Energy Security Safeguard

Energy

Department of Climate Change, Energy, the Environment and Water

Energy Savings Scheme

2023 Rule Change
May 2024 update

May 2024

NSW GOVERNMENT

Acknowledgment of Country

The Department of Climate Change, Energy, the Environment and Water acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and we show our respect for Elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

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Update to the ESS Rule

The Energy Savings Scheme (ESS) is part of the NSW Energy Security Safeguard (the Safeguard). It reduces electricity consumption in NSW by creating financial incentives for households and businesses to invest in energy savings projects. Energy savings are achieved by installing, modifying, removing, or replacing equipment with energy efficient alternatives.

The ESS places an obligation on NSW energy retailers and other liable parties to surrender Energy Savings Certificates (ESCs) each year. These certificates are created by Accredited Certificate Providers (ACPs) when energy users undertake eligible energy savings activities.

The *Electricity Supply Act 1995* (the Act) allows the Minister for Energy and Climate Change to approve rules that set out how ESCs can be created, including the eligibility of activities and the methods used for calculating energy savings. These rules are published in a document called the *Energy Savings Scheme Rule of 2009* (the ESS Rule).

Reasons for the May 2024 rule update

We are updating the ESS Rule to align it with upcoming changes in the Peak Demand Reduction Scheme (PDRS) Rule. The changes ensure consistency between the ESS and PDRS.

Updates to the pool pump activity and the suite of Building Code of Australia (BCA) Climate Zone changes will be mirrored in the PDRS.

Changes to the refrigerated display cabinet activity includes suspending F1.1 (install a new high efficiency refrigerated cabinet), removes the eligibility of 4-sided refrigerated cabinets and clarifies that the activity only supports replacement of the same type and class of refrigerators and freezers.

This position paper explains changes to the ESS Rule published in the NSW Government Gazette in May 2024 and presents the NSW Government’s position on those changes.

Summary of changes

The new rule comes into effect on 19 June 2024 as summarised in Table 1.

Table 1: summary of changes to the ESS Rule

Rule Clause/Method	Changes starting 19 June 2024
Activity Definition D5 – Install a new high efficiency pool pump or replace an existing pool pump with a high efficiency pool pump	Update the activity to allow for the installation of a high efficiency pool pump or replacement of an existing pool pump with a high efficiency pool pump. Update the activity to include a new minimum $200 (ex GST) co-payment for each pool pump installed. Update the energy savings methodology to: • refer to star ratings as recorded in the Greenhouse and Energy Minimum Standards (GEMS) Registry and defined by the GEMS Determination • the savings factors calculations, baseline and minimum star rating • require GEMS registration and utilise the updated AS 5102.1 and GEMS Determination definitions of star rating, weighted energy factor and project annual energy consumption • to align the equipment requirements with the scope of the GEMS Determination • require a minimum star rating of 4 stars • the Deemed Activity Electricity Savings equation.
Activity Definition F1.1 - Install a new high efficiency refrigerated cabinet	Suspend the activity. F1.1 will commence on a date notified by the Minister responsible for the Act by notice published in the NSW Government Gazette.
Activity Definitions: • F1.1 – Install a new high efficiency refrigerated cabinet • F1.2 – Replace an existing refrigerated display cabinet	Update the energy savings methodology to: • amend the activities to exclude 4-sided refrigerated display cabinets as eligible products • remove Total Display Area considerations from the calculation of lifetime, resulting in an 8 year lifetime for Class 7, 8 and 11 equipment.
Activity Definition F1.2 – Replace an existing refrigerated display cabinet	Clarify that the energy savings calculation in F1.1 is for replacing the same product type and class as defined in Table F1.2.1.

Rule Clause/Method	Changes starting 19 June 2024
Activity Definition F4 – Install a new high efficiency air conditioner or replace an existing air conditioner with a high efficiency air conditioner	Update the energy savings methodology in Equation F4.1 to remove reference to the zoned energy rating label.
Activity Definitions: • F16 – Replace existing hot water boilers or water heaters with air source heat pump water heater systems • F17 – Install new air source heat pump water heater systems	Align treatment of climate zones with the recent changes to Activity Definitions D17-D21 by using the Heat Pump Climate Zones HP-3 and HP-5 without reference to Building Code of Australia (BCA) Climate Zones.
Administrative change to BCA Climate Zones	Update the definition of BCA Climate Zone in clause 10 by: • referring directly to the climate zone used in the BCA as updated from time to time • replacing the list of climate zones by postcode in Table A26 with a table linking heat pump climate zones used in AS/NZS 4234 with BCA Climate zones to simplify administration.
General administrative updates (not discussed further below)	Updated definitions in this rule change: • align the definition of Small Business Site between to match the PDRS • remove the redundant definition of Installation Requirements and replace it with the existing definition of Implementation Requirements throughout the rule.

Timing and commencement

This ESS Rule commences on 19 June 2024 and replaces and updates the previous rule, gazetted on 19 December 2023. It includes a transitional clause clarifying that the *Energy Savings Scheme (Amendment No.1) Rule 2023* applies where an implementation date is before 19 June 2024. As the *Energy Savings Scheme (Amendment No.2) Rule 2023* never commenced, it is replaced by this latest rule revision.

Rule change details

Pool pumps

This ESS Rule change updates Activity Definition D5 for pool pumps to include the new GEMS swimming pool pump-unit determination, allow for a new upgrade type (installation of a high efficiency pool pump), and add a minimum co-payment. This change will:

- ensure that the energy savings awarded for pool pump upgrades under the ESS and PDRS are appropriate
- align the ESS and proposed PDRS pool pump activity definitions
- align with the Victorian Energy Upgrades program.

The change aligns ESS and PDRS incentives for replacing an existing pool pump with a high efficiency pool pump. The PDRS Rule 2 public consultation held in November 2023 provides more details and highlighted the ESS rule changes were likely to happen at the same time.

Activity Definition D5 in the ESS Rule has been updated to:

- allow for the installation of a high efficiency pool pump or the replacement of an existing pool pump with a high efficiency pool pump.
- refer to star ratings recorded in the GEMS Registry and defined by the GEMS Determination, rather than referring to AS 5102.2 which has been withdrawn
- align the savings factors calculations, baseline and minimum star rating with the new star rating algorithm and updated AS 5102.1 test method
- require GEMS registration and use the updated AS 5102.1 and GEMS Determination definitions of star rating, weighted energy factor and project annual energy consumption
- align the equipment requirements with the scope of the GEMS Determination
- require a minimum star rating of 4 stars, which eliminates single and two speed pumps and the lowest performing multi-speed or variable speed pump (1 model). The remaining 122 multi-speed and variable-speed pumps will be eligible
- add a minimum $200 (ex GST) co-payment for each pool pump installed.

The new method to calculate activity energy savings reflects the increase in energy consumption and savings potential with increased pump size.

The activity energy savings are calculated through the equation:

Deemed Activity Electricity Savings = ($PAEC_{baseline}$ – PAEC) x Lifetime / 1000

where:

- $PAEC_{baseline}$, in kWh, is defined by nameplate input power in Table 2
- Projected Annual Energy Consumption (PAEC), in kWh/year, is the new or replacement pump's project annual energy consumption as recorded in the GEMS Registry
- Lifetime is 10 years.

Table 2: baseline PAEC by nameplate input power category

Nameplate Input Power (W)	$PAEC_{baseline}$ (kWh/year)
<= 1000	1300
>1000 and <=1500	1500
>1500 and <=2000	1700
>2000	2000

The current ESS lifetime for pool pumps is 12 years. This will be reduced to 10 years to align with the PDRS and ATO Taxation Ruling TR 2022/1 Table A for swimming pool pumps in residential properties.

The wording of the activity definitions is updated to avoid using "New End-User Equipment" when referring to replacement end-user equipment. This ensures consistency with other activity definitions, and the definition of new end-user equipment under the ESS Rule.

Refrigerated cabinets

There are two upgrade types under the Refrigerated Display Cabinet (RDC) activity:

- installing a new high efficiency RDC (Activity F1.1)
- replacing an existing RDC (Activity F1.2).

Changes to Activity Definitions F1.1 and F1.2 address concerns with the suitability of 4-sided display cabinets by:

- suspending Activity Definition F1.1 until a date notified by the Minister responsible for the Act by notice published in the NSW Government Gazette.
- clarifying the Equipment Requirements in Activity Definition F1.2 that the activity is replacing an existing RDC with like-for-like equipment, for example, a refrigerator product class with a refrigerator or a freezer product class with a freezer.

- removing 4-sided RDC eligibility aligned with similar changes to the Victorian Energy Upgrades (VEU) program
- removing Total Display Area from the calculation of lifetime.

These changes are an immediate solution to emerging issues. The next ESS Rule change consultation will include further consideration for RDC activities and their ongoing role in the scheme.

Aligning product types

The intention of Activity F1.2 is to enable replacement of like-for-like equipment, for example, a refrigerator product class with a refrigerator or a freezer product class with a freezer.

IPART guidance issued for IHEAB & Refrigerated Cabinet Changes from 1 August 2022 clarified this intention:

> *A replacement installation occurs where the new refrigerated cabinet is installed to replace existing less efficient equipment of the same type, function, output, or service previously in its place. This would typically result in the existing equipment becoming redundant or underutilised. The replacement refrigerated cabinet can increase refrigerated storage or display capacity but must not reduce production or service levels (including safety).*

The change clarifies the Activity Definition F1.2 Equipment Requirements for replacing an existing RDC in the ESS Rule to ensure the ESS Rule reflects the activity intent and supports IPART's guidance.

Upcoming stakeholder consultation will consider restricting the replacement of equipment by temperature class.

4-sided display cabinets

The ESS and VEU include similar energy saving activities and try to harmonise where possible. This makes things easier for certificate providers operating in both states and help to avoid cross-border issues where equipment no longer eligible in one state scheme is eligible in another.

Recent decisions in the VEU to exclude refrigerated cabinets with 4 or more sides has prompted complimentary changes in the ESS. The VEU review found that "feedback from industry indicates that multi-sided (glass) products installed by accredited providers under the program were of poor quality and may have used loopholes in test standards to evaluate energy efficiency, supporting the exclusion of these products".[1]

Therefore, display cabinets with 4 or more sides have been excluded from the ESS.

[1] https://engage.vic.gov.au/victorian-energy-upgrades-updates-refrigerated-display-cabinets

Simplifying lifetime calculations

Energy savings calculations for new and replacement refrigerated display cabinets were split to give an extended lifetime, for products in classes 7, 8 and 11, where total display areas was more than 3.3m^2. Modelling for the activities considered the display area of a single face of the display cabinet. With the rise of multi-sided cabinets with more than one side, the display area calculation is no longer appropriate and has been removed.

Air conditioning for business

This change clarifies the treatment of energy savings calculations in Activity Definition F4.

Energy saving calculations for air conditioners in Equation F4.1 require Cooling Annual Energy Use and Heating Annual Energy Use values. The existing Rule wording indicates for new or replacement end-user equipment, values should first be taken from the equipment's Zoned Energy Rating label (ZERL), which uses residential values. If the new or replacement end-user equipment does not have a ZERL, then commercial tcec and thec values in the GEMS Registry should be used. Using residential values from the ZERL instead of commercial values in the GEMS Registry results in fewer energy savings certificates.

The change to F4 removes reference to the ZERL in Equation F4.1.

Heat pump hot water for business

This change aligns Activity Definitions F16 and F17 for heat pump water heater systems with a simplified approach to defining climate zones.

NSW has two climate zones for heat pump water heater systems listed in AS/NZS 4234:2021:

- HP5-Au for alpine and cold areas
- HP3-Au for the rest of the state.

These two zones are used for product approvals and for selecting calculation inputs.

Recent changes to the residential hot water Activity Definitions D17-D21 simplified use of climate zones in the rule. This was done by removing the requirement to identify a BCA Climate Zone and use that zone to specify the heat pump climate zone.

Administrative changes to the BCA climate zones

This change simplifies BCA climate zones.

There are postcodes in Table A26 (BCA Climate Zones by postcode) in the ESS Rule, which are inconsistent with BCA climate zones published on the Australian Building Codes Board's (ABCB) website (https://www.abcb.gov.au/resources/climate-zone-map).

The BCA climate zones follow local government boundaries and not postcodes. This creates climate zone discrepancies between the ESS Rule table A26 and BCA climate zone map, as some postcodes cover multiple climate zones. As a result, treatment of BCA climate zones in the ESS Rule has been updated to:

- redefine clause 10.1 so that "**BCA Climate Zone**" means a climate zone under the BCA (as in force and updated from time to time).
- update table A26 to link the heat pump climate zones in AS/NZS 4234 to the BCA climate zones.

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For more information

To learn more about the Energy Security Safeguard, please visit our website or contact:

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