

# Computer Monitors

## Guidelines for Frontrunner Public Procurers



Photo courtesy of Dreamstime.com

### What is Topten?

- Topten is a European web portal helping buyers to find **the most energy efficient products available in Europe**.
- The monitors displayed on [www.topten.eu](http://www.topten.eu) all meet the criteria contained in these guidelines. So procurers can ascertain that there is a sufficient range of products available on the market.
- On [www.topten.eu](http://www.topten.eu) you'll also find links to national Topten sites of a large number of European countries.
- The European Commission's [GPP website](#) also contains valuable legal and practical guidance together with procurement criteria for a range of commonly procured products and services.

### Product group covered:

All computer displays/monitors from 15" upwards

### Product availability:

All products listed on [www.topten.eu](http://www.topten.eu) meet the criteria listed below

### Potential energy savings:<sup>1</sup>

An inefficient 17" screen has a consumption of about 75W in On mode, while the best performing model consumes 16W only. On mode consumption of 19" screens ranges from 110W to 15W.

### Potential cost savings:<sup>1</sup>

The most efficient 17" model uses up to 83% less electricity than an inefficient model, saving about €66<sup>2</sup> per machine over 5 years, based on typical electricity costs. For a 19" monitor savings of up to €80 are possible.

<sup>1</sup> These represent rough figures comparing the best product currently available, with an inefficient model – see [www.topten.eu](http://www.topten.eu) for more details.

<sup>2</sup> Based on an electricity price of €0.15/kWh

## Procurement criteria – Updated: December 2011

The following criteria can be inserted directly into tendering documents. The specifications are updated continuously. The newest versions are always available at [.topten.eu](http://topten.eu).

<b>Subject matter:</b>	<b>Purchase of energy efficient computer monitors</b>								
<b>Technical specifications:</b>									
1. Maximum <b>Sleep and Off-mode power consumption</b> : 1.0 Watt									
2. The <b>On Mode power consumption</b> must not exceed the following maximum values according to the ENERGY STAR Program Requirements for Displays Version 5.0:									
<table border="1"> <thead> <tr> <th>Display Category</th> <th>Maximum On Mode Power Consumption (W)</th> </tr> </thead> <tbody> <tr> <td>Diagonal Screen Size &lt; 30 inches Screen Resolution ≤ 1.1 MP</td> <td><math>P_o = 6*(MP) + 0.05*(A) + 3</math></td> </tr> <tr> <td>Diagonal Screen Size &lt; 30 inches Screen Resolution &gt; 1.1 MP</td> <td><math>P_o = 9*(MP) + 0.05*(A) + 3</math></td> </tr> <tr> <td>Diagonal Screen Size 30 – 60 inches All Screen Resolutions</td> <td><math>P_o = 0.27*(A) + 8</math></td> </tr> </tbody> </table>		Display Category	Maximum On Mode Power Consumption (W)	Diagonal Screen Size < 30 inches Screen Resolution ≤ 1.1 MP	$P_o = 6*(MP) + 0.05*(A) + 3$	Diagonal Screen Size < 30 inches Screen Resolution > 1.1 MP	$P_o = 9*(MP) + 0.05*(A) + 3$	Diagonal Screen Size 30 – 60 inches All Screen Resolutions	$P_o = 0.27*(A) + 8$
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<p><math>P_o</math> = Maximum On Mode power consumption (watts)  <math>MP</math> = Display Resolution (megapixels)  <math>A</math> = Viewable Screen Area (square inches)</p> <p>EXAMPLE: The <u>maximum</u> On Mode power consumption for a display with 1440 x 900 resolution, or 1,296,000 pixels, a 19 inch viewable diagonal screen size and a viewable screen area of 162 square inches, would be: <math>((9 \times 1.296) + (0.05 \times 162)) + 3 = 22.8</math> watts when rounded to the nearest tenth of a watt.</p> <p><b>Verification:</b> Products bearing the ENERGY STAR Displays Version 5.0 label or higher will be deemed to meet the above requirements. Alternatively, bidders may demonstrate compliance with the above requirements by another objective third-party means or by supplying test results in respect of their product demonstrating that the criteria are met.</p>									
3. <b>Environmental and Ergonomic Features</b> (optional): All products must meet the criteria of the TCO '03, '06, 5.0 or TCO Edge labels, or equivalent criteria. Compliance with these criteria is required in respect of the product, not the company itself.									
<p><i>Verification:</i> All products carrying the TCO '03, '06, 5.0 or TCO Edge labels will be accepted. Alternatively bidders may provide documentation to demonstrate that equivalent criteria are met.</p>									

### Notes on implementation:

Optional specification for Environmental and Ergonomic Features - It is recommended to also apply this criterion to ensure an excellent ergonomic performance as well as to address other environmental criteria. However, if a product does not have the TCO label and instead provides extensive technical documentation this may require additional work on behalf of the procurer. Therefore it is listed here as optional. In practice, almost all products meeting the energy performance criteria will also have the TCO label.

### 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 the Procura+ team at:

[@iclei.org](mailto:@iclei.org)

+49 761 368 9244

An expression of interest form is also available on [.topten.eu/pro](https://topten.eu/pro) for public authorities who would like support to apply these criteria in an upcoming procurement process.



### What is Procura+?

Procura+ is an initiative designed to support public authorities in implementing Sustainable Procurement. The campaign is run by ICLEI – Local Governments for Sustainability, the Topten partner for public authorities.

[.procuraplus.org](https://procuraplus.org)