ENERGY SAVINGS SCHEME

# Consultation Paper

## 2018-2019 Rule Change

July 2019

Published by NSW Department of Planning, Industry and Environment

dpie.nsw.gov.au

Title: Energy Savings Scheme Consultation Paper

Subtitle: 2018-2019 Rule Change

ISBN: 978-0-6483960-0-0

# Foreword

This consultation paper explains the policy intent and detail behind proposed changes to the NSW Energy Savings Scheme (ESS) 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 changes are appropriate and reflect best practice industry standards.

The consultation paper assumes prior knowledge of the ESS, legislative and administrative instruments. More information about the operation and administration of the ESS can be found at the Scheme Administrator's website at ess.nsw.gov.au. Information about previous amendments, including consultation papers and stakeholder responses are available at energy.nsw.gov.au/government-and-regulation/energy-savings-scheme.

# Written submissions

The release of this paper starts the consultation period. The NSW Government encourages stakeholders to provide written comments by **COB 23 August 2019** to:

Stephen Procter, Strategic Delivery Manager, Sustainability Programs

Energy, Climate Change and Sustainability

NSW Department of Planning, Industry and Environment

sustainability@environment.nsw.gov.au

# Contents

**Part One: Introduction** ..... **4**
1.1 Why is the ESS Rule updated? ..... 4
1.2 Proposed ESS Rule Change Amendments 2018-19 ..... 4
1.3 Consultation for the ESS Rule Change ..... 4
1.3.1 PIAM&V method ..... 5
1.3.2 NABERS baseline method ..... 5
1.3.3 Commercial Lighting ..... 5
**Part Two: General Changes** ..... **7**
2.1 Commencement date, and transitional arrangements ..... 7
2.2 BCA Climate Zone adjustments ..... 7
2.3 Generating system limit adjustments ..... 8
2.4 Creation of Energy Savings Certificates ..... 8
2.5 ESC registration data collection requirements ..... 9
**Part Three: Project Impact Assessment with Measurement and Verification** ..... **10**
3.1 Clarification of Energy Savings included in the PIAM&V method ..... 10
3.2 Baseline Energy Model Measurement Procedures ..... 10
3.3 Method Requirements Published by the Scheme Administrator ..... 11
3.4 Update to Counted Energy Savings ..... 11
**Part Four: Metered Baseline Method** ..... **12**
4.1 Updates to NABERS baseline method ..... 12
Calculation method 1 ..... 12
4.1.1 Review Benchmark NABERS Rating Indexes and effectiveness of Calculation method 1 to date ..... 12
Calculation method 2 ..... 12
4.1.2 Review the annual rating adjustment ..... 12
4.1.3 Review 1 star minimum improvement requirement ..... 12
4.1.4 Bringing Energy Savings forward ..... 12
4.1.5 Top up against Benchmark NABERS Rating after Forward Creating ESCs ..... 13
4.1.6 Roll-over of negative Energy Savings to the next year ..... 13
**Part Five: Deemed Energy Savings Methods** ..... **14**
5.1 Updates to Sale of New Appliances method ..... 14
5.1.1 Proposed change to the appliance capacity bands and saving factors ..... 14
5.1.2 Expand Activity Definition B5 to refrigerators with more than two doors ..... 15
5.2 Updates to the Commercial Lighting Energy Savings Formula ..... 15
5.2.1 Updates to space type and space type classifications ..... 15
5.2.2 Updates to Maintained Emergency Lighting ..... 16
5.2.3 Licensed electrician requirement ..... 17
5.3 Updates to the Home Energy Efficiency Retrofit method ..... 17

5.3.1 Licensed electrician requirement ..... 17
5.3.2 Replacing a T5 luminaire with an LED luminaire ..... 17
5.3.3 Update to the Implementation Date of HEER activities ..... 18
5.3.4 Update to Activity Definition E1 ..... 19
5.3.5 Light output and luminous efficacy ..... 19
5.4 Installation of High Efficiency Appliances for Business ..... 20
5.4.1 Update to Activity Definition F1 ..... 20
5.4.2 Update to Activity Definition F4 ..... 21
5.4.3 Update to Activity Definition F5 ..... 22
5.4.4 Update to Activity Definition F7 ..... 22
**Part Six: Glossary ..... 24**

# Part One: Introduction

The NSW Energy Savings Scheme (ESS) is the premier energy efficiency program in NSW. The ESS reduces electricity consumption in NSW by creating financial incentives for organisations to invest in energy saving projects. Energy savings are achieved by installing, modifying, removing or replacing energy saving equipment.

The ESS works by mandating NSW energy retailers and other liable parties to purchase Energy Savings in the form of Energy Savings Certificates (ESCs) each year. These certificates are created by an Accredited Certificate Provider (ACP) when an energy user undertakes an eligible energy saving activity.

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

## 1.1 Why is the ESS Rule updated?

The ESS Rule was first published in 2009 and is updated annually. The updates are intended to:

- incorporate stakeholder feedback and evaluation results
- maintain the effectiveness of the ESS Rule through updates to savings factors, changes to the Rule requirements and adding activity schedules for new technologies
- complement changes to building and equipment standards
- incorporate new methods for Energy Savings, and
- make other enhancements to the ESS Rule to maintain its integrity and/or reduce transaction costs.

## 1.2 Proposed ESS Rule Change Amendments 2018-19

This consultation paper discusses the proposed changes for the 2018–2019 ESS Rule, including changes to some of the methods used for calculating Energy Savings in the ESS Rule. A glossary is provided in Part Six.

A draft version of the ESS Rule (the draft ESS Rule) showing proposed changes is available for review and should be read in conjunction with this consultation paper. This can be found at energy.nsw.gov.au/government-and-regulation/energy-savings-scheme.

The draft 2018-19 ESS Rule for consultation shows all proposed changes as coloured additions or strikethroughs.

Where minor changes have been made for clarity or consistency they are shown coloured in the draft ESS Rule but are not considered in this consultation paper. Where a date is marked as ‘DD MM YY’, it will be updated in the final amended version of the ESS Rule when published.

## 1.3 Consultation for the ESS Rule Change

The NSW Government is seeking input to ensure the proposed changes are appropriate and reflect best practice industry standards. Consultation for the 2018-19 ESS Rule Change began in May 2018 when submissions were first opened. Consultation on the draft ESS Rule, supported by this consultation paper, is the last step in the 2018-19 Rule Change process.

Stakeholder concerns and feedback were compiled throughout 2018, before three targeted consultation workshops were held in November and December 2018. The workshops facilitated consideration of the broad range of stakeholder perspectives on potential improvements to the Commercial Lighting method, the NABERS baseline method and the Project Impact Assessment Measurement & Verification (PIAM&V) method. All of the stakeholder recommendations have been considered as part of this Rule Change; with specific proposals developed on issues requiring immediate action, such as the expiring NABERS method factors. Stakeholder suggestions requiring major or systematic changes to the ESS Rule will be considered as part of future Rule Changes.

### 1.3.1 PIAM&V method

At the PIAM&V consultation workshop, participants recommended a number of areas for improvement of the application of the PIAM&V method. The NSW Government considered these recommendations in developing proposals detailed in Part Three of this consultation paper. However, the majority of recommendations to the PIAM&V method require systematic review of the method and will be investigated in more detail as part of the future Rule Changes.

### 1.3.2 NABERS baseline method

Following the NABERS method workshop, specific proposals have been developed in response to stakeholder recommendations listed in Table 1. The proposals are intended to address key barriers hindering wider use of the method across the different building types and buildings with lower star ratings. The NSW Government proposes changes intended to increase the additionality of the method, and to encourage improved energy efficiency over time.

**Table 1: ESS Rule change recommendations for each NABERS calculation method**

| |
|---|
| **Calculation method 1** |
| • Update the Benchmark NABERS Rating Indexes (Section 4.1.1)<br>• Refine method 1 based on effectiveness to date (Section 4.1.1) |
| **Calculation method 2** |
| • Revise the annual rating adjustment (Section 4.1.2)<br>• Revise the 1-star threshold requirement (Section 4.1.3)<br>• Introduce the option to bring Energy Savings forward (Section 4.1.4)<br>• Roll negative Energy Savings over to the next year to ensure continuous improvement (Section 4.1.6). |

ESS Rule change proposals for each of the recommendations in Table 1 are presented in Part Four of this consultation paper.

All other recommendations for methodological changes proposed by the workshop participants were considered. However, based on additional analysis these proposals have not been progressed as part of this Rule Change.

### 1.3.3 Commercial Lighting

The Commercial Lighting workshop identified a range of potential areas for improvements for the method. The areas for which proposals have been developed as part of the current Rule Change are listed in Table 2.

**Table 2: ESS Rule Change recommendations for Commercial Lighting method**

| Recommendations for Commercial Lighting method |
| --- |
| • Space type classifications (Section 5.2.1)<br>• Building Code of Australia (BCA) updates (Section 5.2.1) |

The NSW Government conducted research and analysis in these areas and drafted proposals presented in Part Five of this consultation paper. All other recommendations will be considered as part of future Rule Changes.

# Part Two: General Changes

Please review part two, which provides an overview of the general changes to the ESS Rule. Consider the questions below when providing feedback.

## 2.1 Commencement date, and transitional arrangements

Refer to the draft ESS Rule: §1, §3, §11.11, §11.12, §11.13

It is expected that the changes proposed in this paper will commence on 17 February 2020. However, we propose to include the amendment notice in the NSW Government Gazette approximately three months prior to the exact date that the amendments will come into effect. We further propose that ACPs will be able to register ESCs in accordance with the previous rule until 30 June 2020, for Implementations with an Implementation Date before 17 February 2020.

For details related to the commencement of changes proposed to the Measurement Procedure requirements under the Project Impact Assessment Measurement & Verification (PIAM&V) method, see Part 3.2 of this consultation paper. For details related to the commencement of changes proposed to the Implementation Date of Home Energy Efficiency Retrofits (HEER) activities, see Part 5.3.3 of this paper.

**Please provide feedback on the following questions:**

- Question 1: Do you agree with the proposed transitional arrangement? Please provide reasoning supporting your response.
- Question 2: Is this approximate three-month timeframe sufficient for preparing your business to be ready to comply with the new ESS rule? If not, what timeframe do you deem necessary?
- Question 3: Can you foresee any particular part of the new ESS Rule for which it will be difficult to get ‘business-ready’ within the proposed timeframe?

## 2.2 BCA Climate Zone adjustments

Refer to the draft ESS Rule: Table A26

The Building Code of Australia (BCA) climate zones are assigned to postcodes in NSW in Schedule A of the ESS Rule, Table A26: BCA climate zones by postcode. These climate zones are then used in calculating Energy Savings under the Home Energy Efficiency Retrofits (HEER) method.

The NSW Government proposes to update Table A26 to reflect recent changes to the Australia Post postcode list. The update requires restructuring the original postcode

groupings to exclude any non-NSW postcodes or PO Box numbers and to include new postcodes.

**Please provide feedback on the following question:**

- Question 4: Do you agree with the proposed changes to Table A26? Please provide reasoning supporting your response.

## 2.3 Generating system limit adjustments

Refer to the draft ESS Rule: §5.4(i)(ii)

The ESS Rule currently provides incentives for small generating systems that reduce energy consumption, such as cogeneration systems, waste heat recovery systems, or other similar energy recovery technologies.

This excludes larger generating systems with a name plate rating of 5MW or higher, as well as systems that export to the Electricity Network.

The current cap on generation activities was developed in 2015, in line with the Australian Energy Market Operator's existing threshold for exempt generation.

To incorporate stakeholder feedback, the NSW Government proposes to increase the cap on generating systems within the ESS from 5MW to 30MW, to align with AEMO's nameplate rating cap for exempt generating systems and non-scheduled, non-market generating systems. Generated electricity cannot be exported to the Electricity Network.

This change will enable projects with larger generating systems that have a nameplate rating of under 30MW and do not export to the Electricity Network to be eligible under the ESS.

**Please provide feedback on the following questions:**

- Question 5: Do you agree with the proposed changes to Section 5.4(i)(ii)? Please provide reasoning supporting your response.
- Question 6: Do you perceive any significant impacts, either positive or negative, associated with increasing the ESS cap on generating systems from 5MW to 30MW?

## 2.4 Creation of Energy Savings Certificates

Refer to the draft ESS rule §6.5

ACPs are required to create only the Number of Certificates that reflects the Energy Savings arising from a Recognised Energy Saving Activity. The current equation used to calculate this Number of Certificates, Equation 1, utilises ∑implementations to calculate the relevant Number of Certificates for each implementation.

The NSW Government proposes to amend Equation 1 by placing brackets around the Electricity Savings and Gas Savings sections of the formula. This would provide additional clarity around the use of Equation 1 for the purpose of determining the relevant Number of Certificates an ACP can create in relation to a Recognised Energy Saving Activity.

**Please provide feedback on the following question:**

- Question 7: Do you agree with the proposed updates to Equation 1 in Clause 6.5? Please provide reasoning supporting your response.

## 2.5 ESC registration data collection requirements

Refer to the draft ESS Rule: §6.8

ACPs are required to provide data to the Scheme Administrator when applying to register the creation of ESCs under Clause 6.8. The current Rule requires the collection of the Australian Business Number (ABN) of the entity using the End-Use Service, where applicable. This requirement may impose administrative costs for Appliance Retailers to collect and verify the ABN of the purchaser under the Sales of New Appliance (SONA) method.

The NSW Government proposes to amend the Rule to require ABNs of Appliance Retailers to be collected for Implementations under the SONA method. This would reduce the administrative costs for ACPs.

**Please provide feedback on the following question:**

- Question 8: Do you agree with the proposed updates to Clause 6.8? Please provide reasoning supporting your response.

# Part Three: Project Impact Assessment with Measurement and Verification

Please review part three, which provides an overview of the changes to Project Impact Assessment with Measurement and Verification (PIAM&V) method. Consider the below questions when providing feedback.

The PIAM&V method provides a flexible measurement and verification approach for ACPs to calculate Energy Savings. It is designed to incentivise a broad range of energy saving activities, including those not currently covered by the existing Deemed Energy Savings methods.

These changes aim to clarify some of the requirements for energy certificate creation under the PIAM&V method.

## 3.1 Clarification of Energy Savings included in the PIAM&V method

Refer to the draft ESS Rule: §7A.1

The ESS Rule requires that the method used to calculate Energy Savings produce a result reasonably reflecting the Energy Savings resulting from an Implementation (Clause 6.5A(b)).

The NSW Government proposes to include an overarching addition to Clause 7A.1 of the PIAM&V method. This addition would clarify the existing requirement that equations 7A.1 to 7A.5 are to be used for calculating Energy Savings that, to the satisfaction of the Scheme Administrator:

- are attributable to the PIAM&V implementation only; and
- represent a genuine reduction in the consumption of energy.

**Please provide feedback on the following question:**

- Question 9: Do you agree with the proposed changes to Clause 7A.1? Please provide reasoning supporting your response.

## 3.2 Baseline Energy Model Measurement Procedures

Refer to the draft ESS Rule: §7A.5, §11.11 and §11.12

Clause 7A.5 of the ESS Rule requires a Measurement and Verification Professional's (M&V Professional) written explanatory reasoning in relation to Measurement Procedures.

Stakeholder feedback and program evaluation identified a need to consider specific timing in relation to Measurement Procedures. To increase the confidence that energy models are developed using a suitable modelling approach, the NSW Government proposes to specify that Measurement Procedures, in relation to the Baseline Energy Model, need to be deemed appropriate by an M&V Professional prior to the end of the Baseline Measurement Period. This would ensure that the M&V Professional is engaged in the early stages of an M&V

project. Involving an M&V Professional prior to the completion of the Baseline Measurement Period ensures that Measurement Procedures are in place for the development of a suitable Baseline Energy Model.

Given the length of PIAM&V projects, the NSW Government proposes that these changes would only apply to Implementations for which the end of the Baseline Measurement Period is on or after 17 February 2020.

**Please provide feedback on the following questions:**

- Question 10: Do you agree with the proposed changes to Measurement Procedures of the PIAM&V method? Please provide reasoning supporting your response.
- Question 11: Do you have any specific concerns in relation to the cut-off date of 17 February 2020?

Question 12: Would this change present any particular issues for your business?

## 3.3 Method Requirements Published by the Scheme Administrator

Refer to the draft ESS Rule: §7A.16

Clause 7A.16 provides that the Scheme Administrator may Publish, from time to time, Guides that detail acceptable and unacceptable approaches for Accredited Certificate Providers and M&V Professionals to meet the requirements of Clause 7A of the ESS Rule.

To incorporate stakeholder feedback and support the Scheme's integrity, the NSW Government proposes to amend Clause 7A.16. The amendment emphasises that compliance with materials published by the Scheme Administrator is a requirement.

**Please provide feedback on the following question:**

- Question 13: Do you agree with the proposed changes to Clause 7A.16 of the PIAM&V method? Please provide reasoning supporting your response.

## 3.4 Update to Counted Energy Savings

Refer to the draft ESS Rule: Equation 7A.1, Equation 7A.3

Currently when calculating Electricity Savings, the deducted Counted Energy Savings are multiplied by the Regional Network Factor. As "Counted Energy Savings" are Electricity Savings that were calculated previously, they have already been multiplied by the Regional Network Factor. The NSW Government proposes to amend these formulas to more accurately represent the Electricity Savings.

As Gas Savings are not multiplied by a Regional Network Factor, no changes to Gas Savings are required.

# Part Four: Metered Baseline Method

Please review part four, which provides a number of updates to the NABERS baseline method. Consider the below question when providing feedback.

These changes have been made following targeted stakeholder consultation. The aim of these changes is to address key barriers hindering wider use of the NABERS baseline method.

## 4.1 Updates to NABERS baseline method

Refer to the draft ESS Rule: §8.8, Table A20, Table A21

### Calculation method 1

#### 4.1.1 Review Benchmark NABERS Rating Indexes and effectiveness of Calculation method 1 to date

Based on the assessment of historical NABERS rating data and past ESC creation using the method, the NSW Government proposes:

- To increase additionality by limiting the use of Calculation method 1 to the building's first NABERS rating only. If this first rating is obtained to comply with any mandatory legal requirement imposed through a statutory or regulatory instrument of any jurisdiction, such as the Commercial Building Disclosure (CBD) Program, Calculation method 1 cannot be used;
- Use one set of Benchmark NABERS Rating Indexes per building type (Table A20 of Schedule A) and continually monitor data to amend these benchmarks when changes in average energy consumption are observed; and
- Update Benchmark NABERS Rating Indexes (Table A20 of Schedule A) to reflect the most recent data available for each building type.

### Calculation method 2

#### 4.1.2 Review the annual rating adjustment

Based on historical NABERS rating data, updates have been introduced to annual rating adjustments (Table A21 of Schedule A).

#### 4.1.3 Review 1 star minimum improvement requirement

To date, Calculation Method 2 has not been used. Consultation with stakeholders suggests this is because the requirement for a minimum star rating increase of 1 star is too high.

The policy intent of a minimum star rating improvement is to ensure that Energy Savings are significant and result from a genuine activity. While still upholding this initial intention, the NSW Government proposes to lower the required minimum rating improvement from 1 to 0.5 stars. Lowering this requirement is expected to remove the key barrier to using Calculation Method 2 and facilitate access to the ESS incentive to both low and high performing buildings.

#### 4.1.4 Bringing Energy Savings forward

Based on the outcomes of the targeted consultation workshop and additional analysis, the NSW Government proposes to introduce forward creation of ESCs by bringing Energy Savings

forward and to enable annual 'top-up' of certificates through ongoing NABERS rating certification.

#### 4.1.4.1 Maximum Time Period for Forward Creation

Energy saving activities implemented to increase a NABERS star rating vary: from a number of small shorter-term improvements to the installation of single large energy efficient technologies. To account for this variety, the NSW Government proposes to establish a common maximum time period for Forward Creation. This maximum time period would be based on the default decay factors of the Project Impact Assessment with Measurement and Verification (PIAM&V) method, Table A16 of the ESS Rule. The sum of default decay factors in this table is 4.46 over 10 years, which is an average of 44.6% of first-year savings per year. The NSW Government proposes to apply this percentage to the 7 years of allowable use of the fixed Historical Baseline NABERS Rating in the NABERS baseline method. This allows for a maximum Forward Creation period of 3 years (that is, 7 x 44.6%, rounded to the nearest full year).

#### 4.1.4.2 Benchmark NABERS Rating when Forward Creating ESCs

The NSW Government proposes that Energy Savings can only be forward created using a fixed Historical Baseline NABERS Rating which immediately precedes the current NABERS rating used to calculate Energy Savings, with some allowance for delays. To allow for any unexpected delays between the two ratings, the NSW Government proposes to allow calculation of a Benchmark NABERS Rating using a fixed Historical Baseline NABERS Rating with the end date of no more than 15 months before the end date of the current NABERS rating. Additionally, the current NABERS rating must be 0.5 stars higher than the Historical Baseline NABERS rating.

### 4.1.5 Top up against Benchmark NABERS Rating after Forward Creating ESCs

The Historical Baseline NABERS Rating can be used in subsequent years to calculate Energy Savings annually for 7 years after the end date of the fixed Historical Baseline NABERS Rating. To do so, NABERS Ratings for the NABERS Building must be obtained for every year from the date of the Historical Baseline NABERS Rating to the current NABERS Rating used to calculate Energy Savings.

### 4.1.6 Roll-over of negative Energy Savings to the next year

The NSW Government also proposes a general change to Calculation method 2 to encourage consistent energy efficiency performance over time. When using the fixed Historical Baseline NABERS Rating, the NSW Government proposes to roll-over negative Energy Savings to the following year (Calculation Method 2 at step 4 of method 4). For example, a building performs poorly in a year for which it had already Forward Created ESCs. If the deduction of these ESCs (as Counted Energy Savings) results in negative Electricity Savings, then next year the building would be required to include these negative Electricity Savings in their Electricity Savings calculation as a deduction.

**Please provide feedback on the following question:**

- Question 14: Do you agree with the proposed changes to the NABERS baseline method? Please provide reasoning supporting your response.

# Part Five: Deemed Energy Savings Methods

Please review part five, which details changes to the deemed energy saving methods. Consider the below questions when providing feedback.

Updates to deemed energy saving methods have been made in line with market developments and to clarify some requirements for Energy Savings Certificate creation.

## 5.1 Updates to Sale of New Appliances method

### 5.1.1 Proposed change to the appliance capacity bands and saving factors

Refer to the draft ESS Rule: Schedule B

The Sale of New Appliances (SONA) method provides incentives for appliance retailers to sell new appliances that are more efficient than the market average. Incentives are provided for appliances that carry energy rating labels and have been tested according to the relevant Australian Standard. Appliances included under this method are: clothes washers, clothes dryers, dishwashers, refrigerators, freezers and televisions.

The ESS currently incentivises appliances that have an energy rating of at least 0.5 stars above the market average. However, a review of the performance of the SONA method showed that this has not raised the proportion of high efficiency appliance sales in NSW compared to the Australian average.

The NSW Government proposes to amend the eligibility requirements for all appliance categories incentivised through SONA to ensure the ESS only incentivises the most efficient appliances for sale in NSW. By only rewarding the highest efficiency appliances, the NSW Government aims to shift the market to the sale of these high efficiency appliances over appliances of a lower energy efficiency.

The NSW Government proposes changes to the grouping of some of the appliance types (e.g. washing machine load rating, refrigerator total capacity, television screen size etc.) to better align the capacity of some appliance types with available industry appliance sales data.

Deemed Equipment Electricity Savings were also updated for each eligible activity under SONA. These updates combine equipment and factor updates with review results and stakeholder feedback to reflect the most recent sales data.

Please see the draft ESS Rule for the proposed appliance groups and Deemed Equipment Electricity Savings for each appliance type.

**Please provide feedback on the following questions:**

- Question 15: Would this change shift the market to the sale of these high efficiency appliances over appliances of a lower energy efficiency? Please provide reasoning supporting your response.
- Question 16: Is the link between sales data and proposed changes to the grouping of appliances appropriate?

### 5.1.2 Expand Activity Definition B5 to refrigerators with more than two doors

Refer to the draft ESS Rule: Schedule B Activity Definition B5

Following stakeholder feedback, the NSW Government investigated the energy use of refrigerators with more than two doors. This review concluded that the Star Rating of refrigerators with two doors is not significantly different to the Star Rating of refrigerators with more than two doors of the same capacity and technology.

The NSW Government proposes to update the name and description of Activity Definition B5 to allow refrigerators with more than two doors to be eligible and to update the activity accordingly.

This proposed update would allow ACPs to calculate Energy Savings from selling eligible refrigerators with two or more doors.

**Please provide feedback on the following question:**

- Question 17: Do you agree with the proposal to amend Activity Definition B5 to include refrigerators with more than two doors? Please provide reasoning

## 5.2 Updates to the Commercial Lighting Energy Savings Formula

### 5.2.1 Updates to space type and space type classifications

Refer to the draft ESS Rule: §9.4, Table A10.2 and A10.3

There are several factors behind updating the space type and space type classifications. Updates to the BCA 2019 will commence on 1 May 2019, with the one-year transition period finishing on 1 May 2020. The NSW Government proposes to update the list of space types in Table A10.2 to align with changes to the BCA. In addition, the NSW Government has identified inconsistencies in the classification of certain space types and opportunities to harmonise with the Victorian Energy Upgrade Specifications[1].

The NSW Government proposes to make the following amendments to the space type classifications under Schedule A:

- Amend various Space Types in Table A10.2 to align with changes to the BCA.
- Amend the building/space group in Table A10.3 for building classification “BCA Class 7b buildings” from A (Others) to C (Industrial). This is to align with the classification of wholesale storage in Table A10.2.
- Amend Table A10.2 so that the wholesale storage space type includes distribution centres. This amendment is based on feedback requesting clarification on the classification of distribution centres within the existing categories.
- Harmonise with the Victorian Energy Upgrade Specifications by:
    - introducing a new space type for gyms,

[1] energy.vic.gov.au/energy-efficiency/victorian-energy-upgrades/specifications

- expanding the definition of Building Lighting to include Commercial/Industrial premises classified as BCA Class 10a,
- reducing the annual operating hours for restaurants and cafés in museums and art galleries, while maintaining the annual operating hours for restaurants and cafés in accommodation and food services.

**Please provide feedback on the following questions:**

- Question 18: Do you agree with the proposed amendments to the space type and space type classifications? Please provide reasoning supporting your response.
- Question 19: Given the scope of these changes, is it your understanding that the three-month transitional period for being 'business-ready' is sufficient?

### 5.2.2 Updates to Maintained Emergency Lighting

Refer to the draft ESS Rule: §9.4, §10

The standards for emergency lighting have been updated, with AS/NZS 2293.1:2018 *Emergency lighting and exit signs for buildings - System design, installation and operation* superseding AS 2293.1:2005. Under the new standard, Maintained Emergency Luminaire is energised (illuminated) at all times when normal or emergency lighting is required.

The new standard introduced two separate categories of Maintained Emergency Luminaire:

- Switched: luminaire can be turned on and off when mains power is present.
- Un-switched: luminaire cannot be turned on and off when mains power is present.

Only an un-switched maintained emergency luminaire is considered always-on, with deemed annual operating hours of 8,500 hours. The annual operating hours for switched maintained emergency luminaire should be the same as other lights in the space.

This is because switched maintained emergency luminaires can be switched off when there is no emergency. This means these luminaries are not always on and therefore behave more like a normal light in contrast to the un-switched luminaires which are always illuminated.

The NSW Government proposes to:

- update the Space Type of Maintained Emergency Luminaire to "Un-Switched maintained emergency luminaire", and
- update the definition to "always-on illuminated emergency exit sign or Un-switched Maintained Emergency Luminaire as defined in AS/NZS 2293.1: *Emergency lighting and exit signs for buildings - System design, installation and operation*".

These proposed updates would ensure that the 8,500 annual operating hours only applies to un-switched maintained emergency luminaires, rather than switched maintained emergency luminaires. The update ensures that the Rule is consistent with the revised Australian Standard AS/NSZ 2293.1.

**Please provide feedback on the following question:**

- Question 20: Do you agree with the proposed change to the definition of maintained emergency lighting? Please provide reasoning supporting your response.

### 5.2.3 Licensed electrician requirement

Refer to the draft ESS Rule: §9.4.1(d)

The Commercial Lighting method states that activities must be 'performed or supervised by a licensed electrician'. The NSW Government has identified a risk that current requirements related to personnel undertaking lighting upgrade works are unclear regarding the use of qualified electricians and their apprentices. This issue relates to all lighting upgrade activities under the CLESF (§9.4.1(d)).

To clarify, the NSW Government proposes the following wording:

*"*The activity must be performed by a person authorised to carry out electrical wiring work under Section 14 (1) of the *Home Building Act."*

This proposed change aims to provide clarification for ACPs when undertaking activities under the CLESF method. The updated wording makes it clear that qualified electricians and apprentices can perform the upgrades, as per requirements of the legislation.

**Please provide feedback on the following question:**

- Question 21: Does the proposed change provide for all relevant qualified contractors to undertake the lighting upgrade works? Please provide reasoning supporting your response.

## 5.3 Updates to the Home Energy Efficiency Retrofit method

### 5.3.1 Licensed electrician requirement

Refer to the draft ESS Rule: Activity Definitions E1, E2, E3, E4, E5, E11 and E13

Similar to Section 5.2.3, the NSW Government proposes to amend the implementation requirements for activities under Activity Definitions E1, E2, E3, E4, E5, E11 and E13 under HEER (E13 is a newly created activity definition, explained in Section 5.3.2 below).

**Please provide feedback on the following question:**

- Question 22: Does the proposed change provide for all relevant qualified contractors to undertake the lighting upgrade works? Please provide reasoning supporting your response.

### 5.3.2 Replacing a T5 luminaire with an LED luminaire

Refer to the draft ESS Rule: Schedule E Activity Definition E13

As the technology of LED lights continues to improve, the NSW Government has identified that there are energy saving opportunities in upgrading T5 fluorescent lights to LED lights. The NSW Government proposes to introduce a new activity definition under the HEER method: Activity Definition E13.

This change would enable small businesses to use the HEER method instead of the CLESF when upgrading T5 fluorescent lights to LEDs, which would reduce administration costs for businesses.

The ESS Rule has previously allowed for the installation of T5 adaptor kits, however this was no longer incentivised effective 1 July 2014. This was due to the potential electrical and safety issues associated with the installation of T5 adaptor kits.

The NSW Government proposes to allow for T8 or T12 luminaires fitted with T5 adaptor kits to be replaced with LED luminaires under this activity. It is anticipated that some T5 adaptor stock in NSW would be replaced under this activity and that this would lead to better lighting outcomes for the state.

**Please provide feedback on the following questions:**

- Question 23: Do you have any comments on proposed Activity Definition E13?
- Question 24: How likely are you to use the proposed Activity Definition E13? Why/why not?

### 5.3.3 Update to the Implementation Date of HEER activities

Refer to the draft ESS Rule: §9.8.2

The HEER method was introduced into the ESS Rule on 1 July 2014 to provide incentives for a wide range of energy saving activities in households and small businesses. Due to the wide range of activities, an Implementation could involve multiple tradespeople undertaking the Implementation over multiple dates.

The NSW Government proposes to amend the Implementation Date definition under Clause 9.8.2 for the following reasons:

- to reflect when Energy Savings from the implementation commence
- to reduce the amount of evidence required to establish the Implementation Date, as the date would be encoded into the nomination form, and
- to require that ACPs are nominated upfront, establishing a clear relationship between the Purchaser and the ACP before any works are carried out.

ESC creation requirements would remain unchanged and would still require that all conditions of Clause 9.8.1 are met.

The following wording is proposed:

*"The Implementation Date is the earliest date that any End-User Equipment is installed under the Implementation."*

Under this proposed change, ACPs would need to be nominated prior to the installation of the first eligible End-User Equipment. All associated work for an activity must still be completed prior to ESC registration. An ACP would have until 30 June of the year following the year in which the Implementation Date falls to create the relevant ESCs.

The NSW Government proposes that where Implementations do not meet all of the relevant conditions of the Energy Savings Scheme (Amendments No. 2) Rule 2018 by 16 February 2020, the requirements of the new Rule would need to be met for these Implementations from 17 February 2020. This includes the use of the updated Implementation Date definition and meeting the affected ACP nomination, ESC registration, and other requirements.

For example, for an Implementation beginning on 10 January 2020 that is completed in March 2020, the Implementation Date will be 10 January 2020. Eligible ESC creation for this Implementation will require that any nominations are obtained prior to 10 January 2020.

**Please provide feedback on the following questions:**

- Question 25: Do you agree with the proposed definition as opposed to the current definition of the Implementation Date for HEER activities? Please provide reasoning supporting your response.
- Question 26: Do you anticipate that this change would present any difficulties with being nominated and generating ESCs for a particular work program?

### 5.3.4 Update to Activity Definition E1

Refer to the draft ESS Rule: Schedule E Activity Definition E1, Table E1.1 and E1.2

A review of Activity Definition E1 (replace halogen downlight with an LED luminaire and/or lamp) was undertaken to identify potential improvements that could assist with simplifying the compliance and reducing the costs of undertaking the activity. The NSW Government identified an opportunity to combine lamp only magnetic and electronic transformers in Tables E1.1 and E1.2 into a single category and applying an average savings factor.

Combining the factors slightly increases the Energy Savings for replacements where the transformer is electronic, and slightly decreases the Energy Savings for replacements where the transformer is magnetic.

**Please provide feedback on the following questions:**

- Question 27: Do you agree with combining lamp only magnetic and electronic transformers into a single category? Please provide reasoning supporting your response.
- Question 28: Would this change result in reduced administrative costs for your business?

Under this proposed update, ACPs would use the same Energy Savings Factor when replacing lights with magnetic and electronic transformers.

### 5.3.5 Light output and luminous efficacy

Refer to the draft ESS Rule: Schedule E Activity Definitions E2, E3, E5, E11, Table A9.4 and §10

This section has two proposals. The first proposal is to use a consistent term to refer to “light output”. Light output generally refers to the amount of brightness a lighting equipment produces and is measured in lumens (lm).

The current ESS Rule uses the following terms to describe light output:

- “rated lumens” (referenced in E11)
- “lumen output” (referenced in E11)
- “Initial Light Output” (referenced in E2, E3, E5)

The NSW Government proposes to use “light output” to replace these terms for consistency.

"Light output" is currently defined in Clause 10 of the Rule as "*the luminous flux (measured in lumens) emitted by a lamp or luminaire*" which covers the references listed above.

The NSW Government proposes to amend this definition to:

> "***"Light Output"*** *means the luminous flux (measured in lumens) emitted by a lamp or luminaire, determined in accordance with a standard accepted by the Scheme Administrator*".

The second proposal is to correct the use of the term "lumen efficacy". Activity Definition E11 and Table A9.4 refer to "lumen efficacy", which is not the term used by industry. Lumen efficacy is a measure of how well lighting equipment produces visible light.

The NSW Government proposes to replace "lumen efficacy" in Activity Definition E11 and Table A9.4 with "luminous efficacy" which is the term commonly used within the lighting industry.

**Please provide feedback on the following question:**

- Question 29: Do you agree with aligning the terminologies used in Schedule E? If not, please provide supporting evidence to justify your response.

## 5.4 Installation of High Efficiency Appliances for Business

### 5.4.1 Update to Activity Definition F1

Refer to the draft ESS Rule: Activity Definition F1, Table F1.1, F1.2

The NSW Government has identified an opportunity to update Activity Definition F1 to align with the incoming Greenhouse and Energy Minimum Standards (Refrigerated Cabinets) Determination 2019 (the 2019 Refrigerated Cabinets Determination). The 2019 Refrigerated Cabinets Determination will soon be registered, replacing the GEMS 2012 Determination currently used to determine a product's eligibility.

The Determination includes a 12 month transition period where both the GEMS 2012 and 2019 Refrigerated Cabinets Determinations are in effect. The NSW Government's current understanding is that the 2019 Refrigerated Cabinets Determination will be signed prior to the gazettal date of the 2018-2019 amendments to the ESS Rule.

In order to ensure a seamless transition of this Activity Definition within the ESS, the NSW Government proposes that following the commencement of the 2018-2019 changes to the Energy Savings Scheme, on 17 February 2020, all activities within Activity Definition F1 are required to be registered within the terms defined by the 2019 Refrigerated Cabinets Determination. This would prevent any confusion between the two Determinations, while also allowing manufacturers and ACPs to integrate this change with what will be required to comply with the 2019 Refrigerated Cabinets Determination.

The NSW Government proposes to align Activity Definition F1 with the incoming 2019 Refrigerated Cabinets Determination through implementing the following changes:

- Activity Definition F1 would adopt the product class categorisations in the 2019 Refrigerated Cabinets Determination. This would significantly reduce the complexity of product classification by reducing the number of product classes from 44 to 15.

The 15 new product classes categorise integral and remote refrigeration products by use case.

- Activity Definition F1 would adopt the Energy Efficiency Index (EEI) introduced in the Determination to define the energy efficiency of a product. The Determination uses the EEI calculation, currently applied within the European standard, to establish a 10-star rating system (detailed in Schedule 6 of the Determination). A 3-star or more rating would be required to assign "energy efficient" status to registered products. The NSW Government determined this benchmark by analysing both the products currently registered within the GEMS Register and improvements in energy efficiency within the refrigerated cabinets sector over the previous 15 years since the existing benchmarks were established.
- The term "Refrigerated Display Cabinets" will be changed to "Refrigerated Cabinets" and "RDC" will be changed to "RC". This is because the 2019 Refrigerated Cabinets Determination creates new product classes for both Refrigerated Display Cabinets (RDCs) and Refrigerated Storage Cabinets (RSCs). The term "Refrigerated Cabinet (RC)" covers both RDCs and RSCs.

**Please provide feedback on the following questions:**

- Question 30: Do you agree with the use of the 3-star rating, as defined within the 2019 Refrigerated Cabinets Determination, as a baseline for determining energy efficient status? Please provide reasoning supporting your response.
- Question 31: Do you agree with the proposed changes to Activity Definition F1? Please provide reasoning supporting your response.

### 5.4.2 Update to Activity Definition F4

Refer to the draft ESS Rule: Activity Definition F4, Table F4.1, F4.2

The NSW Government has identified an opportunity to update Activity Definition F4 to align with the incoming Greenhouse and Energy Minimum Standards (Air Conditioners up to 65kW) Determination 2019 (the 2019 Air Conditioners Determination). This Determination, which was registered on 25 March 2019, will come into effect 1 April 2020, replacing the existing Activity Definition governing the use of Activity Definition F4.

In order to ensure a seamless implementation of the 2019 Air Conditioners Determination within the ESS Rule, the NSW Government proposes that following the commencement of the 2018-2019 changes to the Energy Savings Scheme, proposed to begin 17 February 2020, all activities within Activity Definition F4 are required to be registered within the terms defined by the 2019 Air Conditioners Determination.

The NSW Government proposes to align Activity Definition F4 with the incoming 2019 Air Conditioners Determination, through implementing the following changes:

- Activity Definition F4 would adopt the product class categorisations detailed in Schedule 1 of the 2019 Air Conditioners Determination, which categorise unitary, single-split and multi-split air conditioning systems by use case and capacity, through amending Table F4.1 and Table F4.2 to include the new product classes.

- The Baseline Cooling and Heating values detailed in Table F4.1 and Table F4.2 will be amended to reflect the changed MEPS values detailed in Schedule 1 of the 2019 Air Conditioners Determination.

**Please provide feedback on the following question:**

- Question 32: Do you agree with the proposed changes to Activity Definition F4? Please provide reasoning supporting your response.

### 5.4.3 Update to Activity Definition F5

Refer to the draft ESS Rule: Activity Definition F5

The NSW Government identified an opportunity to align the installation requirements between Activity Definitions F5 and F6. The installation requirements under Activity Definition F5 specify that:

*"The End-User Equipment must replace an equivalent shaded pole motor or a permanent split capacitor motor as identified by the manufacturer of the End-User Equipment and accepted by the Scheme Administrator".*

The same installation requirement is used under Activity Definition F6 but does not require the Scheme Administrator to accept it.

Removing the term "and accepted by the Scheme Administrator" from Activity Definition F5 would make the activity easier to use, as it removes the obligation on the Scheme Administrator to accept the replaced equipment. It would also ensure that the installation requirements are consistent with those under Activity Definition F6.

The term "Refrigerated Display Cabinet" will be changed to "Refrigerated Cabinet" to align with the product class naming changes under the new Greenhouse and Energy Minimum Standards (Refrigerated Cabinets) Determination 2019.

**Please provide feedback on the following question:**

- Question 33: Do you agree that the removal of "and accepted by the Scheme Administrator" would make the activity easier to use? Please provide reasoning supporting your response.

### 5.4.4 Update to Activity Definition F7

Refer to the draft ESS Rule: Activity Definition F7

The NSW Government has identified an opportunity to align the current Activity Definition F7 with the implementation of the Greenhouse and Energy Minimum Standards (Three Phase Cage Induction Motors) Determination 2018. This Determination replaced the existing GEMS (Three Phase Cage Induction Motors) Determination 2012 in May 2019.

The NSW Government proposes to update the baseline efficiency figures contained within Table F7.3 of the Activity Definition, to align with the baseline efficiency figures in Schedule 2 of the Determination.

**Please provide feedback on the following question:**

- Question 34: Do you agree with updating and aligning this Activity Definition in line with the updates to the GEMS Determination 2018? Please provide reasoning supporting your response.

# Part Six: Glossary

| Acronym | Definition |
|---|---|
| ACP | Accredited Certificate Provider |
| BCA | Building Code of Australia |
| CBD | Commercial Building Disclosure |
| CEC | Comparative Energy Consumption |
| CLESF | Commercial Lighting Energy Savings Formula |
| EEI | Energy Efficiency Index |
| EEIS | Energy Efficiency Improvement Scheme |
| ESC | Energy Savings Certificate |
| ESS | Energy Savings Scheme |
| HEER | Home Energy Efficiency Retrofit |
| IPART | Independent Pricing and Regulatory Tribunal |
| LED | Light Emitting Diode |
| MBM | Metered Baseline Method |
| M&V | Measurement and Verification |
| NABERS | National Australian Built Environment Rating System |
| NSW | New South Wales |
| PIAM&V | Project Impact Assessment with Measurement and Verification |
| RESA | Recognised Energy Saving Activity |
| SONA | Sale of New Appliances |
| VEET | Victorian Energy Efficiency Target |
| | |