

EXPLANATORY STATEMENT

Issued by the authority of the Assistant Minister for Climate Change and Energy

Greenhouse and Energy Minimum Standards Act 2012

Greenhouse and Energy Minimum Standards (Incandescent Lamps for General Lighting Services) Determination 202X

Purpose and Operation

The *Greenhouse and Energy Minimum Standards Act 2012* (the Act) established a national framework for regulating the energy efficiency and labelling standards of appliances and equipment supplied or used within Australia. This national legislation allows the Australian Government to set mandatory minimum efficiency requirements for certain products, supporting the move towards greater energy efficiency. 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. Other regulatory requirements possible under the Act include product performance and the effect of the product on the environment or human health.

The *Greenhouse and Energy Minimum Standards (Incandescent Lamps for General Lighting Services) Determination 202X* (the Determination) establishes minimum energy efficiency, energy labelling and product performance requirements, as well as associated requirements for conducting tests for incandescent lamps for general lighting services. It increases the minimum energy efficiency requirements and includes a limited grandfathering period to phase out certain inefficient lighting products.

This Determination revokes and replaces the *Greenhouse and Energy Minimum Standards (Incandescent Lamps for General Lighting Services) Determination 2016* (revoked Determination).

The substantive changes to the revoked determination are:

1. Adjustments to the scope:
 - a. Increased range of lamps to be covered by the Determination, with the scope defined by cap (base) type and the rated voltage of the lamp.
 - b. Updating exclusions in the standard. For example, lamps that are specified for aircraft and aircraft navigation are excluded (based on their requirement to adhere to another standard) as more efficient alternatives are not available.
 - c. Where there is not currently a suitable, efficient replacement, but this is anticipated in the future, for example for G9 capsule lamps, the scope may be expanded at a later stage.
2. Removal of exclusions for the following:
 - a. Automotive lights, as these products are not within scope.

- b. Lamps intended for traffic signals, as halogen and incandescent versions are no longer supplied, and many of these lights have been converted to LEDs or have caps outside the scope of this Determination.
 - c. Lamps intended for sea navigation – as those within scope are either replaceable with LED lamps or can be registered as extra low voltage (11 V to 13 V)
 - d. Reinforced construction lamps (rough use or vibration lamps), as they are replaceable by LED lamps.
 - e. Coloured and crown reflector lamps, as they are replaceable by LED lamps.
- 3. Increased minimum efficacy level for mains voltage incandescent lamps within scope which is intended to phase-out the supply of these products.
 - 4. Revised scope for 11-13V halogen lamps which continue to be subject to a minimum efficacy level which the more efficient models within scope can achieve. Suppliers will need to register these lamps for supply in Australia and meet the MEPS specified.
 - 5. Inclusion of guidance on lamp tests report format

Background

[Further background will be added following feedback on the public consultation paper]

A key driver for this determination is that on 20 April 2018, the former Council of Australian Governments (COAG) Energy Council agreed to further improve lighting energy efficiency regulation by phasing out inefficient incandescent lamps in Australia and introducing minimum standards for LED lamps in Australia and New Zealand aligned with EU regulations.

The timing for introduction of the new regulation was agreed to align with the EU regulatory process. Finalisation of the EU regulation was delayed by 12 months (published in the Official Journal on 5 December 2019 to come into effect in September 2021). Further information about the EU regulation is included at Attachment X *[see Attachment to LED Lamps Determination consultation draft]*.

Following availability of the EU regulation, work commenced on the development, through a joint trans-Tasman Standards Australia process, of a draft test standard for LED lighting (AS/NZS 5341) and a revised MEPS standard for incandescent and halogen lighting (AS 4934-2 – Australia only), both of which were published in March 2021.

Authority

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.

Section 35 of the Act allows a Minister to make replacement determinations through revoking the previous determination and making a new determination to replace the revoked determination. The new determination can specify the new requirements and retain any relevant existing requirements from the revoked determination. The revoked determination ceases to be in force immediately before the replacement determination comes into force.

Under section 36 of the Act, a replacement determination must specify whether it affects the registration of models of GEMS products. Under subsection 36(2) of the Act, if a replacement determination does not specify that it affects a model's registration, the model is taken to be registered against the replacement determination. If a replacement determination specifies that it affects a model's registration, then under paragraph 48(2)(c) of the Act, the model's registration ceases to be in force from the time the replacement determination comes into force (or the beginning of the day a registration of the model against the replacement determination comes into force, whichever is the earlier).

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

Prior to preparation of the Determination, the Australian Government undertook industry consultation in development of the Consultation Regulatory Impact Statement (RIS), Decision RIS, and the new Australian Standard AS 4934.2.2021 *Incandescent lamps for general lighting services Part 2: Minimum Energy Performance Standards (MEPS) requirements*.

The Decision RIS defined the majority of items in scope with additional items for research and consultation in the standards development process. Products were excluded or omitted where it was determined that there was no suitable more efficient replacement product available. In some circumstances, suppliers of products within scope may need to apply for an exemption. For example, an exemption may be required where a more efficient replacement product is unavailable for a specific use but, due to similarity with general lighting products, it has been impractical to define for exclusion on the basis of attributes alone.

Some exclusions have been removed following consultation with industry advising that it was no longer required. In addition, the scope of some items, such as extra low voltage halogen lamps, were narrowed to $\geq 11\text{V}$ to $\leq 13\text{V}$ to reduce the need for further exclusions.

[Further information will be added following the public consultation paper]

Regulatory Impact

A comprehensive COAG Decision Regulation Impact Statement (RIS) was prepared as part of the process of developing the Determination. In April 2018, COAG Energy Council Ministers agreed the preferred option in the Decision RIS.

The Office of Best Practice Regulation (now the Office of Impact Analysis) assessed the RIS as meeting the former Council of Australian Governments' best practice regulation requirements. The RIS is set out in full at Attachment X *[to be added following public consultation]*.

Details of the Determination are set out at Attachment A.

The Decision RIS considered costs and benefits to businesses, consumers and government and the environment. The RIS estimated that phasing out a greater range of incandescent and halogen lamps over a 10 year period would achieve a net benefit of over \$1.2 billion in cost savings, over 4.5 Mt of emissions and around 7,500 GWh in energy saved.

Exposure Draft

Details of the Determination

Part 1 – Preliminary

Section 1 – Name

This section sets out the title of the Determination.

Section 2 – Commencement

This section provides that the Determination commences and comes into force on the day after the end of the period of 12 months beginning on the day it is registered.

Section 3 – Authority

This section describes the provisions that authorise the making of this Determination, which are sections 23 and 35 of the *Greenhouse and Energy Minimum Standards Act 2012*.

Section 4 – Schedules

This section deals with the Schedules to the Determination. Schedule 1 relates to registrations affected by this Determination (section 12 refers), Schedule 2 relates to products that are not covered by this Determination (section 15 refers), while Schedule 3 formally repeals the *Greenhouse and Energy Minimum Standards (Incandescent Lamps for General Lighting Services) Determination 2016*.

Section 5 – This instrument revokes and replaces the old determination

This section provides that this Determination revokes and replaces the *Greenhouse and Energy Minimum Standards (Incandescent Lamps for General Lighting Services) Determination 2016*.

Section 6 – Definitions – standards referred to in this instrument

This section provides details of the standards referred in this Determination

Section 7 – Definitions – other expressions used in this instrument

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

Section 8 – Applicable definitions and applicable versions of standards and documents incorporated into standards

Section 8 provides guidance for interpreting certain aspects of the Determination.

Subsection 8(1)

The purpose of this subsection is to define the order of priority of source documents in interpretation, if there is inconsistency in the definitions of words or expressions mentioned in the Determination.

Subsection 8(2)

This subsection confirms that a word or expression mentioned specifically in the section 6 of the Determination has the meaning given to it in the relevant standard.

Subsection 8(3)

The purpose of this subsection is to make it clear that the applicable version of standards referred to in this Determination, and certain other documents referred to in such standards, is the version that existed on the day the Determination was made.

Section 9 – Families of models

Section 28 of the Act provides that a GEMS Determination must specify for all the product classes the circumstances in which two or more models in that product class are in the same family of models.

Different models of products can be a part of a product family, if specified requirements are met. Section 9 sets out the scope of the Determination with respect to the families of products that it covers

Subsection 9 (1)

Subsection 9(1) sets out the requirements to be met by models to be in the same family.

Subsection 9(2)

This subsection specifies the circumstances in which two or more models of incandescent lamps from a single product class covered by this Determination may be in the same family of models. This subsection operates, subject to subsection 9(1).

The specified circumstances are when the models (a) are in the same product class, (b) are of a single brand, (c) rely on the same test report, (d) have the same physical characteristics that are relevant to complying with the GEMS level requirements, the GEMS labelling requirements and the other requirements, and have the same wattage and claimed performance characteristics that are relevant to complying with those requirements. 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.

An example of physical differences that might be allowed between two or more models with the same energy performance in order for them to be registered in the same family of models is different cap types (for example, bayonet cap or edison screw) or cap sizes.

Subsection 9(3)

This subsection defines the maximum number of models that can be included in a family, which is 8 models.

Section 10 – Product Category

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 incandescent lamps covered by the Determination are category A products. This is unchanged from the revoked Determination.

Section 11 – Limited grandfathering

This section sets out the grandfathering period for products in product classes 1 and 2 in the table at section 14 of the Determination, but do not meet all the requirements set out in the Determination and already imported into Australia on the day this determination comes into force.

This Determination allows a limited grandfathering period of 5 years for such products that begins on the day this determination comes into force.

Section 12 – Registrations affected by this instrument

This section clarifies the status of products which are already registered against the *Greenhouse and Energy Minimum Standards (Incandescent Lamps for General Lighting Services) Determination 2016*.

Part 2 – Products Covered by instrument

Section 13 – Purpose of Part

This section describes the purpose of inclusion of this Part, i.e. to define the classes of products that are covered by this Determination and the classes of products that are not covered.

Section 14 – Classes of products that are covered by this instrument

This section describes types of incandescent lamps that are covered by this Determination.

Products are categorised into two product classes as described at the AS 4934.2:2021 and described with their rated voltages and cap types.

Two product classes defined are;

Class 1 – products with rated voltage > 140V with specified cap types

Class 2 – products with rated voltage between 11 V and 13 V including both values with specified cap types.

Section 15 – Classes of products that are not covered by this instrument

This section describes the types of the lamps that are not covered by this Determination, by reference to Schedule 2 to the Determination.

Part 3 – GEMS level requirements

Section 16 – Purpose of Part

This section specifies GEMS level requirements for the purposes of section 25 of the Act.

Section 17 – GEMS level requirements

This section specifies GEMS level requirements, in relation to product performance, for incandescent lamps covered by the Determination, including requirements for conducting tests in order to demonstrate compliance with these requirements, under section 27 of the Act.

These performance requirements are intended to prevent non-conforming products entering the Australian market, and remaining after the limited grandfathering period.

Subsection 17(1) specifies the initial efficacy requirement for the products in product class 1, whereas subsection 17(2) specifies the initial efficacy requirement for the products in product class 2.

Section 18 – Testing requirements

This section sets out the testing requirements for the products and how the test results must be presented.

Subsection 18(1) specifies product tests must be conducted in accordance with the requirements mentioned in section 2 of the AS/NZS 4934.1:2014. There is no change from the previous determination.

Subsection 18(2) specifies the contents of the test report that it must contain the applicable information mentioned in the Appendix A of AS 4934.2:2021.

Subsection 18(3) specifies the test conditions; required duration of lamp ageing before testing and the requirement of replacing the failed lamp(s) with another lamp(s)

Subsection 18(4) specifies the minimum sample size for lamp testing, which is 10 units, the same as that of the previous determination.

Part 4 – GEMS labelling requirements

Section 19 – Purpose of Part

This section specifies the purpose of this Part, which is to specify GEMS labelling requirements under section 26 of the Act for incandescent lamps covered by the Determination.

Section 20 – GEMS labelling requirements

This section specifies the GEMS labelling requirements for products in all product classes. These requirements concern the information that must be marked on the packaging of the product, in relation to light output, wattage and median life.

The requirements allow for tolerances in order to allow for small variations in performance.

Section 21 – Testing requirements

This section specifies that the requirements for conducting tests for products in all product classes are those set out in section 2 of AS/NZS 4934.1:2014.

Section 22 – Impact of replacement determination

This section provides a mechanism, in the event that this Determination is replaced in the future, to allow a transitional labelling provision to be specified in that replacement determination (the new determination) with the effect that complying with its requirements will be taken to be compliance with the labelling requirements of this Determination. This is to prevent the situation arising, in circumstances where a registrant chooses to register to the new determination between the time it is made and when it comes into force (as allowed by section 44 of the Act), of a product needing to comply with the labelling requirements of both determinations.

Part 5 – Other requirements

Section 23 – Purpose of Part

This section states purpose of the Part, which is specifying other requirements, for the purposes of section 27 of the Act

Section 24 – Other GEMS requirements

Section 24 defines specific requirements that products in product class 1 and product class 2 need to be met in relation to lumen maintenance factor and minimum median life. In addition, products in product class 2 must satisfy maximum wattage requirements mentioned in clause 2.6 of AS 4934.2:2021.

Section 25 – Testing requirements

This section specifies the testing requirements and minimum sample sizes for conducting tests for products in both product classes 1 and 2. This section also specifies that the lamps that fail prior to 75% of the rated median life must not be included in the mean.

Schedule 1 – Registrations affected by this instrument

This Schedule lists registrations under the revoked Determination affected by the Determination. Section 12 sets out when a registration is affected by the Determination.

Schedule 2 – Products not covered by this instrument

Schedule 2 lists the types of out of scope lamps (aeronautical ground lights, aircraft lamps, high temperature lamps, infrared heat lamps and low power decorative lamps), as referenced in section 15.

Schedule 3 – Repeals

Schedule 3 formally repeals the *Greenhouse and Energy Minimum Standards (Incandescent Lamps for General Lighting Services) Determination 2016*.