

Dated 30 April 2013

Gary Gray
Minister for Resources, Energy and Tourism
1 **Name of Determination**

This Determination is the *Greenhouse and Energy Minimum Standards (Computer Monitors) Determination 2013*.

2 **Commencement**

This Determination comes into force on 1 October 2013.

3 **Definitions**

In this Determination:


**Note 1:** *AS/NZS 4665.1:2005* is available from Standards Australia Limited.

**Note 2:** *AS/NZS 4665.1:2005* includes all amendments up to and including *AS/NZS 4665.1:2005/Amdt 1:2009* made on 27 February 2009.


**Note:** *AS/NZS 5815.1:2012* is available from Standards Australia Limited.

*automatic brightness control*—see subsection 6(5).

*comparative energy consumption*—see subsection 7(4).


**Note:** *EN 55103-1:2009* is available from Standards Australia Limited.

*IEC 60601* means *IEC Standard IEC 60601-1:2005 Medical electrical equipment – Part 1: General requirements for basic safety and essential performance*, as it existed on the day this Determination came into force.

**Note 1:** *IEC 60601-1:2005* is available from Standards Australia Limited.

**Note 2:** *IEC 60601-1:2005* includes all amendments up to and including *IEC 60601-1:2005/Amdt 1:2012* made on 13 July 2012.

*computer monitor* means a commercially-available product with a display screen and associated electronics, encased in a single housing, that as its primary function displays visual information from a computer, workstation or server, including via a wireless connection.
Note: Common computer monitor technologies include liquid crystal display (LCD), light emitting diode (LED), cathode-ray tube (CRT), and plasma display panel (PDP).

Projected annual energy consumption (or PAEC)—see subsection 7(3).

Off mode—see subsection 6(1).

Standby active (sleep) mode—see subsection 6(3).

Note: Pursuant to paragraph 13(1)(b) of the Legislative Instruments Act 2003, expressions used in this declaration have the same meaning as in the Act. For example, section 5 of the Act defines the following expressions:

- category A product
- covered by
- family of models
- GEMS
- GEMS labelling requirements
- GEMS level requirements
- model
- product classes
- supply

4 Interpretation

(1) If a term or phrase is not defined under the Act, the Regulations to the Act or in this Determination, but the term is defined in a standard specifically mentioned in section 3 of this Determination, the term or phrase is to be read for the purposes of this Determination as having the meaning of the term under the relevant standard.

Note: Notwithstanding this, for convenience to users, the key terms for ascertaining if a product is covered by this Determination are defined in this Determination.

(2) For the purposes of this Determination the applicable version of any document, including a standard, that:

(a) is referred to in a standard under the heading ‘Normative References’ or under an equivalent heading in a standard; and

(b) must be applied to give effect to this Determination or a standard referred to in this Determination,

is the version of the document, including a standard, that existed at the date this Determination came into force.
5 Specified product classes covered by this Determination

(Act, section 23)

Products that are covered by this Determination

(1) This Determination covers computer monitors specified in the table following this subsection which are designed to be connected to 230 or 240 volts mains voltage via:
   (a) a direct connection; or
   (b) an external power supply permanently connected to the product; or
   (c) an external power supply that can be disconnected from the product.

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2 Description of class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1</td>
<td>Computer monitors with a diagonal screen size less than 76 cm (30 inches) and a screen resolution less than or equal to 1.1 MegaPixels.</td>
</tr>
<tr>
<td>Class 2</td>
<td>Computer monitors with a diagonal screen size less than 76 cm (30 inches) and a screen resolution greater than 1.1 MegaPixels.</td>
</tr>
<tr>
<td>Class 3</td>
<td>Computer monitors with a diagonal screen size equal to or greater than 76 cm (30 inches) and equal to or less than 152 cm (60 inches).</td>
</tr>
</tbody>
</table>

Products that are not covered by this Determination

(2) Despite subsection (1), the products described in Columns 2 and 3 of the following table are not covered by this Determination.

<table>
<thead>
<tr>
<th>Column 1 Item</th>
<th>Column 2 Description of product not covered by this Determination</th>
<th>Column 3 Detailed description (if applicable)</th>
</tr>
</thead>
</table>
| 1             | Electronic displays used exclusively for digital signage or digital picture frames | Displays using in plain switching (IPS) or vertical alignment (VA) technology and offering:  
(a) a native pixel resolution greater than or equal to 2.3 (1920 x 1200) MegaPixels; and  
(b) a viewing angle greater than or equal to 178 degrees (at a minimum contrast ratio of 1:10); and  
(c) a colour gamut greater than or equal to 72 per cent of NTSC; and  
(d) a diagonal screen size greater than or equal to 61 cm (24 inches). |
<table>
<thead>
<tr>
<th>Item</th>
<th>Description of product not covered by this Determination</th>
<th>Detailed description (if applicable)</th>
</tr>
</thead>
</table>
| 4    | Specialised electronic displays                          | Displays intended for use primarily in commercial or professional fields (for example: engineering, medicine, graphic arts) and that are not intended for sale to the general public. Displays intended for use in these applications include the following:  
(a) displays defined as professional products that are in the scope of EN 55103; and  
(b) medical products as set out in the IEC 60601 series; and  
(c) displays intended for medical use that comply with the Digital Imaging and Communications in Medicine (DICOM) standard; and  
(d) products used in diagnostic medical applications that do not have a power state equivalent to standby active mode; and  
(e) displays that can display content through installed serial digital interface (SDI) signal path/s including medical electronic displays intended by manufacturers to be used in the diagnosis, treatment, or monitoring of a patient. |
<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2 Description of product not covered by this Determination</th>
<th>Column 3 Detailed description (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Combined products</td>
<td>Products with video electronic display capability and other functionality, including one or more of the following: (a) built-in or integrated networking functionality, the circuitry for which cannot be physically separated or switched independently from the electronic display component. Examples of such functionality include (without limitation) video-conferencing capability, VoIP capability, and PCoIP capability. The inclusion of a camera, microphone and/or loudspeakers is not a network function; or (b) integrated personal computers, tablet computers, slate computers, electronic readers, smart phones, and personal digital assistants.</td>
</tr>
<tr>
<td>6</td>
<td>Public displays</td>
<td>Products intended for electronically displaying content to multiple users such as in public settings, conference rooms, etc., with one or more of the following characteristics: (a) a screen size of 81 cm (32 inches) or above; (b) the product is marketed as a product that is intended to be viewed by more than one user at a time; (c) the product is not intended for desktop use; (d) the product is not supplied with a means of allowing it to be freestanding; (e) the product requires installation on a permanent basis (it cannot be easily moved without tools being used).</td>
</tr>
<tr>
<td>7</td>
<td>Large displays with a diagonal display dimension greater than 152 cm (60 inches)</td>
<td></td>
</tr>
</tbody>
</table>
6 GEMS level requirements

(Act, section 25)

Energy used by operating all products covered by this Determination—off mode

(1) In this Determination, off mode means the operational mode of a computer monitor that is:
   (a) connected to a power source; and
   (b) engaged by a mechanical power switch; and
   (c) not providing any function.

(2) All products covered by this Determination must have power consumption which is equal to or less than 1 watt when used in off mode.

Energy used by operating all products covered by this Determination—standby active (sleep) mode

(3) In this Determination, standby active (sleep) mode means the operational mode of a computer monitor that:
   (a) is connected to a power source; and
   (b) has all mechanical (hard) power switches turned on; and
   (c) has been placed into a low-power mode by receiving a signal from an externally connected device (for example, a computer, game console or set-top box) or by cause of an internal function such as a sleep timer or occupancy sensor.

(4) All products covered by this Determination must have power consumption which is equal to or less than 2 watts when used in standby active (sleep) mode.

Energy used by operating Class 1 and Class 2 products in on mode

(5) In this Determination:
   automatic brightness control means a self-acting mechanism that controls the brightness of a monitor as a function of ambient light.
   on mode means the operational mode of a computer monitor that:
   (a) is connected to a power source;
(b) has all mechanical (hard) power switches turned on; and
(c) is performing its primary function of producing an image.

(6) A product in a class specified in Column 1 of the following table must have power consumption when used in on mode (or $P_{\text{avg}}$) less than the amount worked out in accordance with the corresponding formula in Column 2.

<table>
<thead>
<tr>
<th>Class</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1</td>
<td>$P_{\text{avg}}^{\text{(MEPS)}} = (6 \times \text{screen resolution in MegaPixels}) + (0.00775 \times \text{screen area in cm}^2) + 3$</td>
</tr>
<tr>
<td>Class 2</td>
<td>$P_{\text{avg}}^{\text{(MEPS)}} = (9 \times \text{screen resolution in MegaPixels}) + (0.00775 \times \text{screen area in cm}^2) + 3$</td>
</tr>
</tbody>
</table>

(7) For products which have automatic brightness control enabled by default, the power consumption must be calculated in accordance with the following formula:

$$P_{\text{avg}} = (0.8 \times P_h) + (0.2 \times P_l)$$

Where:

- $P_{\text{avg}}$ is the average on mode power consumption in watts, rounded to the nearest tenth of a watt.
- $P_h$ is the on mode power consumption in high ambient lighting conditions.
- $P_l$ is the on mode power consumption in low ambient lighting conditions.

Note: This formula is based on the assumption that the monitor will be in low ambient conditions 20 per cent of the time.

**Conducting tests**

(8) The requirements for conducting tests for products covered by this Determination are those mentioned in sections 2 and 3 of AS/NZS 5815.1:2012.

(9) If a product covered by this Determination is designed to be connected to 230 or 240 volts main voltage via an external power supply that can be disconnected from the product, then the tests mentioned in subsection (8) must be conducted:

(a) in the case of a product which is supplied with an external power supply—with the supplied external power supply; or
(b) in the case of a product which is not supplied with an external power supply—with an external power supply which has a Mark III energy performance mark in accordance with AS 4665.1:2005.

**7 GEMS labelling requirements**

(Act, section 26)

*Simplified outline of this Section*

(1) The following is a simplified outline of this Section:
All products that are covered by this Determination are required to have an energy rating label.

To work out the comparative energy consumption which is shown on the label, first the projected annual energy consumption for the product must be calculated in accordance with subsection (3). Subsection (4) sets out how to test the validity of the comparative energy consumption.

Next, the comparative energy consumption is used to work out the star rating index by using the formula in subsection (8). Subsection (7) sets out how to convert a star rating index into a star rating.

This Section also specifies the format for the energy rating label (see subsection (10)) and where it must be placed (see subsection (11)).

**Requirement for products covered by this Determination to have an energy rating label**

(2) All products covered by this Determination are required to have an energy rating label which:

(a) is in the format required by subsection (9); and

(b) is affixed to the product in accordance with subsection (10); and

(c) contains information calculated in accordance with subsections (4) and (6).

**Working out the projected annual energy consumption (PAEC) for a product**

(3) The *projected annual energy consumption* (or **PAEC**) for a product is worked out in accordance with the following formula:

\[ PAEC = 0.365 \times ((On_{avg} \times 10) + (14 \text{ hour standby active})) \text{ kWh/yr} \]

Where:

*PAEC* is the projected annual energy consumption

*On*$_{avg}$ is the on mode average power consumption determined in accordance with AS 5815.1:2012.

*14 hour standby active* is the standby active mode average power consumption determined in accordance with AS 5815.1:2012.

**Content of label—comparative energy consumption**

(4) The *comparative energy consumption* of a product is the product's projected annual energy consumption worked out in accordance with subsection (3) but rounded to the nearest whole number and expressed in units of kilowatt-hour/year.

(5) The product's energy rating label must show the comparative energy consumption worked out in accordance with subsection (4).
Content of label—star rating

(6) The star rating for a product is the rating shown in Column 2 in the following table for that product’s corresponding star rating index shown in Column 1.

<table>
<thead>
<tr>
<th>Column 1 Star rating index</th>
<th>Column 2 Star rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal to or greater than 1, but less than 1.5</td>
<td>1</td>
</tr>
<tr>
<td>Equal to or greater than 1.5, but less than 2</td>
<td>1.5</td>
</tr>
<tr>
<td>Equal to or greater than 2, but less than 2.5</td>
<td>2</td>
</tr>
<tr>
<td>Equal to or greater than 2.5, but less than 3</td>
<td>2.5</td>
</tr>
<tr>
<td>Equal to or greater than 3, but less than 3.5</td>
<td>3</td>
</tr>
<tr>
<td>Equal to or greater than 3.5, but less than 4</td>
<td>3.5</td>
</tr>
<tr>
<td>Equal to or greater than 4, but less than 4.5</td>
<td>4</td>
</tr>
<tr>
<td>Equal to or greater than 4.5, but less than 5</td>
<td>4.5</td>
</tr>
<tr>
<td>Equal to or greater than 5, but less than 5.5</td>
<td>5</td>
</tr>
<tr>
<td>Equal to or greater than 5.5, but less than 6</td>
<td>5.5</td>
</tr>
<tr>
<td>Equal to or greater than 6, but less than 7</td>
<td>6</td>
</tr>
<tr>
<td>Equal to or greater than 7, but less than 8</td>
<td>7</td>
</tr>
<tr>
<td>Equal to or greater than 8, but less than 9</td>
<td>8</td>
</tr>
<tr>
<td>Equal to or greater than 9, but less than 10</td>
<td>9</td>
</tr>
<tr>
<td>Equal to or greater than 10</td>
<td>10</td>
</tr>
</tbody>
</table>

(7) A product’s star rating index is worked out in accordance with the following formula:

\[ SRI = 1 + \frac{\log\left(\frac{CEC}{BEC}\right)}{\log(1 - ERF)} \]

Where:

- SRI is the star rating index
- CEC is the comparative energy consumption for the product
- BEC is the base energy consumption worked out in accordance with subsection (8)
- ERF is the energy rating factor, which is 20 per cent or 0.2
- log means log to base 10.

(8) A product’s base energy consumption is worked out in accordance with the following formula:

\[ BEC = 65.41 + (0.00934 \times \text{screen area cm}^2) \]
Format of label

(9) The relevant format for the energy rating label for a product is:
   (a) in the case of a product with a star rating of six or less—the format as set out in Schedule 1; or
   (b) in the case of a product with a star rating of seven or more—the format as set out in Schedule 1 in which case only six stars may be shown on the label, or the format as set out in Schedule 2.

Affixing label

(10) The energy rating label must be affixed to:
   (a) the top of the computer monitor; or
   (b) the screen or mask of the computer monitor.

(11) To avoid doubt, an energy rating label may be part of another label so long as the energy rating label complies with the requirements of this Determination.

Other labels

(12) In addition to the label affixed in accordance with subsection (2), an energy rating label may also be affixed to the packaging of the product.

8 Other GEMS requirements

(Act, section 27)

There are no other GEMS requirements for products covered by this Determination.

9 Families of models

(Act, section 28)

(1) Two or more models of a product covered by this Determination are in the same family of models if those models:
   (a) are marketed in the same category or class of product; and
   (b) have the same energy performance characteristics; and
   (c) have identical physical characteristics; and
   (d) are included on a single test report which was prepared prior to the application for registration for the model being made under section 41 of the Act.

(2) However, a model cannot be a member of a family of models if its inclusion in that family would lead to the family consisting of more than 10 models.

10 Product Categories

(Act, section 29)

The products covered by this Determination are category A products.
Note

1. All legislative instruments and compilations are registered on the Federal Register of Legislative Instruments kept under the Legislative Instruments Act 2003. See http://www.frlg.gov.au.
Schedule 1—Format of six-star label

1 Colour and text details for six-star label

(1) The diagram in Item 2 of this Schedule shows the colour and text requirements for a six-star energy rating label.

(2) The label must be printed on a white background using the following colours:
   (a) for red—Pantone Warm Red; and
   (b) for yellow—Pantone 116; and
   (c) for black—Pantone Black.

(3) The entire label must be in only one font, which can be any one of the following:
   (a) Gill Sans; or
   (b) Humanist 521; or
   (c) Hammersmith.

(4) The band indicated by the letter "a" in the diagram must terminate according to the computer monitor’s star rating, either bisecting the relevant star for a rating involving a half star, or for a rating of only full stars, bisecting the gap between the relevant star and the next highest on the scale.

(5) The brand and model of the product must:
   (a) be inserted where indicated by the letter "b" in the diagram; and
   (b) be complete and concise; and
   (c) not exceed a length of 50 mm; and
   (d) be centred horizontally in the area allowed.

(6) The product’s comparative energy consumption must be shown where indicated by the letter "c" in the diagram.

(7) To avoid doubt, the energy consumption figure and the star ratings shown in the diagram below are examples only, and the comparative energy consumption and the star rating for the particular product must be shown on the label for that product.
Colour and text requirements for six-star label—diagram

1. Red
2. Black text 12 pt
3. Black with white text 28 pt
4. Black 7 pt italic
5. Red 7 pt
6. Black 10 pt
7. Red with bold white text 22 pt
8. Black 10 pt
9. Yellow
10. Black 6 pt
11. White with black text 10 pt
12. Black underline 0.5 pt

Compare all models at www.energysaving.gov.au
3 Physical layout requirements for six-star label

The following diagram shows the physical layout requirements for a six-star label.
4 Star dimensions

The following diagram shows the dimensions for the stars (referred to as "Fig B5" in the diagram in Item 3 of this Schedule).

The apex for each star point lies on the corner of a pentagon. Angles are 108° for the pentagon and 36° for each star apex.

For the smaller star (lower arch) the pentagon side $x$ is 6 mm (height $y$ is 9.2 mm) and for the larger star (upper arch) the pentagon side $x$ is 7 mm (height $y$ is 10.8 mm)
Schedule 2—Format of ten-star label

1 Specifications for ten-star label

The specifications for the ten-star label are the same as those for a six-star label as set out in Schedule 1, but applied to the physical layout of the label shown in the diagram below.
Purpose

The Greenhouse and Energy Minimum Standards (Computer Monitors) Determination 2013 (Determination) implements a Council of Australian Governments (COAG) decision from February 2013 to regulate computer monitors for minimum energy performance standards (MEPS) and energy labelling. The Determination establishes minimum energy efficiency and energy labelling requirements, and associated requirements for conducting tests, for computer monitors.

Background

The Greenhouse and Energy Minimum Standards Act 2012 (Act) established a national framework for regulating the energy efficiency of products supplied or used within Australia, implementing Australian Government and COAG commitments to establish national legislation to regulate energy efficiency and labelling standards for appliances and other products. The national legislation permits the Australian Government to set mandatory minimum efficiency requirements for products, to drive greater energy efficiency for regulated products. The Act also allows the Australian Government to set nationally-consistent labelling requirements, to increase Australians’ awareness of options to improve energy efficiency and reduce energy consumption, energy costs and greenhouse gas emissions. The national framework replaced seven state and territory legislative frameworks, harmonising the regulation of equipment energy efficiency.

Historically, MEPS and energy labelling requirements were set out in Australian or Australian/New Zealand Standards and incorporated by reference in regulations, which were usually made under the relevant state or territory electrical safety legislation. Over time the COAG Equipment Energy Efficiency Program (E3 Program) developed the practice of setting the requirements by reference to the relevant Australian or Australian/New Zealand Standards. This Determination departs from that practice, instead setting out the requirements in full in its own terms.

MEPS requirements, or energy use requirements, relate to requirements for the minimum allowable energy efficiency of a product. They provide an energy efficiency ‘floor’ for that product type, below which individual models of that product type cannot be sold. The level of the floor can be raised over time, providing a means of raising the average energy efficiency of the product type.

Energy labelling requirements primarily relate to requirements for the display of energy rating labels, such as those commonly seen on products including refrigerators, dishwashers and televisions, amongst others. Energy rating labels allow consumers to compare the energy consumption of similar products, and factor potential cost savings into their purchasing decision.

Other regulatory requirements possible under the Act include requirements relating to high efficiency levels, product performance, and the impact of the product on the environment or the health of human beings. There are no requirements of these types set in this Determination.
Legislative basis

Under subsection 23(1) of the Act the Minister may, by legislative instrument, make a determination (a GEMS determination) that specifies one or more classes of products if the products in those classes use energy or affect the amount of energy used by other products. A GEMS determination is the vehicle by which energy efficiency requirements (GEMS level requirements), energy labelling requirements (GEMS labelling requirements) for classes of products and other requirements for a product class are established.

Under section 25 of the Act the GEMS level requirements specified in a GEMS determination may be:

- requirements relating to one or more of the following:
  - the amount of energy used in operating products in relevant product classes;
  - the amount of greenhouse gases resulting from operating products in the relevant product class;
  - the effect of those products on the amount of energy used by operating other products; and

- requirements for conducting tests in relation to products in the relevant product class in order to determine whether the products meet the specified requirements.

Under section 26 of the Act the GEMS labelling requirements specified in a GEMS determination may be:

- requirements relating to the information that must be communicated in connection with supplying or offering to supply products in the relevant product class;
- requirements relating to the manner in which that information must be communicated; and
- requirements for conducting tests in relation to products in the relevant product class in order to determine whether the products meet the specified requirements.
Consultation

The Australian Government conducted extensive consultation with the computer industry throughout the development of the regulatory approach to computer monitors reflected in this Determination. Dialogue with key stakeholder groups about regulatory intervention started in 2005, with negotiations on the substance of the possible regulation commencing in 2007. This dialogue continued until 2011.

A Consultation Regulatory Impact Statement (Consultation RIS) covering both computers and computer monitors (and prepared in accordance with COAG best practice regulation requirements) was released for public comment in October 2010. Submissions were received from two industry associations and one multinational computer company. There were no submissions from user groups, consumers or consumer advocacy groups or other companies. This lack of response may be attributed to the lengthy consultations which preceded the consultation RIS and general support from the stakeholders on the regulatory proposals.

The submissions did not include additional data or any alternatives to the regulatory proposals presented in the Consultation RIS. The submissions did include some concerns about the proposals for computer monitors, in relation to the coverage of some special purpose products and the implementation date of the requirements. In response to these concerns, it was agreed that some additional products would be excluded from the scope of the regulation, and the commencement date for mandatory labelling would be delayed for a period of six months to allow responsible parties time to adjust to the new requirements.

Regulatory Impact

A COAG decision RIS (Decision RIS) for computers and computer monitors was prepared following the completion of the Consultation RIS process. The Decision RIS incorporated industry submissions and comments and reflected the modifications agreed to in consultation. The Decision RIS was presented to the Select Council on Climate Change (SCCC) for approval in February 2013. The SCCC agreed to adopt the recommended regulatory approach presented in the Decision RIS on 21 February 2013.

Detailed description of the Determination

Details of the Determination are set out at Attachment A.

Statement of compatibility with human rights

A statement of compatibility with human rights for the purposes of Part 3 of the Human Rights (Parliamentary Scrutiny) Act 2011 is set out at Attachment B.
Details of the Determination

Section 1 – Name of Determination
This section sets out the title of the Determination.

Section 2 – Commencement
This section provides that the Determination commences on 1 October 2013.

Section 3 – Definitions
This section sets out definitions for key terms used in the Determination. The definitions include:

- definitions relating to the various Australian/New Zealand, European Committee for Standardization (CEN) and International Electrotechnical Commission (IEC) Standards referenced in the Determination; and
- a definition of “computer monitor”, which is given the same meaning as in Australian/New Zealand Standard AS/NZS 5815.1:2012.

Section 4 – Interpretation
Section 4 provides guidance for interpreting certain aspects of the Determination.

Subsection 4(1)
The purpose of this subsection is to avoid any inconsistency in terminology between the Determination (and other elements of the GEMS legislation) and the standards referenced in section 3 of the Determination. It indicates that where a term used in the Determination is not defined in any part of the GEMS legislation, but is defined in a standard referenced in section 3, for the purposes of the Determination the term has the meaning set out in the applicable standard.

Subsection 4(2)
Unless otherwise specified, the applicable version of a document incorporated by reference in a legislative instrument is the version that existed on the date the instrument came into force. This is made clear for standards specifically referenced in section 3 of the Determination. However, often these standards refer to other standards or documents which also contain requirements that must be applied to give effect to the Determination or a standard referred to in the Determination. The purpose of this subsection is to make clear that the applicable version of these further documents is also the version that existed on the day the Determination came into force.
Section 5 – Specified product classes covered by the Determination

Section 5 sets out the scope of the Determination with respect to the class of products that it covers.

Subsection 5(1)

This subsection provides that the Determination covers computer monitors (as defined in section 3 and in the product classes specified in the table) that are designed to be connected to a mains voltage electricity supply. Three product classes are specified, based on the screen size and resolution of the monitor.

Subsection 5(2)

This subsection sets out product classes that are not covered by the Determination. These are largely electronic displays that are:

- used for public display of advertising or other content; or
- used for other specialised applications, such as in engineering or medicine; or
- of a larger size than a standard computer monitor; or
- marketed or sold as a television.

Section 6 – GEMS level requirements

Section 6 specifies GEMS level requirements for energy use for computer monitors covered by the Determination, including requirements for conducting tests in order to demonstrate compliance with the energy use requirements, under section 25 of the Act. Different requirements are set depending on whether the computer monitor is operating in off mode, standby active (sleep) mode, or on mode.

Subsection 6(1)

This subsection defines off mode to mean the operational mode of a computer monitor that is connected to a power source, engaged by a mechanical switch, and not providing any function.

Subsection 6(2)

This subsection specifies that the maximum allowable power consumption when a computer monitor is used in off mode is 1 watt.

Subsection 6(3)

This subsection defines standby active (sleep) mode to mean the operational mode of a computer monitor that:

- is connected to a power source; and
- has all mechanical (hard) power switches turned on; and
- has been placed into a low-power mode by receiving a signal from an externally connected device (for example, a computer, game console or set-top box) or by cause of an internal function such as a sleep timer or occupancy sensor.
Subsection 6(4)

This subsection specifies that the maximum allowable power consumption when a computer monitor is used in *standby active (sleep) mode* is 2 watts.

Subsection 6(5)

This subsection provides definitions for the terms *automatic brightness control* and *on mode*.

*Automatic brightness control* is defined to mean a self-acting mechanism that controls the brightness of a monitor as a function of ambient light.

*On mode* is defined to mean the operational mode of a computer that is connected to a power source, has all mechanical (hard) power switches turned on, and is performing its primary function of producing an image.

Subsection 6(6)

This subsection specifies the maximum allowable power consumption for a computer monitor when it is used in *on mode*. Different maximum allowable power consumptions are specified for computer monitors in product class 1 and product class 2, and are worked out using the formula in the table. The calculations in the formulae are based on the screen resolution and the screen area of a computer monitor.

Subsection 6(7)

This subsection specifies the method for working out the power consumption figure, from the results of testing, for computer monitors with the automatic brightness control feature activated by default. It does not affect the operation of subsection (6), or set alternative energy use requirements. Rather, it provides instructions for how the results of testing for products with this feature enabled should be compared with the maximum allowable power consumption calculated in accordance with subsection (6). The formula provides a weighting to be applied when combining the results of testing in high ambient lighting and low ambient lighting conditions in order to arrive at a single power consumption figure.

Subsection 6(8)

This subsection specifies that the requirements for conducting tests are those set out in sections 2 and 3 of AS/NZS 5815.1:2012.

Subsection 6(9)

This subsection specifies, for subsection (8), that for computer monitors that are powered by an external power supply that can be disconnected from the computer
monitor, all energy measurements are to include the energy consumption of the external power supply. The subsection establishes requirements for doing so depending on whether or not an external power supply is supplied with the computer monitor. If the external power supply is supplied with the computer monitor, the computer monitor is to be tested with that external power supply. Otherwise, the computer monitor is to be tested with an external power supply of Energy Performance Mark III (as defined in AS/NZS 4665.1:2005).

Section 7 – GEMS labelling requirements

Section 7 specifies GEMS labelling requirements for computer monitors covered by the Determination, including requirements for conducting tests in order to demonstrate compliance with the energy labelling requirements, under section 26 of the Act.

Subsection 7(1)

This subsection provides a simplified outline of section 7.

Subsection 7(2)

This subsection specifies that all products must have an energy rating label in the format required by subsection (9), affixed in accordance with subsection (10), and containing information calculated in accordance with subsections (4) and (6).

Subsection 7(3)

This subsection specifies the method for working out the projected annual energy consumption of a computer monitor, based on the results of testing in accordance with AS/NZS 5815.1:2012.

Subsection 7(4)

This subsection specifies that a computer monitor’s comparative energy consumption is its projected annual energy consumption, rounded to the nearest whole number and expressed in kilowatt-hours per year.

Subsection 7(5)

This subsection specifies that a computer monitor’s energy rating label must show its comparative energy consumption.

Subsection 7(6)

This subsection provides a table for working out the star rating of a computer monitor that may be displayed on the energy rating label. Column 2 of the table specifies the allowable star ratings based on the star rating index for the computer monitor (worked out in accordance with subsection (7)), as set out in column 1.
This subsection specifies the method for working out a computer monitor’s star rating index. The calculation is based on the comparative energy consumption (see subsection (4)), base energy consumption worked out in accordance with subsection (8), and a provided energy rating factor.

Subsection 7(8)

This subsection specifies the method for working out a computer monitor’s base energy consumption, for the purposes of subsection (7).

Subsection 7(9)

This subsection specifies the allowable format of the energy rating label for a computer monitor. For computer monitors with a star rating of 6 or less, the format is as set out in Schedule 1 to the Determination (the six-star label). For a computer monitor with a star rating of seven or more, the format as set out in either Schedule 1 or Schedule 2 (the ten-star label) may be used.

Subsection 7(10)

This subsection specifies the requirements for how an energy rating label must be affixed to a computer monitor. The label must be affixed to either the top, or the screen or mask, of the computer monitor.

Subsection 7(11)

This subsection clarifies that an energy rating label may be part of another label, as long as it still meets the requirements of this Determination.

Subsection 7(12)

This subsection provides that an energy rating label may also be affixed to the packaging of the computer monitor, in addition to being affixed to the computer monitor itself.

Section 8 – Other GEMS requirements

There are no other GEMS requirements for computer monitors covered by this Determination.

Section 9 – Family of models

Section 28 of the Act provides that a GEMS determination must specify, for each product class covered by the determination, the circumstances in which two or more models in that product class are in the same family of models.

Subsection 9(1)
This subsection specifies the circumstances in which two or more models of computer monitors covered by this Determination may be in the same family of models. This subsection operates subject to subsection 9(2).

The specified circumstances are when the models (a) are marketed in the same category or class of products, (b) have the same energy performance characteristics, (c) have identical physical characteristics, and (d) are included on a single test report prepared prior to applying for registration under the Act. The effect of these specified circumstances is to limit the physical differences that are allowed between models that may be registered in the same family of models to cosmetic differences only.

Subsection 9(2)

This subsection has the effect that for the purposes of subsection (1) a family of models may consist of no more than 10 models.

Section 10 – Product categories

Section 29 of the Act requires that a GEMS determination specify whether the products it covers are category A or category B products. Category B products are subject to higher penalties than category A products for certain offences under the Act, on the basis that category B products have a high impact on energy use or greenhouse gas production.

Section 10 specifies that computer monitors covered by the Determination are category A products.

Schedule 1 – Format of six-star label

Schedule 1 specifies the requirements for the appearance of the six-star energy rating label for a computer monitor. The schedule covers the required colours, allowable fonts, required text, and the required physical layout of the label. Diagrams are provided to establish the physical layout requirements.

Schedule 2 – Format of the ten-star label

Schedule 2 specifies the requirements for the appearance of the ten-star energy rating label for computer monitors. The requirements are the same as for the six-star label, but must be applied to the physical layout for the ten-star label as set out in the diagram in this schedule.
Statement of Compatibility with Human Rights

Prepared in accordance with Part 3 of the Human Rights (Parliamentary Scrutiny) Act 2011


This Legislative Instrument is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the Human Rights (Parliamentary Scrutiny) Act 2011.

Overview of the Legislative Instrument

The Greenhouse and Energy Minimum Standards (Computer Monitors) Determination 2013 prescribes matters relating to minimum energy efficiency and energy labelling requirements for computer monitors under the Greenhouse and Energy Minimum Standards Act 2012. The Determination establishes requirements for energy use and energy labelling, including requirements for conducting tests in order to demonstrate compliance with those requirements. The Determination also sets out the circumstances in which two or more models in a product class may be a family of models, and establishes the applicable product category for the purposes of calculating certain penalties under the Act.

Human rights implications

This Legislative Instrument does not engage any of the applicable rights or freedoms.

Conclusion

This Legislative Instrument is compatible with human rights as it does not raise any human rights issues.

The Hon Gary Gray AO MP
Minister for Resources, Energy and Tourism