EXPLANATORY STATEMENT

Issued by the authority of the Parliamentary Secretary for Climate Change and Energy Efficiency

Greenhouse and Energy Minimum Standards Act 2012

Greenhouse and Energy Minimum Standards (Power Transformers) Determination 2012

Purpose

The *Greenhouse and Energy Minimum Standards (Power Transformers) Determination 2012* (**Determination**) establishes minimum energy efficiency, energy labelling and high efficiency level requirements, and associated requirements for conducting tests, for power transformers.

The Determination is one of an initial suite of 19 determinations by which responsibility for the regulation of energy efficiency and energy labelling has been transitioned from the States and Territories to the Commonwealth.

Background

The *Greenhouse and Energy Minimum Standards Act 2012* (**Act**) establishes a national framework for regulating the energy efficiency of products supplied or used within Australia, implementing Australian Government and the Council of Australian Governments (**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.

Under the previous state and territory legislative frameworks, Minimum Energy Performance Standards (**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. It was intended that the transition to Commonwealth regulation would, to the greatest extent possible, simply reproduce the regulatory requirements that existed under state and territory law. As a result, the practice of setting the requirements by reference to the relevant Australian or Australian/New Zealand Standards has been continued in this initial suite of determinations made under the Act, albeit with some departures in order to enshrine in the law various rulings made over time by state regulators, and certain administrative practices that had developed

over time in the COAG Equipment Energy Efficiency Program (**E3 Program**), to provide certainty to the regulated community.

Selected definitions and text are extracted in the GEMS Determinations from the relevant Australian or Australian/New Zealand Standards. This is done with the intention of making it possible to determine if a product is covered (or excluded) by the GEMS Determination without having to refer to the relevant standard.

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. For some products labelling requirements also relate to specific information that must be marked on the product itself or the box in which it is supplied.

Other regulatory requirements include requirements relating to high efficiency levels, product performance, and the impact of the product on the environment or the health of human beings:

- *High efficiency level* requirements allow suppliers or manufacturers to differentiate more efficient products in the market where the product does not carry an energy rating label, provided they meet a specified efficiency benchmark over and above the nominated GEMS level requirements.
- *Product performance* requirements are intended to ensure that minimum efficiency requirements or a higher number of stars on an energy rating label are not achieved by reducing the effectiveness of the product in its primary function. An example of this is the setting of minimum requirements for soil removal for clothes washers.
- Requirements in relation to the *impact of a product on the environment or the health of human beings* are intended to ensure that greater energy efficiency does not come at the expense of the environment or human health. An example of this is the setting of a maximum limit for the amount of mercury that may be contained in a compact fluorescent or linear fluorescent lamp. Some level of mercury is necessary for these energy efficient lamps to operate so limits are set to keep mercury content within safe levels for human health and the environment.

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.

Under section 27 of the Act other requirements that may be specified in a GEMS determination are:

- requirements for products in the relevant product class to meet a specified level (the high efficiency level);
- requirements relating to the performance of products in the relevant product class;
- requirements relating to the impact of products in that product class on the environment or on the health of human beings;
- requirements for conducting tests in relation to products in the relevant product class in order to determine whether the products meet the specified requirements; and
- requirements of a kind specified in the regulations for the purposes of this paragraph.

Consultation

The Australian Government conducted extensive consultation with Australian businesses throughout the development of the Act. In the development of this Determination, Australian businesses were further consulted on 'family of models' circumstances in the Determinations (discussed below). Australian businesses were not consulted on the other provisions of this Determination (or the other Determinations in the initial suite of 19) as those provisions reproduce the requirements that existed under state and territory legislation.

Industry stakeholders representing all regulated product types were consulted in June and July 2012 on a proposed approach to the circumstances in which two or more models of products could be in a family of models. The aim of the consultation was to develop a streamlined and consistent approach to families of models across all product types. The consultation raised some general issues and some specific issues that are unique to particular product classes. It was decided that these issues could only be addressed with a detailed review of each of the family of models circumstances for each product type. A commitment was made to review the family of models treatment under GEMS for each product type over time. Lighting products have already been reviewed, and the results of the review were incorporated into the relevant determinations in the initial suite of 19. For products that have not had a review it was decided that the family of models treatment in previous state and territory regulation and practice would be carried over in the GEMS Determinations.

Extensive consultation was undertaken with state and territory government policy officers, state regulators, and technical consultants to ensure that the requirements established in the Determinations did not go beyond the scope of the previously existing state and territory requirements. The draft determinations were amended to reflect the outcome of the consultations.

Regulatory Impact

A comprehensive COAG Regulatory Impact Statement (the GEMS RIS) was prepared as part of the process of developing the Act. The regulatory proposals encapsulated by the Determinations fall within the scope of the GEMS RIS, and only reproduce regulatory requirements for business that already existed under state and territory legislation. Consequently, no further regulatory impact analysis was considered neccesary in relation to the regulatory proposal.

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.

Attachment A

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 the day after it is registered on the Federal Register of Legislative Instruments. The default 12 month period that otherwise applies to the commencement of a GEMS determination, as provided for by paragraph 34(a) of the Act, is not necessary with respect to this Determination because it reproduces in Commonwealth law the energy efficiency and energy labelling requirements that previously existed in state and territory legislation.

Section 3 – Definitions

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

- definitions relating to the various Australian Standards by which the requirements of the Determination are specified;
- a definition of "power transformer", which is given the same meaning as in Australian Standard AS 2374.1-1997;
- a definition of "CIE Standard", which is a standard that is published by, or on behalf of, the International Commission on Illumination;
- a definition of "IEC Standard", which is a standard published by, or on behalf of, the International Electrotechnical Commission; and
- a definition of "standard", which means an Australian Standard, an Australian/New Zealand Standard, an IEC Standard or any other equivalent document.

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)

The standards referred to in the Determination themselves refer to other documents that must be applied to give effect to the Determination. The purpose of this subsection is to specify which version of such a document, if referred to in a standard under the heading "Referenced Documents" (or an equivalent heading), is the applicable version of the document for the purposes of the Determination.

Where a relevant document is defined in section 3 of this Determination and the definition specifies a date of effect, the applicable version of the document for the purposes of the Determination is the version that existed at that specified date. Otherwise, the applicable version of the document is the version that existed on the date this Determination comes into force.

In this Determination two standards have been defined in section 3 with a date other than the date the instrument came into force that has been specified – AS 2374.1-1997 with a specified date of 5 September 1997, and AS 2735-1984 with a specified date of 9 November 1984. Therefore, the applicable versions of these standards are the versions that existed on 5 September 1997 and 9 November 1984 respectively (the dates on which each standard was published). The standards were superseded by AS 60076.1-2005 (published on 5 December 2005) and AS 60076.11-2006 (published on 25 January 2006) respectively, but it is the older standards that were incorporated by the previous state and territory legislation. It was not possible for the applicable version of these standards to be the versions that existed on the date the instrument came into force, as the standards had been superseded. For all other documents incorporated by reference in accordance with this subsection, the application version is the date this Determination comes 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)

Subsection 5(1) provides that the Determination covers power transformers, as defined in section 3, in the product classes set out at subsection 5(2), with power ratings from 10 kilovolt-amperes (**kVA**) to 2500kVA and with a system highest voltage of up to 24 kilovolts (**kV**). This reflects the scope of the regulations for this product type under the previous state and territory legislation, as it was set out in the Australian Standard AS 2734.1.2-2003 (*Power transformers. Part 1.2: Minimum energy performance standard (MEPS) requirements for distribution transformers*).

Subsection 5(2)

Subsection 5(2) specifies the product classes that are covered by the Determination. This subsection establishes six product classes for power transformers covered by the Determination, based on whether the product is single phase or three phase, whether the product is an oil-immersed type or dry-type transformer, and if the product is a dry-type transformer, whether the system highest voltage is 12 kV or 24 kV.

Subsection 5(3)

This subsection sets out product classes that are not covered by the Determination. The excluded product classes are the same as the product classes excluded by clause 1.1 of AS 2374.1.2-2003, which are:

- transformers other than those designed for 11 or 22 kV networks;
- instrument transformers;
- auto transformers, that is transformers in which at least two windings have a common part;
- traction transformers mounted on rolling stock;
- starting transformers;
- testing transformers;
- welding transformers;
- three-phase transformers with three or more windings per phase;
- arc-furnace transformers;
- earthing transformers;
- rectifier or converter transformers;
- uninterruptible power supply (ups) transformers;
- transformers with an impedance less than 3 per cent or more than 8 per cent;
- voltage regulating transformers;
- transformers designed for frequencies other than 50 hertz;
- gas-filled dry-type transformers; and
- flameproof transformers.

Subsection 5(4)

This subsection defines the terms "dry-type transformer", "oil-immersed type transformer", and "U_m" for the purposes of section 5. (The terms "dry-type transformer" and "oil-immersed type transformer" are given the same meaning as they have in AS 2734.1-1997). The terms are included here to assist in ascertaining whether a product is covered by this Determination without the need to refer to the relevant standard.

Section 6 – GEMS level requirements

Section 6 specifies GEMS level requirements for energy use for power transformers 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.

Subsection 6(1)

This subsection provides that the GEMS level requirements in relation to energy use are those set out in:

- Table 1 at clause 2.1 of AS 2734.1.2-2003 for products in product classes 1 and 2 in Table 1 at subsection 5(2); and

- Table 2 at clause 2.1 of AS 2734.1.2-2003 for products in product classes 3 to 6.

Subsection 6(2)

This subsection specifies that the requirements for conducting tests are those set out in section 4 of AS 2734.1.2-2003 and section 5 of AS 2735-1984.

Section 7 – GEMS labelling requirements

Section 7 specifies GEMS labelling requirements for power transformers 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 that the GEMS labelling requirements are those set out in clause 1.6 of AS 2734.1.2-2003 in relation to compliance marking.

Section 8 – Other GEMS requirements

Section 8 specifies other GEMS requirements in relation to the high efficiency level for power transformers covered by the Determination, including requirements for conducting tests in order to demonstrate compliance with the high efficiency level requirements, under section 27 of the Act.

A high efficiency level is a concept that will help to distinguish the most efficient product models in each product class, assisting businesses to promote highly efficient products. Products need not meet the high efficiency level but those which do will be entitled to use the more distinctive high efficiency claim and a higher energy performance mark – for as long as they meet the high efficiency level (which may change over time to encourage greater efficiency).

Subsection 8(1)

This subsection provides that the requirements for power transformers covered by the Determination to meet the high efficiency level are those set out in:

- Table 3 at clause 3.1 of AS 2734.1.2-2003 for products in product classes 1 and 2; and
- Table 4 at clause 3.1 of AS 2734.1.2-2003 for products in product classes 3 to 6.

Subsection 8(2)

This subsection specifies that the requirements for conducting tests are those set out in section 4 of AS 2734.1.2-2003.

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.

This section specifies that the family of models circumstances for power transformers in a single product class covered by this Determination are those set out in subclause 1.5.2 of AS 2734.1.2-2003.

Section 10 – Product categories

Section 10 specifies that power transformers covered by the Determination are category B products.

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.

Power transformers have a high impact on energy use, relative to other regulated products, due to the high energy throughput and the scale of network energy losses associated with their use.

Attachment B

Statement of Compatibility with Human Rights

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

Greenhouse and Energy Minimum Standards (Power transformers) Determination 2012

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 (Power transformers) Determination 2012* prescribes matters relating to minimum energy efficiency requirements for power transformers under the *Greenhouse and Energy Minimum Standards Act 2012*. The Determination establishes requirements for energy use (including high efficiency levels), 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.

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