



Environmental criteria for sustainable public  
procurement of

# Audiovisual Equipment

Version March 2017

# 1. Scope/definition

The Audiovisual Equipment product group includes:

- televisions;
- beamers (projectors).

For larger monitors (>30 inch), see the criteria document for ICT Hardware and Mobile Appliances. In specific situations, a monitor may be preferable to a television (for example, situations in which the imaging element must be on for extended periods, must display static images, or must be connected to an operating system).

The following products (with their corresponding CPV codes) are part of the Audiovisual Equipment product group. This list of products is not intended to be exhaustive.

Products	CPV code
Television and audiovisual equipment	32320000-2
Projectors	38652100-1
Video projector devices	38652120-7

Excluded from the scope of this product group are:


- repair and maintenance of audiovisual and optical equipment (50340000-0).
- video recording or playback equipment (32333000-6).
- video recorders (32333100-7).
- video playback equipment (32333300-9).
- video players (32333400-0).
- recording and playback equipment for audio and video (32330000-5).
- microphones and speakers (32340000-8);
- audio and video equipment parts (32350000-1);
- intercom equipment (32360000-4).

This document describes the environmental criteria. Information about the other elements of sustainable public procurement, such as social conditions and social return, may be found on the PIANOo website, on the specific product group page: <https://www.pianoo.nl/document/10515/productgroep-audiovisuele-apparatuur>.

# 2. Most significant environmental impacts

The table below lists the sustainability themes and describes the approach to each theme for the product group. The “Approach” column presents a statement indicating the influence of sustainable purchasing and its criteria on the “sustainability” of the theme. This column also includes a reference to any requirements, award criteria or points of attention/suggestions that may be useful in implementing the approach. The product group can also have an impact on other environmental themes but, for now at least, these are less relevant, of a much less significant level of concern or do not as yet have a suitable set of standard criteria.

Themes:	Approach:	No. of requirement/ Criterion
<b>Energy and climate</b> Energy consumption in the use phase of televisions and projector, with corresponding CO <sub>2</sub> emissions	<ul style="list-style-type: none"> <li>• Use energy-efficient models.</li> </ul>	ME1, ME2
	<ul style="list-style-type: none"> <li>• Use low-power projectors.</li> </ul>	ME3

<p><b>Supplies and raw materials</b> Raw materials consumption in production of televisions and projectors</p>		<ul style="list-style-type: none"> <li>Limit number of units.</li> </ul>	AS1, AS2
		<ul style="list-style-type: none"> <li>Use bulbs with a minimum life cycle.</li> </ul>	ME4
		<ul style="list-style-type: none"> <li>Mercury in televisions.</li> </ul>	ME5
		<ul style="list-style-type: none"> <li>Use recycled packaging material.</li> </ul>	ME6, GC1
		<ul style="list-style-type: none"> <li>Bio-based procurement.</li> </ul>	AS3

### 3. Points of attention/suggestions

Devoting attention to the opportunities and possibilities for the most sustainable procurement possible in the preparation phase will lead to specifications that are more ambitious or which differ from the standard technical specifications and award criteria set out in this document. The table below presents points for attention and suggestions for promoting sustainability in procurement within this product group.

No.	Points of attention/suggestions (AS)
AS1	<p><b>Choose multifunctional equipment</b> Many conference rooms are equipped with both a television and a monitor. Wherever possible, purchase a device that can function as both monitor and television.</p>
AS2	<p><b>Use video conferencing</b> Consider purchasing video conferencing equipment to reduce the amount of employee travel.</p>
AS3	<p><b>Consider bio-based procurement</b> In many cases, bio-based raw materials are preferable over fossil-based raw materials (such as plastics). Survey (in consultation with the market where possible) the possibilities, the pros and any cons of use of bio-based raw materials for your procurement needs and give them an appropriate place in your procurement documents.</p> <p>More information on bio-based procurement can be found via PIANOo SPP Theme Bio-based Procurement (<a href="https://www.pianoo.nl/themes/maatschappelijk-verantwoord-inkopen-duurzaam-inkopen/mvi-thema-s/biobased-inkopen">https://www.pianoo.nl/themes/maatschappelijk-verantwoord-inkopen-duurzaam-inkopen/mvi-thema-s/biobased-inkopen</a>), where the guide to bio-based procurement and the Guidelines to Bio-based Procurement have also been made available (<a href="https://www.pianoo.nl/themes/maatschappelijk-verantwoord-inkopen-mvi-duurzaam-inkopen/handreikingen-mvi-0/handreikingen-biobased-inkopen">https://www.pianoo.nl/themes/maatschappelijk-verantwoord-inkopen-mvi-duurzaam-inkopen/handreikingen-mvi-0/handreikingen-biobased-inkopen</a>).</p> <p>If you include a requirement that the material used must be bio-based, ask for descriptions of the material used and documentation supporting claims such as “bio-based”, “sustainable biomass” and “compostable”. This will make the assessment easier and give the purchaser the opportunity to check upon delivery of the goods whether the items supplied are in fact those agreed. It is also important not to require the production of specific certificates because this may put producers to</p>

unnecessary expense when alternative evidence would also suffice.
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## 4. Selection criteria

Not defined for this product group.

## 5. Technical specifications

Television:

No.	Technical specifications (ME)
ME1	<p data-bbox="316 667 699 696"><b>Television energy consumption</b></p> <p data-bbox="316 719 1394 779">The televisions carry the highest possible energy efficiency label (Energy label A++). The energy efficiency of televisions is defined using an energy label.</p> <p data-bbox="316 808 443 837"><i>Explanation</i></p> <p data-bbox="316 837 1394 927">Energy label A++ is the highest (most energy-efficient) classification currently available as a standard product. A++ corresponds to an EEI of &lt;0.16. (<a href="http://www.energielabel.nl/apparaten/televisie">http://www.energielabel.nl/apparaten/televisie</a>)</p> <p data-bbox="316 956 437 985"><i>Verification</i></p> <p data-bbox="316 1008 1394 1093">The tender may be asked to produce documentation showing that the television is in compliance with an energy efficiency classification of label A++ in accordance with Regulation 2010/30/EU or better.</p>

**Projectors:**

ME2	<p><b>Standby mode</b> The projector switches to standby mode automatically after 15 minutes of inactivity.</p> <p>Standby mode means a condition where the equipment is connected to the mains power source, depends on energy input from the mains power source to function properly and offers the following functions only, which may persist for an indefinite time:</p> <ul style="list-style-type: none"> <li>• reactivation function, or reactivation function and only an indication of enabled reactivation function; and/or</li> <li>• information or status display.</li> </ul> <p>(Source: ecodesign requirements for televisions regulation (2009/642/EC), <b>article 2.6</b>)</p> <p><i>Verification</i> The tenderer may be asked to demonstrate, using the functional specifications of the projectors, that the equipment automatically engages standby mode after 15 minutes of inactivity.</p>
ME3	<p><b>"On" power of projector</b> The power consumption of projectors (excepting ultra short throw projectors) in the "On" state (definition of state according to IEC62087:2008) is less than or equal to:</p> <ul style="list-style-type: none"> <li>• for light emission of <math>\Phi \leq 1750</math> lm: 180 [W];</li> <li>• for light emission of <math>\Phi &gt; 1750</math> lm: <math>180 W + 0.09 * (\Phi - 1750)</math> [W].</li> </ul> <p>Where <math>\Phi</math> is the light emission, in lm, measured in accordance with EN 61947-1:2002. The power consumption, in W, is determined in accordance with IEC62087; measurement method for televisions.</p> <p>An ultra short throw projector is defined as: "A projector that can project a 60-inch image or larger (measured diagonally) from under 18 inches away from the projection surface." (Source: Futuresource Consulting Ltd.)</p> <p><i>Explanation</i> An exception to this criterion is the ultra short throw projector. This is a projector that projects the image at a very wide angle from a very short distance away from the screen. This type of projector is frequently used in schools. Due to the greater angle, an ultra short throw projector is less energy-efficient than a conventional projector. However, because benefits to human health outweigh energy consumption, ultra short throw projectors are exempted from this requirement.</p> <p><i>Verification</i> The tenderer may be asked to demonstrate, using the functional specifications of the projectors, that the power consumption of the projectors meets or beats the standard set out above.</p>
ME4	<p><b>Minimum life cycle of projector bulb</b> Under conditions of normal use, the projector bulb has a minimum life cycle of 2500 operating hours.</p> <p><i>Verification</i> The tenderer may be asked to demonstrate, using the functional specifications of the projectors, that the bulbs have a minimum life cycle of 2500 operating hours.</p>
ME5	<p><b>Mercury in televisions</b> Televisions may not contain mercury.</p> <p><i>Verification</i> The tenderer may be asked to submit documentation demonstrating compliance with the criteria above. All products with a relevant EU Ecolabel are considered to be in compliance. Products with a different type 1 environmental label or an environmental declaration meeting this criterion will be assumed to be in compliance. Other appropriate forms of documentation will also be accepted.</p> <p><i>Explanation</i> A Type I environmental label refers to environmental labels based on an independent test using pre-determined environmental criteria which are based on a "life-cycle approach". Examples in the Netherlands include the Milieukeur label and the EKO label. Other examples include the EU</p>

	Ecolabel (Europe), Blaue Engel (Germany) and Nordic Swan (Scandinavia). For further information on type I environmental labelling, see <a href="http://www.nen.nl/NEN-Shop/Norm/NENENISO-140242000-en.htm">http://www.nen.nl/NEN-Shop/Norm/NENENISO-140242000-en.htm</a> .
ME6	<p><b>Use recycled material for packaging</b></p> <p>Any cardboard boxes used must consist of at least 80% recycled material. If plastic bags or sheets are used in the consumer packaging, they must have a recycled content of at least 75%. This technical requirement will not apply if bio-based material is chosen.</p> <p><i>Verification</i></p> <p>The tenderer may be asked to provide a sample of the product packaging with the application, together with an accompanying declaration stating that this criterion has been met.</p> <p><i>Source EU GPP office equipment</i></p>

## 6. Award criteria

No.	Award criteria (GC)
GC1	<p><b>Recycling packaging</b></p> <p>The greater the provision made by the tenderer for better recycling of the packaging, the higher this component of the tender will be rated. The tenderer may earn points by:</p> <ul style="list-style-type: none"> <li>- avoiding multi-layers, black plastic and combination packaging;</li> <li>- using packaging that is readily recyclable;</li> <li>- collecting and recycling a higher percentage of the packaging it supplies.</li> </ul> <p><i>Verification</i></p> <p>The tenderer may be asked to state:</p> <ul style="list-style-type: none"> <li>- whether multi-layers, black plastic and combination packaging are used;</li> <li>- whether the packaging is readily recyclable, where “readily recyclable” is defined as: can be separated by hand into elements of a single material and/or packaging that are suitable for multiple use;</li> <li>- what percentage of the packaging it supplies is collected and recycled.</li> </ul> <p>The tenderer may be asked to send a sample of the packaging. It may also be asked to send a statement in which it indicates 1) what percentage of the packaging used is collected or taken away 2) how the packaging used is processed during the waste phase and, 3) in the case of recycling, which recycler recycles the material.</p>

## 7. Contract provisions

Not defined for this product group.