	93 €	322 €
Savings in 5 years	**73% energy / unit 276 € / unit**		**71% energy / unit 229 € / unit**	

Note: ipm = images per minute, used to express print speed

Comparing models with equal print speed, the Topten models allow electricity savings, in 5 years, of 276 €/unit for monochrome printers, and 229 €/unit for colour printers. Best models on www.topten.eu consume only 21 kWh/year.

Procurement criteria

The following criteria can be inserted directly into tendering documents. The Topten selection criteria and the product lists are updated regularly. The newest versions are always available at **www.topten.eu/pro.**

SUBJECT: HIGHLY ENERGY-EFFICIENT LASER PRINTERS

TECHNICAL SPECIFICATIONS

1. "Blauer Engel" Certification

Products are required to have the "Blue Angel" certification that guarantees that the products respect the highest criteria for resource and energy efficiency.

Verification

Products bearing the Blue Angel certification will be deemed to comply.

NOTES ON IMPLEMENTATION

- Paper manufacturing consumes a lot of energy. Therefore, reducing paper consumption by using two-sided printing with a duplex function contributes to global energy savings.
- It is recommended to also use recycled paper that is certified "Blue Angel"
- There are numerous models complying with these criteria that are available on the market – see the latest product lists at www.topten.eu.

To increase savings and reduce environmental impact, procurers should evaluate life cycle costs when tendering for laser printers. Thus, it is advisable to include in the tender a costing exercise - even if simple - for the product life cycle costs.

Table 1: Example of a breakdown costs table, to be filled in by bidders.

	Information details	Different unit costs in € (excluding tax)	Total cost in € (excluding tax)
Delivery			
Installation			
Use*	Indicate Typical Energy Consumption (TEC) in kWh/week x 52 weeks x 5 years x nº units	Electricity cost: 0,20 €/kWh**	
Maintenance			
Recycling and disposal			

* Example of how use costs can be determined. The variables for the costs calculation during the product lifetime can be stated by the procurer (according to the equipment replacement rate, the number of days the equipment is in use, etc.).

** This figure is just an example. The procurer can use the average electricity price paid during the last 2 or 3 years, and also include subscription fee and taxes.

Advice and support

If you would like further assistance in using the information presented here in your own procurement actions or more information on Topten Pro please contact your national Topten team (find the links on Topten.eu).

The European Commission's Green Public Procurement website also contains valuable legal and practical guidance together with procurement criteria for a range of commonly procured products and services.

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