Department of Climate Change,
Energy, the Environment and Water
(DCCEEW)

Energy Security Safeguard

Energy Savings Scheme

Rule and Regulation Change 2025

February 2025

NSW GOVERNMENT

Acknowledgment of Country

Department of Climate Change, Energy, the Environment and Water acknowledges the traditional custodians of the land and pays respect to Elders past, present and future.

We recognise Australian Aboriginal and Torres Strait Islander peoples' unique cultural and spiritual relationships to place and their rich contribution to society.

Artist and designer Nikita Ridgeway from Aboriginal design agency – Boss Lady Creative Designs, created the People and Community symbol.

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Energy Savings Scheme: Rule and Regulation Change 2025

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Contents

Foreword

This consultation paper explains the intent and detail behind proposed changes to the NSW Energy Savings Scheme (ESS) Rule and Regulation and seeks stakeholder feedback. The changes are part of the NSW Government's commitment to continuous improvement of the ESS. The NSW Government is seeking input from stakeholders to ensure the proposed ESS Rule and Regulation changes in this consultation paper are appropriate and reflect industry best practices and Australian Standards.

This paper assumes prior knowledge of the ESS and legislative and administrative instruments. The Independent Pricing and Regulatory Tribunal (IPART) is the scheme administrator. More information about the operation and administration of the ESS can be found on IPART's website. Information about previous amendments to the ESS, including consultation papers and stakeholder responses is available on our website.

Call for submissions

The release of this paper starts the consultation period. The NSW Government invites submissions from all interested parties on changes set out in this consultation paper. The closing date for written submissions is 5 pm AEDT on Friday 4 April 2025.

Please send your submission to:

> Terry Niemeier, Director, Program and Market Development, Energy Security Safeguard
>
> NSW Department of Climate Change, Energy, the Environment and Water
>
> sustainability@environment.nsw.gov.au

Publication of submissions

The NSW Government is committed to an open and transparent process. All consultation responses and submissions will be made publicly available. Written submissions should be provided as PDF or Word document files that can be published on our website.

If you wish for your written submission to remain confidential, please clearly state this in your submission, and only your organisation's name will be published. Personal details from submissions made by individuals will be removed.

Please be aware that even if you state that you do not wish certain information to be published, there may be legal circumstances that require the NSW Government to release that information (for example, under the *Government Information (Public Access) Act 2009*).

Part 1. Introduction

The NSW Energy Savings Scheme (ESS) reduces energy consumption in NSW by creating financial incentives for investment in energy savings projects. Energy savings are achieved by installing, modifying, removing or replacing end-user equipment.

The ESS requires NSW energy retailers and other liable parties to obtain and surrender Energy Savings Certificates (ESCs) each year to meet energy-saving targets. Accredited Certificate Providers (ACPs) create ESCs when energy users undertake eligible energy savings activities, such as installing, improving or replacing energy saving equipment and appliances in NSW households and businesses.

The *Electricity Supply Act 1995* (the Act) allows the NSW Minister for Energy to approve the Rule that sets out how ESCs can be created, including the eligibility of participants and activities and methods for calculating energy savings.

1.1. Why are the ESS Rule and Regulation updated?

The *Energy Savings Scheme Rule of 2009* (ESS Rule) and *Electricity Supply (General) Regulation 2014* (ESS Regulation) are updated periodically to maintain their effectiveness. Updates can complement changes to building and equipment standards, add new technologies, and make other enhancements to maintain their integrity and/or reduce transaction costs. This update aligns the ESS Rule and Regulation with the objectives of the NSW Energy Security Safeguard (the Safeguard).

1.2. Proposed 2025 ESS Rule changes

Table 1 lists the proposed changes for the 2025 ESS Rule which are discussed in this paper.

No.	Item	Proposal
1.	Commercial Lighting Energy Savings Formula: - Clause 9.4	Discontinue the Commercial Lighting Energy Savings Formula (CLESF) calculation method 6 months after the amended Rule is gazetted.
2.	Gas boiler installation/replacement activities: - Activity Definitions D11, D12, D21, F8 and F9 - Clauses 7A and 8	Discontinue gas boiler installation/replacement activities.
3.	Heat pump hot water activities: - Activity Definitions D17, D19, F16 and F17 in the ESS Rule	Require ACPs to provide customers with a minimum 5-year whole-of-system product warranty for all heat pump hot water systems eligible for ESS incentives.
4.	Refrigerated display cabinet: - Activity Definition F1.2	Suspend eligibility for ESS incentives of Integral Refrigerated Display Cabinets under F1.2 – Replace an existing refrigerated display cabinet.
5.	Sale of New Appliances - Clause 9.3	Discontinue the Sale of New Appliances (SONA) calculation method 3 months after the amended Rule is gazetted.
6.	NABERS baseline - Clause 8.8.1 - Tables A20 and A21 in Schedule A	Enable NABERS baseline method for schools and retail stores.

Table 1 Proposed changes to the 2025 ESS Rule (Refer to Part 3 for more details)

1.3. Proposed 2025 ESS Regulation change

As part of this consultation, the NSW Government is seeking feedback on the following proposed change in the *Electricity Supply (General) Regulation 2014* (Table 2).

No.	Item	Proposal
7.	Certificate conversion factors in clause 37A	Update the certificate conversion factors (other than electricity)

Table 2 Proposed change to the *Electricity Supply (General) Regulation 2014* (Refer to Part 4 for more details)

The NSW Government does not typically consult on Rule and Regulation changes simultaneously. However, this proposed Regulation update is included in this consultation because it:

- closely relates to and impacts the ESS Rule (Proposal 2)
- simplifies the consultation process by avoiding separate consultations.

The next steps for the Rule and Regulation changes include:

1. review and consideration of submissions to this consultation
2. publication of the amended ESS Rule in the NSW Government gazette, and publication of a position paper detailing the final changes
3. publication of the updated ESS Regulation.

1.4. Guide to the consultation for the 2025 ESS Rule and Regulation changes

The NSW Government is seeking input to ensure the proposed changes are appropriate and reflect industry best practices and Australian Standards. Consultation questions provide an opportunity for input on the proposed changes.

Please be specific in your responses to the consultation questions, highlight if you agree or disagree with the proposal and provide evidence to support your answer where available. Specific and substantiated responses will help the NSW Government make informed decisions on finalising these proposals.

Where relevant, preliminary stakeholder feedback is embedded in the proposed changes.

A full list of questions is available in Appendix A.

1.5. Commencement dates

The ESS Rule is expected to be gazetted in mid-2025 and will come into effect at a later date (TBC). For some proposals, the NSW Government is proposing a transition period. Details of the transition period are provided in the respective proposals set out in this paper.

The NSW Government intends to update the ESS Regulation in mid-2025.

Part 2. Proposals for ESS Rule Change

2.1. Commercial Lighting Energy Savings Formula

Refer to ESS Rule: clause 9.4

Proposal 1:

Discontinue the Commercial Lighting Energy Savings Formula (CLESF) calculation method 6 months after the amended Rule is gazetted.

The ESS has incentivised energy-efficient lighting since its inception in 2009. A study commissioned by the NSW Government in 2017 found that ESS incentives have brought forward lighting retrofit projects 7 to 10 years earlier than they would otherwise have occurred[1].

The ESS has delivered energy-efficient lighting retrofits to about 34,000 business sites in NSW between 2011 and 2023. Commercial lighting upgrades made up around 30% of the ESS Certificates (ESCs) created in 2023. Between 2011 and 2016, these retrofit projects were estimated to have provided $671 million of economic benefits to NSW and a combined $1.6 billion in avoided energy bill costs for NSW businesses.

The ESS's success in driving the market transformation of energy-efficient lighting in NSW has contributed to the extension of the ESS to 2050.

This section provides the rationale and further information on the proposal to discontinue the CLESF calculation method, and the relevant consultation questions.

LEDs have reached market maturity

Lamp import data shows that imports of fluorescent lights have decreased by 85% and halogen downlights by 93% from 2010 to 2022.[2] The data also revealed that LED lamp imports nearly doubled between 2017 and 2021. Lamp import data serves as a strong proxy for lamp sales and a strong indicator of lighting market trends in Australia.

[1] Common Capital Pty Ltd (2017)
[2] Lighting Council Australia (2024)

Additionally, data from the Commercial Building Disclosure Scheme, which mandates tenancy lighting assessments for office spaces of 1,000m^2 or more at the point of sale or lease, shows that lighting power per unit office floor area in NSW and Victoria has decreased by more than 30% from 2013 to 2021. States without white certificate schemes like ESCs, such as Queensland, have also shown a similar downward trend.

Niche and mainstream lighting suppliers interviewed in the study commissioned by the NSW Government in 2017 indicated that the quality of LEDs has significantly improved since the early 2010's. Data from the US and Europe shows that LED prices have fallen by at least 50% since then.[3]

Regulatory changes also driving LED uptake

Other international and national regulatory changes are also contributing to the transition towards LED lighting. As a signatory to the Minamata Convention on Mercury,[4] Australia has prohibited the import, export and manufacture of mercury lamps and certain compact fluorescent lamps. The incentives for replacing these legacy lamps no longer represent additional savings.

The National Construction Code 2022, effective in NSW from 1 October 2023, requires an illumination power density of not exceeding 4.5 W/m2 for new office spaces. This requirement not only drives further LED uptake but also reduces the demand for lighting upgrades in the future.

The Victorian Energy Upgrades program has phased out lighting incentives

The Victorian Energy Upgrades (VEU) program phased out incentives for lighting upgrades from 1 February 2023. This proposal aligns the ESS with the VEU.

LEDs are reaching maximum luminous efficacy

The speed of improvements in luminous efficacy is expected to slow down as conventional LED technology approaches practical limits. LED products will instead focus on features such as trimming and dimming measures, or solid-state products with a higher performance range. Product design will incorporate more advanced sensing and control features in the form of 'smart' lighting.[5]

[3] Common Capital Pty Ltd (2017)
[4] Australian Government (2024)
[5] Victorian Department of Environment, Land, Water and Planning (2019)

Discontinuing the Commercial Lighting Energy Savings Formula (CLESF)

In response to the market transformation of LEDs, the NSW Government proposes to discontinue the CLESF calculation method. Incentives for activities that will likely occur without the scheme, do not encourage additional energy savings. Discontinuing the CLESF will help ensure that the ESS supports activities that better support scheme objectives and ensure better value for money for liable parties and NSW electricity ratepayers.

Other lighting upgrade activities and methods remain unchanged

There is limited data pointing towards the level of maturity of LEDs in the residential sector and in lighting for roads and public spaces. ESS implementation data from January 2021 to August 2024 shows that the number of ESCs registered under the CLESF is up to 6 times as many as those registered by lighting upgrade activities for the Home Energy Efficiency Retrofits (HEER). At this stage, the NSW Government does not propose any changes to lighting activities in the residential sector. The Public Lighting Energy Savings Formula calculation method under clause 9.4A will also remain unchanged.

Commercial lighting projects will continue to be eligible for ESS incentives under the Project Impact Assessment with Measurement and Verification (PIAM&V) method and the Metered Baseline Method (MBM). This is to ensure that the ESS continues to incentivise ambitious energy-efficient lighting activities like:

1. installation of solid-state lighting products with the highest performance range available in the market (also known as ‘super LEDs’)
2. trimming and dimming measures.

The following clauses of the ESS Rule will remain unchanged:

- Clause 7A.21, which sets out the additional requirements for lighting upgrades under the Project Impact Assessment Method.
- Clause 7A.21A, which sets out the acceptable end-user equipment for lighting upgrades under the PIAM&V Method.

The NSW Government will continue to monitor the number of lighting upgrade projects under the PIAM&V and MBM methods to consider their eligibility for ESS incentives in future Rule changes.

Managing market impact through a transition period

This proposed change can have a considerable impact on commercial lighting projects seeking ESCs. The NSW Government proposes a transition period of 6 months for businesses to complete existing projects and prepare for the change. This means that implementations under the CLESF activity will be ineligible for ESS incentives 6 months after the amended Rule is gazetted.

Please provide feedback on the following questions

Be specific in your responses, highlight if you agree or disagree with the proposal and provide evidence to support your answer where available.

- Question 1: What are your views on the proposal of discontinuing the CLESF?
- Question 2: What are your views on the transition period of 6 months after the amended Rule is gazetted?
- Question 3: What are your views on keeping other lighting upgrade activities (public lighting, HEER) and methods (PIAM&V method and MBM) unchanged? Do you have any comments on the market maturity of LEDs in the residential and public sectors?

2.2. Gas boiler installation/replacement activities

Refer to ESS rule: Activity Definitions D11, D12, D21, F8, F9 and clauses 7A and 8

Proposal 2:

Discontinue gas boiler installation/replacement activities.

This section provides the rationale for this proposal, further information and consultation questions.

Unintended consequences of updating certificate conversion factors

In Part 4, the NSW Government proposes to update the existing certificate conversion factors for all fuels. The proposed update may risk incentivising investments in new gas boilers, which may create stranded assets in the future. This proposal will ensure that the NSW Government helps to mitigate any such unintended consequences.

Mitigating the unintended consequences of incentivising investments in new gas boilers also align with the NSW Government's commitment in the NSW Consumer Energy Strategy to support the cost savings and emissions benefits from electrification.

Low impact on deemed gas boiler installation/replacement activities

Table 3 shows the number of implementations for each deemed boiler installation/replacement activity since 2021. The proposal is going to have little impact on

deemed gas boiler installation and replacement activities, given that there were only 10 implementations under Activity definitions D11, D12, D21, F8 and F9 since 2021.

Activity	Description	Number of implementations since 2021
D11	Replace an existing gas-fired water heater with a high-efficiency gas-fired water heater.	No implementations
D12	Install a high-efficiency gas space heater or replace an existing gas space heater with a high-efficiency gas space heater.	No implementations
D21	Replace an existing gas water heater with a solar (gas-boosted) water heater.	3
F8	Replace existing gas-fired steam boiler with a new high efficiency gas-fired steam boiler.	6
F9	Replace existing gas-fired hot water boiler or gas-fired water heater with a new high-efficiency gas fired hot water boiler or a new gas-fired water heater.	1
Total from activities D11, D12, D21, F8 and F9.		10

Table 3 Implementations of deemed boiler installation or replacement activities since 2021

Limited impact on measurement and verification methods

Targeted consultation with stakeholders suggested that:

- the size and nature of ESS incentives through PIAM&V have not typically driven the installation of efficient gas boilers
- the ESS has incentivised a relatively small number of gas boiler replacements in the recent past, through PIAM&V
- only a small number of gas boiler replacements are currently ongoing or in the pipeline, that would seek ESS incentives.

Stakeholders also noted that external factors like the ESC price and availability of suitable electric alternatives also impact the feasibility of gas boilers.

Discontinuing incentives for gas boiler installation and replacements

Based on the above reasons, the NSW Government proposes to discontinue all current incentives for gas boiler installations and replacements. This includes:

- discontinuing deemed activities: D11, D12, D21, F8 and F9
- making gas boiler replacements/installations ineligible for ESS incentives under PIAM&V and MBM.

Note that gas efficiency improvements of existing boilers, such as activities F10 to F15 under the Installation of High Efficiency Appliances for Business (IHEAB) method, will remain eligible for ESS incentives.

Please provide feedback on the following questions

Be specific in your responses, highlight if you agree or disagree with the proposal and provide evidence to support your answer where available.

- Question 4: What are your views on removing deemed gas-based activities D11, D12, D21, F8 and F9 and gas boiler installations/replacements under PIAM&V and MBM?
- Question 5: What are your views on the implementation timeframe of this proposal (which is at the time the Rule comes in effect in mid-2025)?
- Question 6: Do you support removing the eligibility for ESS incentives under performance efficiency improvements of gas boilers in the future?

2.3. Heat pump hot water system activities: warranty period requirements

Refer to ESS rule: Activity Definitions D17, D19, F16 and F17.

Proposal 3:

Require ACPs to provide customers with a minimum 5-year whole-of-system product warranty for all heat pump hot water systems eligible for ESS incentives.

Currently, there are no warranty requirements for activities relating to hot water systems under HEER (D17 and D19) and IHEAB (F16 and F17). Typical warranty periods offered on parts and labour, including electronics are often relatively low at 1 to 2 years, compared to warranty periods on cylinders and compressors of 5 to7 years. This section provides the rationale for this proposal, further information and consultation questions.

Addressing concerns of early failures

Consumers have highlighted concerns about early equipment failures resulting in costly full product replacements paid for by the user. In some cases, such failures could result in replacement with less-efficient electric resistance water heaters to reduce the cost. This would result in increased energy consumption which is inconsistent with the intent of the ESS.

This proposal aims to increase consumer confidence that the purchased equipment meets a certain quality and ensures that consumers are protected in case of any early equipment failures.

Aligning with the proposed minimum warranty requirements from VEU

In April 2024 the Victorian Government consulted on a proposal to implement minimum product and installation warranty requirements for heat pump hot water systems installed under the VEU program.[6] Following analysis and review of the submissions, the Victorian Government will introduce a 5-year minimum product warranty requirement for heat pump water heaters up to 700 litres from 31 March 2025. They will re-consider the introduction of installation warranties at a future date.

This proposal under the ESS aims to align with the VEU by requiring ACPs to provide a minimum 5-year warranty requirement on all heat pump hot water systems.

[6] Victorian Department of Energy, Environment and Climate Action (2024)

Including warranty period requirements in the Rule

Based on the above reasons, the NSW Government proposes to update the equipment requirements for all heat pump hot water system activities in the Rule to include "the new or replacement End-User Equipment must have a whole-of-system product warranty on all major components of at least 5 years."

Please provide feedback on the following questions

Be specific in your responses, highlight if you agree or disagree with the proposal and provide evidence to support your answer where available.

- Question 7: What are your views on requiring ACPs to provide customers with a minimum 5-year whole-of-system product warranty for all eligible systems?
- Question 8: What are your views on including the requirement for ACPs to also provide a minimum 5-year installation warranty?

2.4. Refrigerated display cabinet: Activity Definition F1.2

Refer to ESS rule: Activity Definition F1.2.

Proposal 4:

Suspend eligibility for ESS incentives of Integral Refrigerated Display Cabinets under F1.2 – Replace an existing refrigerated display cabinet.

This section provides the rationale for this proposal, further information and consultation questions.

Maintaining scheme integrity

In May 2024, the NSW Government suspended F1.1 (installation of new Refrigerated Display Cabinets). This was in response to the Independent Pricing and Regulatory Tribunal of NSW (IPART) and the VEU having identified issues around modelling of savings, quality of products and suitability of installations. The NSW Government notes that similar concerns have also been raised for installations under F1.2, specifically for Integral Refrigerated Display Cabinets. This proposal is a precaution to mitigate the risks of these concerns and maintain the integrity of the scheme.

Future Rule changes will include updates for high-efficiency refrigerated cabinets

As part of future Rule changes, the NSW Government will further review and update activities related to high-efficiency refrigerated cabinets (F1.1 and F1.2). This may include, but is not limited to:

- reviewing key issues related to refrigerated cabinets that are impacting scheme integrity
- reviewing opportunities to re-activate certain installation activities that drive energy savings under Activity Definition F1.1, which is currently suspended
- reviewing the eligibility of Product Types and Product Classes for ESS incentives.

Please provide feedback on the following questions

Be specific in your responses, highlight if you agree or disagree with the proposal and provide evidence to support your answer where available.

- Question 9: What are your views on discontinuing the eligibility of integral refrigerated display cabinets for ESS incentives, under F1.2?
- Question 10: Are there any other proposals for how the NSW Government can address the issues highlighted above, through the ESS Rule?

2.5. Sale of New Appliances

Refer to ESS rule: clause 9.3 and Activity Definitions in Schedule B

Proposal 5:

Discontinue the Sale of New Appliances (SONA) calculation method 3 months after the amended Rule is gazetted.

Under the Sale of New Appliances (SONA) calculation method, the ESS provides incentives for energy-efficient washing machines, clothes dryers, dishwashers, refrigerators, freezers and televisions. The aim of the SONA calculation method is to provide an incentive for retailers to introduce measures to increase their sales of high-efficiency appliances. This section provides the rationale for this proposal, further information and consultation questions.

SONA method not driving additional energy savings

The NSW Government commissioned a study in 2018 to review activities under SONA. The study produced these key findings:

- While retailers were creating ESCs for selling high efficiency appliances, sales of these appliances are not different to what they would be without the ESS.
- Retailers have not changed their sales approach to encourage purchases of higher energy-efficient appliances. Floor staff involved either were not aware of the ESS or could not readily identify the level of incentives applicable to the activities eligible under the ESS. Retailers also do not have any NSW-specific sales offers, so SONA does not really impact their marketing and sales tactics at the shop front.
- The energy savings potential for clothes washers, televisions, refrigerators, freezers and dishwashers is modest because the overall efficiency of these appliances has increased in general.

These key findings from the study suggest that the incentives provided under the SONA calculation method do not drive consumer decisions towards higher energy-efficient appliances.

In response to the review findings, the NSW Government amended the eligibility requirements for all appliance categories incentivised through the SONA method as part of the ESS Rule change in 2020. The amendment aimed to ensure that only the most efficient appliances were eligible to ESS incentives. The NSW Government also committed to an ongoing review of the SONA method to ensure its effectiveness.

Discontinuing SONA

In the absence of new data supporting that the SONA calculation method has been driving consumer decisions towards higher energy-efficient appliances, the NSW Government proposes discontinuing the calculation method. Discontinuing SONA will help ensure that the ESS supports activities that better support scheme objectives and ensure better value for money for liable parties and NSW electricity bill payers.

To allow stakeholders time to adjust to the changes, the NSW Government proposes that implementations under the SONA calculation method will be ineligible for ESS incentives 3 months after the amended Rule is gazetted.

Please provide feedback on the following questions

Be specific in your responses, highlight if you agree or disagree with the proposal and provide evidence to support your answer where available.

- Question 11: What are your views on discontinuing SONA?
- Question 12: What are your views on the transition period of 3 months after the amended Rule is gazetted?

2.6. NABERS method

Refer to ESS rule: clause 8.8.1, table A20 and table A21 in Schedule A.

Proposal 6:

Enable NABERS baseline method for schools and retail stores.

ESS incentives under the NABERS Baseline method

The NABERS baseline method currently covers all NABERS energy performance rating methodologies, including offices, hotels, shopping centres, data centres, hospitals, apartment buildings, residential aged care, retirement living facilities, warehouses and cold storage centres.

The ESS provides financial incentives for these building types when their NABERS energy rating is:

- at least 0.5 star higher than that of the Benchmark NABERS Rating Index for the building type, or
- at least 0.5 star higher than the building's historical NABERS energy rating.

The Benchmark NABERS Rating Index is the energy rating for the average building stock, which is based on the median star rating value of the building type. The buildings' historical NABERS energy rating can also be used to calculate the improvement in ratings for the ESS.

NABERS has expanded to schools and retail stores

In June 2024, the NABERS program launched rating tools to measure the energy performance of buildings in 2 further sectors, schools and retail stores.

The NSW Government proposes enabling the ESS NABERS baseline method to calculate energy savings for schools and retail stores. The proposal will provide more opportunities for schools and retail stores to access the ESS.

Like other building types such as warehouses and residential aged care facilities, the NABERS Benchmark Rating Index for schools and retail stores will be set at 3 stars, regardless of when the buildings were constructed. This is reflective of the current median NABERS Energy star ratings for schools and retail stores. The NSW Government is not proposing different indices based on the age of the buildings, as limited information is available on this.

For example, a school or retail store where the Benchmark NABERS Rating Index is set at 3 stars must achieve a minimum 3.5-star rating to be eligible for financial incentives. The energy savings will be calculated based on the energy reduction achieved by this improvement.

Under the proposal, the historical NABERS energy ratings for schools and retail stores will not be adjusted to account for rating improvements of the building stock. There is currently no evidence to suggest that the energy performance of the school and retail store sectors is improving at the same rate as, for example, commercial office building stock in Australia. However, this may be evaluated for subsequent rule changes as new data becomes available.

Please provide feedback on the following questions:

Be specific in your responses, highlight if you agree or disagree with the proposal and provide evidence to support your answer where available.

- Question 13: Do you support the proposed NABERS baseline method for the school and retail store sectors?

Part 3. Further issues on ESS Rule and Regulation

In addition to specific changes set out in Part 2, the NSW Government is seeking stakeholder feedback on broader topics related to the market states of heat pump and air-conditioning activities, along with telemarketing and door-knocking campaigns within the scheme.

3.1. Heat pump hot water system activities: market state

Refer to ESS rule: Activity Definitions D17, D19, F16 and F17.

Since February 2022, the addition of incentives for heat pump hot water system activities in the ESS has led to a rapid uptake of these systems in NSW.

In 2022, ESS deemed methods (Activity Definitions D17, D19, F16 and F17) incentivised 12,500 new and replacement heat pump hot water systems. In 2023, the number of installations for the same activities increased to 54,500. Out of the 12,500 installations incentivised by ESS in 2022, only 1,130 of them (9%) were in the commercial sector. The proportion of installations in the commercial sector increased to 41% in 2023.

While the rapid uptake of heat pump hot water system activities is the intended market outcome, industry and consumers have raised significant concerns about the quality of the products, quality of installations and customer protections.

This section provides an overview of key issues and consultation questions. The proposed warranty requirements (Section 2.3) will address some of these issues. Based on the feedback, the NSW Government may consider adding other requirements in the Rule.

Key concerns with heat pump hot water system activities

The following is a summary of key stakeholder feedback the NSW Government has noted to date:

1. Concerns around modelling procedures and how they are applied, often leading to over-estimating energy savings.
2. Concerns around installations, which include, but are not limited to:
    (1) location of heat pumps (indoors/outdoors)
    (2) fit for purpose (sizing).

3. Inadequate consumer protections when products fail.

Feedback to inform future Rule changes

The feedback received on the questions below will be considered in future Rule changes for heat pump hot water activities. Additionally, as part of future Rule changes, the NSW Government will continue to review and update activities related to high-efficiency heat pump hot water systems.

Please provide feedback on the following questions

Be specific in your responses, highlight if you agree or disagree with the proposal and provide evidence to support your answer where available.

- Question 14: What are your views on addressing the issues related to modelling, installation and consumer protection? What are the other key issues with heat pump hot water systems?
- Question 15: Apart from warranty requirements, are there any other measures to address concerns of early equipment failures or to strengthen consumer protection for hot water systems such as the availability of spare parts or afters sales customer service?
- Question 16: What ESS Rule changes would you recommend to address the issues highlighted above (and the additional issues you identified in Question 14)?

3.2. Air-conditioning activities: market state

Refer to ESS rule: Activity Definitions D16, F2, F3 and F4.

The NSW Government understands that commercial and residential air-conditioning activities will provide significant opportunities to drive energy savings and create ESCs in the next few years. As part of this consultation paper, the NSW Government is seeking feedback on key issues that the ESS Rule can address. The feedback received on the questions below will be considered in future Rule changes.

Key considerations for air-conditioning activities

The following is a summary of key stakeholder feedback the NSW Government has noted to date:

1. Develop a calculation method to provide incentives for air-conditioning systems with capacities above 65kW.

2. Update the Activity Definitions of multi-split air-conditioning systems tested and registered in the Greenhouse and Energy Minimum Standards (GEMS).
3. Review and update lifetime of savings.
4. Include warranty requirements.
5. Review ESS incentives for over-complying the regulatory requirements of air-conditioner installations from the Building Sustainability Index (BASIX).

Please provide feedback on the following questions

Be specific in your responses, highlight if you agree or disagree with the proposal and provide evidence to support your answer where available.

- Question 17: What are the other opportunities and issues with air-conditioning activities that have not been identified in this consultation paper?
- Question 18: How could the ESS best address the opportunities and risks highlighted in this consultation paper (and the additional ones you identified in Question 17)?

3.3. Telemarketing and door-knocking campaigns

New provisions in the Act or the ESS Regulation.

Following consumer complaints of unsolicited marketing of energy efficiency upgrades under the VEU program, the Victorian Government took action to ban telemarketing from 1 May 2024 and doorknocking from 1 August 2024. These actions aim to protect consumers from high-pressure sales tactics and other inappropriate marketing practices. The Victorian Government has received strong support for these actions from members of the public and consumer protection groups.

As a result of the ban, accredited providers and participants of the VEU program cannot:

- cold call a person, or doorknock at a person's premises, except in certain circumstances where the person has provided express consent to be contacted
- arrange an employee, contractor or agent to telephone or doorknock a person's premises, unless the person has provided express consent
- purchase from a third-party the contact details of a person who had previously expressed interest in a product upgrade under the VEU program following a cold call and/or door-knocking sale.

Other forms of marketing that are still permitted include:

- digital advertising (for example, texts, emails, social media, websites, search engine optimisation)
- traditional media advertising (for example, radio, television, newspapers, displays)
- direct marketing (for example, stalls, leaflets, brochures, mailers).

Key concerns with telemarketing and doorknocking campaigns

Like the VEU, the NSW Government has received complaints of unsolicited marketing of energy efficiency upgrades eligible for ESS incentives. The following is a summary of key stakeholder feedback the NSW Government has received.

- Listing phone numbers on the Do Not Call Register has proved ineffective at stopping cold calls about energy efficiency upgrades.
- Some households consider doorknocking as an invasion of their privacy and as a safety concern.
- High-pressure sales tactics used in telemarketing and doorknocking mean businesses and households may not be able to make informed decisions about whether to replace their existing appliances or whether the replacement appliances are fit for purpose.

As a result, the NSW Government is considering aligning with the VEU by imposing a ban on telemarketing and doorknocking campaigns. These marketing activities can potentially damage the ESS's reputation and prevent customers making informed choices about available upgrades.

Please provide feedback on the following questions

Be specific in your responses, highlight if you agree or disagree with the proposal and provide evidence to support your answer where available.

- Question 19: What are your views on banning telemarketing and door-knocking campaigns in NSW?
- Question 20: What are the short-term and long-term impacts of banning telemarketing and door-knocking campaigns?

Part 4. Proposal for ESS Regulation Update

4.1. Updating certificate conversion factors

Refer to Clause 37A of the *Electricity Supply (General) Regulation 2014*.

Proposal 7:
Update the certificate conversion factors (other than electricity) in clause 37A of the Electricity Supply (General) Regulation 2014, as shown in Table 4.

This section provides the rationale for this proposal, further information and consultation questions.

Certificate conversion factors account for emission intensities of different fuels

The ESS uses certificate conversion factors to calculate how many ESCs are created for the amount of energy that is saved from an activity. The scheme is designed so that a savings of 1MWh equates to 1 ESC.

This means that 1MWh of energy saved at the point of the use represents more than 1 MWh of avoided electricity purchased by scheme participants (e.g. electricity retailers). For fuels other than electricity, for example gas efficiency, gas to electricity, and other fuel switching activities, a conversion factor is provided in the scheme. These conversion factors are calculated based on the equivalent emissions for those fuel types in comparison to grid electricity (accounted for through the non-renewable primary energy factors).

Updating the certificate conversion factors to reflect growing renewable electricity

The growing portion of renewable electricity in the NSW electricity grid means that the conversion between grid electricity and other non-renewable energy sources is changing. As a result, the NSW Government is proposing to update the certificate conversation factors. The electricity certificate conversion factor remains at 1.06 to reflect network losses.

Updating the certificate conversion factors will support gas savings and electrification

The proposed update will see the number of ESCs created for gas savings increase. For example, if the gas savings for an activity currently creates 100 ESCs, the same activity will create around 214 ESCs based on the proposed factors. The above example aims to illustrate the impacts of the proposed updates on the number of ESCs. The actual increase in the number of ESCs will depend on the energy saving activity, site location and the specifications of the existing and replacement systems. Note that the number of ESCs created for electricity savings will remain unchanged.

Updating certificate conversion factors based on the forecast of non-renewable primary energy factors

The NSW Government used outputs from its internal NSW electricity sector emissions modelling to forecast the non-renewable primary energy factor for NSW grid electricity. The model used is based on the 2024 Integrated Systems Plan model by the Australian Energy Market Operator (AEMO), with adjustments to reflect current policy settings in NSW.

Certificate conversion factors of other fuels are updated based on the NSW Government's forecasts of non-renewable primary energy factors for NSW grid electricity every year over the next 10 years. While the certificate conversion factor for electricity is maintained at 1.06, certificate conversion factors of other fuels are updated relative to the future projections of non-renewable primary energy factors of grid electricity.

Proposed certificate conversion factors

The proposed certificate conversion factors of other fuels are calculated as an average over the next 10 years. This approach aims to strike the necessary balance of reflecting the grid decarbonisation trajectory and managing future uncertainties. The NSW Government will regularly monitor these factors and update when required.

Table 4 shows the current and proposed certificate conversion factors. While this update is expected to encourage fuel-switching activities, it poses the risk of incentivising investments in new gas boilers. This risk is addressed in Section 2.2.

Fuel	Current certificate conversion factors[7]	Proposed certificate conversion factors[8]
Electricity	1.06	1.06 (no change)
Natural gas and LPG	0.47	1.01
Diesel	0.47	1.01
Biogas	0.17	0.37
Biomass	0.08	0.18
Biofuel	0.21	0.46
Onsite renewables	0	0

Table 4 Current and proposed certificate conversion factors for all fuels based on their non-renewable primary energy factors

Please provide feedback on the following questions

Be specific in your responses, highlight if you agree or disagree with the proposal and provide evidence to support your answer where available.

- Question 21: What are you views of the certificate conversion factors being proposed?
- Question 22: Are there any other data sources to forecast the non-renewable primary energy factors for NSW grid electricity?
- Question 23: Do you agree with using the 10-year average of the forecasted non-renewable primary energy factors for grid electricity to update the certificate conversion factors of other fuel types?

[7] Current non-renewable primary energy factors and conversion factors are found in clause 33 under Schedule 4 of the *Electricity Supply Act 1995* and clause 37A of the *Electricity Supply (General) Regulation 2014.*

[8] Proposed certificate conversion factor for all fuels (other than electricity) is calculated by the Department as an average value over 10 years using data from internal NSW electricity sector emissions modelling to inform AEMO's 2024 Integrated System Plan.

Appendix A: Consultation questions

Please be specific in your responses, highlight if you agree or disagree with the proposal and provide evidence where available.

Commercial Lighting Energy Savings Formula	
Question 1	What are your views on the proposal of discontinuing the CLESF?
Question 2	What are your views on the transition period of 6 months after the amended Rule is gazetted?
Question 3	What are your views on keeping other lighting upgrade activities (public lighting, HEER) and methods (PIAM&V method and MBM) unchanged? Do you have any comments on the market maturity of LEDs in the residential and public sectors?

Gas boiler activities	
Question 4	What are your views on removing deemed gas-based activities D11, D12, D21, F8 and F9 and gas boiler installations/replacements under PIAM&V and MBM?
Question 5	What are your views on the implementation timeframe of this proposal (which is at the time the Rule comes into effect in mid-2025)?
Question 6	Do you support removing the eligibility for ESS incentives under performance efficiency improvements of gas boilers in the future?

Warranty requirements for heat pump hot water system activities	
Question 7	What are your views on requiring ACPs to provide customers with a minimum 5-year whole-of-system product warranty for all eligible systems?
Question 8	What are your views on including the requirement for ACPs to also provide a minimum 5-year installation warranty?

Refrigerated display cabinet – Activity Definition F1.2	
Question 9	What are your views on discontinuing the eligibility of integral refrigerated display cabinets for ESS incentives, under F1.2?
Question 10	Are there any other proposals for how the NSW Government can address the issues highlighted above, through the ESS Rule?

Sale of New Appliances	
Question 11	What are your views on discontinuing SONA?
Question 12	What are your views on the transition period of 3 months after the amended Rule is gazetted?

NABERS method	
Question 13	Do you support the proposed NABERS baseline method for the school and retail store sectors?

Market state of heat pump hot water system activities	
Question 14	What are your views on addressing the issues related to modelling, installation and consumer protection? What are the other key issues with heat pump hot water systems?
Question 15	Apart from warranty requirements, are there any other measures to address concerns of early equipment failures or to strengthen consumer protection for hot water systems such as the availability of spare parts or afters-sales customer service?
Question 16	What ESS Rule changes would you recommend to address the issues highlighted above (and the additional issues you identified in Question 14)?

Market state of air-conditioning activities	
Question 17	What are the other opportunities and issues with air-conditioning activities that have not been identified in this consultation paper?
Question 18	How could the ESS best address the opportunities and risks highlighted in this consultation paper (and the additional ones you identified in Question 17)?

Telemarketing and door-knocking campaigns	
Question 19	What are your views on banning telemarketing and door-knocking campaigns in NSW?
Question 20	What are the short-term and long-term impacts of banning telemarketing and door-knocking campaigns?

Updating certificate conversion factors	
Question 21	What are you views of the certificate conversion factors being proposed?
Question 22	Are there any other data sources to forecast the non-renewable primary energy factors for NSW grid electricity?
Question 23	Do you agree with using the 10-year average of the forecasted non-renewable primary energy factors for grid electricity to update the certificate conversion factors of other fuel types?

Appendix B: References

1. Common Capital Pty Ltd. for the NSW Office of Environment and Heritage (2017), Lighting Market Impact Evaluation – Impacts of NSW Government energy efficiency programs.
2. Lighting Council Australia, LED Adoption Surges: Insights from the Latest U.S. and Australian Lighting Reports, accessed on 1 November 2024.
3. Victorian Department of Environment, Land, Water and Planning (2019), Victorian Energy Upgrades – Lighting Activities Issues Paper.
4. Australian Government, Energy Rating – Industry information – Regulated products – Lighting, accessed on 27 September 2024.
5. Victorian Department of Energy, Environment and Climate Action (2024), VEU – Electrification co-payment and warranty requirements consultation paper.

Appendix C: Glossary

Acronym	Definition
ACP	Accredited Certificate Provider
AEDT	Australian Eastern Daylight Time
AEMO	Australian Energy Market Operator
BASIX	Building Sustainability Index
CLESF	Commercial Lighting Energy Savings Formula
DCCEEW	Department of Climate Change, Energy, the Environment and Water
ESC	Energy Savings Certificate
ESS	Energy Savings Scheme
ESS Regulation	Electricity Supply (General) Regulation 2014
ESS Rule (or the Rule)	Energy Savings Scheme Rule of 2009
GEMS	Greenhouse and Energy Minimum Standards
HEER	Home Energy Efficiency Retrofits
IHEAB	Installation of High Efficiency Appliances for Business
IPART	Independent Pricing and Regulatory Tribunal of NSW
kW	Kilowatt
LED	Light-emitting diode
LPG	Liquified petroleum gas
m^2	Metres squared
MBM	Metered Baseline Methods
NABERS	National Australian Built Environment Rating System
NSW	New South Wales
PIAM&V	Project Impact Assessment with Measurement & Verification
Safeguard	NSW Energy Security Safeguard
SONA	Sale of New Appliances
VEU	Victorian Energy Upgrades
W/m2	Watts per square metre

NSW GOVERNMENT

For more information

Learn more about the Energy Savings Scheme here.

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