

EXPLANATORY STATEMENT

Issued by the authority of the Assistant Minister to the Minister for Industry, Energy and Emissions
Reduction

Greenhouse and Energy Minimum Standards Act 2012

*Greenhouse and Energy Minimum Standards (Swimming Pool Pump-units)
Determination 2021*

Purpose

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 (Swimming Pool Pump-units) Determination 2021* (the Determination) introduces minimum energy performance standards (MEPS) and mandatory labelling for single-phase swimming pool pump-units, which are the most common type of pump that would be used for a residential swimming pool. Testing is to be conducted in accordance with the relevant energy efficiency standard, and the use of energy rating labels will make it easier for consumers to identify the pump that best meet their needs. These regulations will encourage the supply and purchase of more energy efficient pumps, thereby reducing greenhouse gas emissions and energy costs for consumers.

The new energy rating label provides information about the efficiency of a pump, including electricity consumption rates and an efficiency star rating in comparison to similar pumps. The design of the energy rating label for swimming pool pump-units incorporates a single 10-star arch to better inform installers, retailers and consumers about the energy efficiency of any particular pool pump, allowing for easier comprehension and comparison of energy efficiency between different models. The inclusion of a single 10-star arch in the energy rating label followed market research conducted by the Department, which indicated that a single arch and the inclusion of energy consumption in kWh per year would better support consumers to make a more informed decision about the energy efficiency of pool pump-units. This research informed the final label and icon design, as set out in the Determination.

A new energy rating icon is also introduced in the Determination. This icon is a simplified version of the energy rating label which allows it to be scaled to size, making it more flexible for use in advertising and on-line media while still providing the efficiency star rating for a specific pump.

Products regulated for energy efficiency must be registered with the GEMS Regulator before they can be sold or offered for supply in Australia. The new energy rating label will be automatically generated as part of the registration process, assisting pool pump suppliers with preparing the applicable labels for their products and making it easier to comply with the regulations.

Background

Pool pumps maintain the safety and clarity of pool water by circulating the water through a filter and a chlorinator or other sanitising system. The filter (including the hair and lint pot) removes material such as dirt, leaves and other solid debris, while the chlorinator or other sanitising system adds chemicals or other agents like disinfectants, oxidisers and algaecides to keep the water clean and safe for swimming.

Pool pump-units use a lot of electricity and represent an average of 18 per cent of the energy bills for households with a swimming pool. Given the electricity consumption and cost of operation of pool pump-units, there is scope to improve energy efficiency by regulating the sale of new pumps.

Market failures and consumer behaviour in the swimming pool pump market have limited the adoption of energy efficient pool pump-units and imposed higher than necessary costs on consumers and society more broadly. A pool pump is not a high priority for consumers when installing a swimming pool. The pump is just one component of a much larger construction project and the consequences of the choice of pump (including the operating costs) are often not apparent until well after the pool is built.

Further, most consumers do not know which pump would be the best for their circumstances and rely on advice from pool professionals (builders, retailers, maintenance and service people, etc). Professionals, however, may have little interest in pump efficiency and often have commercial relationships with major suppliers, so they may offer only a limited range of pumps.

Pool pump-units can also be subject to split incentives, where a pump is purchased by a party other than the end user (for example, a builder, landlord or property manager) who may prioritise the lowest upfront cost, over the long-term benefits of both energy and cost savings for the end user. For existing pools, replacement pumps are often an emergency purchase and consumers may not be in a position to research their options thoroughly - for example, if a pump breaks down at the start of summer.

Pool pump-units have long operating lives, which means that an inefficient pump may be consuming electricity for many years. Pool pumps are also used more in summer, when the pressure on the electricity grid is greater. This increased pressure amplifies demand for electricity generation, transmission and distribution, driving up energy costs for all consumers.

The most energy efficient pool pump-units use more advanced technology, in the form of variable speed motors. As such, they typically incur higher upfront costs and are therefore competing with cheaper to buy, but less efficient pumps on the market.

For these reasons, there is a role for government to encourage the selection of more energy efficient pool pump-units. Requiring swimming pool pumps to display an energy rating label and meet a MEPS requirement respects consumer choice and also supports the long term interests of individuals and the broader community.

Previously, the then-Department of Environment and Energy administered a voluntary program named the Voluntary Energy Rating Labelling Program (VERLP) for pool pump-units. The VERLP was intended as a transitional step to a mandatory labelling scheme and MEPS. Moving to mandatory regulations resolves the shortcomings of a voluntary program, in particular that only the most energy efficient pumps participated in the scheme and information on the energy consumption of pumps outside the VERLP was difficult to obtain. The VERLP was closed to new applications in December 2018 in anticipation of mandatory energy efficiency requirements.

The Determination introduces mandatory energy efficiency regulations for pool pump-units, giving effect to the policy intention and recommendations of the Decision Regulation Impact Statement (RIS). The Swimming Pool and Spa Association (SPASA) estimates that there are over 1.5 million residential swimming

pools in Australia, and that there will be approximately 2.2 million residential swimming pool pump-units in operation by 2030. Introducing government regulation will support the sale of more energy efficient pumps as the market grows, thereby reducing energy consumption and costs for households and cutting greenhouse gas emissions.

Authority

Under subsection 23(1) of the Act, the Minister may, by legislative instrument, make a determination (a Greenhouse and Energy Minimum Standards Determination or 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 means by which energy efficiency requirements (GEMS level requirements), energy labelling requirements (GEMS labelling requirements) 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 the 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 for a product class specified in a GEMS Determination are:

- 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) at a particular time;
- 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 of a kind specified in the regulations for the purposes of that paragraph; 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.

Incorporated material and copyright

The Determination references Australian test standards AS 5102.1:2019 and AS 2706-2003. These Australian test standards are incorporated by reference into this Determination, as they existed at the time the Instrument was made. This is because there is no power in the Greenhouse and Energy Minimum Standards Act 2012 (GEMS Act) that allows for the incorporation of documents as in force from time to time.

A list of standards incorporated by reference is included in section 4 of the Determination and the standards can be purchased from Standards Australia, currently through its licensed distributors SAI Global and Techstreet. Commercial users who have determined that they are likely to be covered by the Determination (which is possible from reading the Determination in isolation) would be expected to purchase the referenced standards in order to comply with the Determination.

Interested, non-commercial users can access referenced standards for free, through the Standards Australia Distribution and Licensing Policy Framework, published in November 2019. The Framework provides access to Australian Standards to the general public in physical library reading rooms for personal, domestic and household use. Standards Australia has also committed to funding and providing access by other means, anticipated to be delivered online and provided directly by Standards Australia, by no later than December 2023.

The Skills National Cabinet Reform Committee continues to work with Standards Australia on improving access to Australian standards. In its new Distribution and Licensing Policy Framework, published in November 2019, Standards Australia committed to striving to maximise the availability of public library reading room access, such that Australian Standards can be accessed by the general public in physical public library reading rooms for personal, domestic and household use. It also committed to funding and providing this type of access by other means, currently anticipated to be online provision directly by Standards Australia, by no later than December 2023. The Department continues to engage with Standards Australia while this work is underway, regarding options for non-commercial users to access standards incorporated in this Determination without charge. During this period, interested non-commercial users may be able to access standards without cost through the National Library of Australia, including via interlibrary loans. In addition, should requests to view standards be received from non-commercial users, the Department will work with the requesting party to provide appropriate access to any standard referenced in the Determination on a case-by-case basis.

This Determination contains a copyright notice that clarifies the permitted use of the Determination by those seeking to comply with their obligations under it.

Consultation

The Australian Government has worked extensively with industry and other stakeholders on the design of the new requirements for swimming pool pump-units. Industry stakeholders were also consulted on the other provisions of the Determination.

A consultation Regulation Impact Statement (RIS) was released to industry, consumers and interested stakeholders in November 2016. Four public consultation sessions were held in November and December 2016 in Melbourne, Perth, Sydney, and Brisbane, attended by 42 people. Four meetings were also held with individual suppliers. A total of 21 written submissions were received from a variety of manufacturers, industry groups, individuals and other stakeholders during the consultation RIS process. Following feedback on the Consultation RIS, a Technical Working Group was convened, which included industry representatives, regulators and independent experts who were tasked with determining the requirements for a test standard for the Australian market, and considering any potential technical alterations to the existing test standard. A Pool Industry Advisory Group comprised of senior pool industry representatives was also formed to consider the implications for the pool industry, if energy rating labels and MEPS were introduced for pool pump-units.

An exposure draft of the Determination was released for public consultation on 27 October 2020. The responses received raised only minor queries and focussed on the proposed commencement date that the regulations would become mandatory. (Other comments referred to noise level checks and the number of units to be tested as part of the registration process.) Based on this feedback, the date that the new

regulations would come into force was changed from 1 October 2021 to 1 October 2022, to allow pool pump suppliers sufficient time to comply with the new requirements.

Regulatory impact

A comprehensive Decision RIS which took into account stakeholder feedback was prepared as part of the process to develop the Determination. On 18 December 2018, the then Council of Australian Governments (COAG) Energy Council agreed to the preferred option in the Decision RIS. This preferred option was to introduce low level MEPS and mandatory labelling (policy option 3 in the decision RIS), establishing a single star rating benchmark for swimming pool pump-units.

The Office of Best Practice Regulation assessed the RIS as meeting COAG's best practice regulation requirements. The RIS is set out in full at Attachment C.

Compliance with legislative preconditions

Section 33 of the Act specifies that, before making a GEMS Determination, the Minister must obtain consent from participating jurisdictions to the terms of the Determination. This is the only statutory precondition specified in the Act that must be satisfied for the instrument to be lawfully made.

Consent from participating jurisdictions was sought, consistent with the methods established in the Inter-governmental Agreement for the GEMS Legislative Scheme, in November 2021. All participating jurisdictions gave their consent.

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

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 1 October 2022.

Section 3—Authority

This section identifies the sections of the Act which authorise the Minister to make the Determination.

Section 4—Definitions—standards referred to in this Determination

Section 4 lists the standards referred to in the Determination.

The test standards referenced in the Determination are:

- AS 5102.1-2019: *Australian Standard 5102.1:2019 Performance of household electrical appliances – Swimming pool pump-units, Part 1: Measurement of energy consumption and performance*; and
- AS 2706-2003: *Australian Standard 2706-2003 Numerical values – Rounding and interpretation of limiting values*.

The applicable version of each standard referenced in the Determination is the version that existed at the date the Determination was made (see subsection 7(2) of the Determination).

Section 5—Definitions—other expressions used in this Determination

This section sets out definitions for expressions used in the Determination.

The definitions in this section specify what a swimming pool pump is for the purposes of the Determination including outlining the characteristics and components of a pump. Definitions are also included for the different types of swimming pool and spa, to assist with determining whether a particular type of pump is in scope or not. These definitions should be referred to when looking at the scope of the Determination, for example, when reading Part 2 which lists the product classes that are covered by the Determination.

Section 6—Classification of pump-units – meaning of *single, two, multi and variable speed*

This section sets out the definitions of single speed, two speed, multi speed and variable speed pool pump-units, based on motor design. The definitions for the different motor designs have the same meaning as in AS 5102.1:2019.

Section 7—Applicable definitions and applicable versions of standards and documents incorporated into standards

Section 7 provides guidance for interpreting certain aspects of the Determination.

Subsection 7(1)

Subsection 7(1) sets out the order in which priority should be taken in the interpretation of relevant provision if there are any inconsistencies between the Act, the Determination and the standards.

Subsection 7(2)

The purpose of subsection 7(2) is to make clear that the applicable version of any standard referenced in the Determination, or other relevant document that is referred to in a standard, is the version that is current on the date that the Determination was made.

Section 8—Families 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.

Section 8 specifies that for two or more models to be in the same family of models they must be in the same product class, have the same energy performance and relevant physical characteristics, and rely on a single test report.

Subsection 8(3) makes it clear that a family must contain no more than ten models.

Section 9—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. Different penalty levels apply for certain offences under the Act, depending on whether a product is a category A product or a category B product for a product class.

Section 9 specifies that swimming pool pump-units covered by the Determination are category A products.

PART 2—PRODUCTS COVERED BY DETERMINATION

Section 10—Purpose of Part

This section indicates that this Part specifies the product classes that are and are not covered by the Determination, for the purposes of subsections 23(1) and (2) of the Act.

Section 11—Class of product that is covered by this Determination

Subsection 11(1) provides the classes of products covered by this Determination. It establishes that pump-units affected by the Determination are single-phase pool pump-units capable of a specific flow rate (equal to or greater than 120 litres per minute) and with an identified nameplate input power rating as outlined in Table 1.

Subsection 11(2) sets out classes of products that are not covered by the Determination. These include pump-units that do not meet the flow rate requirements or the nameplate input power specifications.

PART 3—GEMS LEVEL REQUIREMENTS

Division 1—Preliminary

Section 12—Purpose of Part

This section indicates that the purpose of Part 3 of the Determination is to specify GEMS level requirements (also known as minimum energy performance standard or MEPS levels) under section 25 of the Act for swimming pool pump-units covered by the Determination.

Section 13—Meaning of relevant MEPS level

This section defines the relevant MEPS level for a product, and provides the algorithm used to calculate the relevant MEPS level or Baseline Weighted Energy Factor (WEF).

Division 2—GEMS level requirements (MEPS levels)

Section 14—GEMS level requirements (MEPS levels) for a product

This section specifies GEMS level requirements for swimming pool pump-units covered by this Determination. The section requires that the WEF for a product must be equal to or greater than the relevant MEPS level. The WEF means the weighted average of the volume of water pumped in litres per watt hour of electrical energy consumed by the pump unit. The WEF must be calculated in accordance with clause 3.3 of AS 5102.1-2019.

Division 3 – Testing Requirements

Section 15—Testing requirements

Section 15 specifies the requirements that testing for the purposes of Part 3 should be conducted in accordance with sections 3 to 7 of AS 5102.1-2019 (with the exception of clause 5.9 of AS 5102.1-2019).

Section 16 – Rounding

This section states that figures should be rounded in accordance with AS2706-2003, meaning figures should be rounded and recorded to five significant figures.

PART 4—GEMS LABELLING REQUIREMENTS

Division 1—Preliminary

Section 17—Purpose of Part

This Part specifies GEMS labelling requirements for products covered by the Determination under paragraph 24(1)(b) and section 26 of the Act.

Section 18—Interpretation

This section provides definitions for terms used in the Determination which relate to labelling, including energy rating label, energy rating icon and GEMS retail premises.

Division 2—Requirements relating to energy labels

Subdivision 1—When energy labels are required or permitted

Section 19—When energy labels are required or permitted

Energy rating labelling is mandatory in some circumstances outlined in the Determination, and voluntary in other circumstances. Section 19 specifies the circumstances where products must, or are permitted to, display a label or icon.

Energy rating labels are required for pool pump-units that are covered by the Determination when sold through a GEMS retail premises.

The use of an energy rating label is only mandatory when the product is being supplied at a GEMS retail premises, requirements for the content and format of energy rating labels are provided in Schedule 1.

A simplified label, called an energy rating icon, can (but does not have to) be used in online or print advertisements for products which are identified in section 19. Requirements for the content and format of energy rating icons are provided in Schedule 2. The purpose of the energy rating icon is to offer a simpler, scalable version of the label that is more suitable for online or print advertising, where a small image is more likely to be used.

Section 20—Manner of communication of energy rating labels

Section 20 specifies how the energy rating label must accompany each unit of a product and how it must be displayed at retail premises.

Subsection 20(1) sets out the requirements for incorporating the energy rating label in a display at retail premises. For units that are packaged, the outside of each package must have a clearly visible energy rating label present as part of the packaging. Each unpackaged unit must display an energy rating label either as part of the unit itself, or attached to the unit.

Retail premises often make use of non-functioning display units or partial units of products as part of their in-store displays. These are subject to the same requirements for displaying the label as an unpackaged unit (see subsection 20(3)).

Subdivision 2—Calculation of amounts for energy rating label and energy rating icon

Section 21—Calculating Energy Consumption

Section 21 sets out the formula to calculate energy consumption, which is included on energy rating labels (see Schedule 1). The energy consumption under this section must be calculated in accordance with section 3 of AS 5102.1-2019.

Section 22—Calculating the star rating

Section 22 sets out how to calculate the star ratings for swimming pool pump-units. These star ratings appear on the energy rating labels.

Division 3—Other GEMS labelling requirements

Section 23—Advertising material

This section outlines the circumstances where the energy rating icon may be used for advertising purposes. It also specifies that the energy rating label must not be used for advertising purposes.

Division 4—Testing requirements

Section 24—Testing requirements

Section 24 provides that testing requirements for the purposes of this Part are those set out in sections 3 to 7 (except clause 5.9) of the test standard, AS 5102.1-2019.

Section 25 – Rounding

This section states that figures should be rounded and recorded to five significant figures in accordance with AS 2706-2003.

Division 5—Labelling requirements if this Determination is revoked

Section 26—Impact of replacement determination

Section 26 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 a pool pump to the new determination between the time it is made and when it comes into force (as allowed by section 44 of the Act), from needing to comply with the labelling requirements of both determinations.

PART 5—OTHER GEMS REQUIREMENTS

Division 1 - Preliminary

Section 27—Purpose of Part

This section indicates that Part 5 specifies other requirements for the purposes of section 24(2) of the Act other than than GEMS level requirements or GEMS labelling requirements for swimming pool pump-units covered by the Determination, in accordance with section 27 of the Act.

Division 2 – Testing requirements

Section 28—Other requirements – reporting sound testing results

Section 28 specifies that the results of sound testing must be included in an application for registration of a model or models of swimming pool pump-units covered by this Determination.

Section 29 – Other requirements – testing requirements

This section specifies that for paragraph 27(1)(e) of the Act, the sound testing requirements for the purposes of this Part are those specified in sections 3 to 7 of AS 5102.1-2019.

SCHEDULE 1—FORMAT OF ENERGY RATING LABEL

Section 1 - Interpretation

Section 1 of Schedule 1 provides signpost references for diagrams in this Schedule.

Section 2 – Meaning of certain details in the diagrams

Section 2 clarifies that the numbers, model details and star ratings used in the diagrams in the Schedule are included for illustrative purposes only.

Section 3 – The energy rating label

Section 3 identifies the default elements that must be included in an energy rating label, the objects and text that must be included in each element and how those must be arranged. Diagram 1 shows a default label.

Section 4 – Content of the star arch (element a)

Section 4 specifies the content of the star arch and how to set out the star ratings, including the requirement to show a single 10-star arch. This section is intended to demonstrate the star rating of a particular pool pump, so that it is possible to make a simple visual comparison about the energy efficiency of a particular pump model. The star rating is expressed by a numerical figure under the arch as well as by the star's position along the rating scale.

Sections 5-10 – Other content (elements b, c, d, e, f and g)

Sections 5 to 10 detail the content requirements for the other elements of the label including the placement of the Energy Rating strip; joint government and industry program text; where to include a pump's brand, model and classification; energy consumption text in kWh per year; the test standard; and the "compare models" website text.

Section 11 – Colours and fonts for the energy rating label

Section 11 specifies the colours and fonts that must be used on an energy rating label.

Section 12 – Physical layout requirements for the label

Section 12 specifies how the label must be laid out. As the label is a set size the spacing and size are defined in fixed units (millimetres).

SCHEDULE 2—FORMAT OF ENERGY RATING ICON

Section 1 - Interpretation

Section 1 of this Schedule provides signpost references for diagrams in this Schedule.

Section 2 – Meaning of certain details in the diagrams

Section 2 clarifies that the numbers and star ratings shown in the diagrams in the Schedule are for illustrative purposes only.

Section 3 – The energy rating icon

Section 3 shows the required format of an energy rating icon including the required elements and components.

Sections 4 and 5 – Content of the star arch and energy rating text

Sections 4 and 5 specify the content of the icon including the star arch and proportional measurements.

Section 6 – Colours and fonts for the energy rating icon

Section 6 specifies the colours and fonts that must be used in the icon.

Section 7 – Physical layout requirements for the icon

Section 7 specifies the physical layout of the icon. The icon may be of any size so long as it is proportional to the dimensions of the icon in Diagram 7 of Schedule 2. This reflects the fact that it may reproduced in a range of media.

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 (Swimming Pool Pump-units) Determination 2021

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 (Swimming Pool Pump-units) Determination 2021* prescribes matters relating to minimum energy efficiency and energy labelling requirements for swimming pool pump-units 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 the energy use 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 Tim Wilson MP
Assistant Minister to the Minister for Industry, Energy and Emissions Reduction