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Energy Savings Scheme

Rule Change

2017-18

Position Paper

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Foreword

This paper is intended to explain the NSW Government's position on submissions received regarding the proposed changes to the Energy Savings Scheme (ESS) Rule. The changes made are part of the NSW Government's commitment to continuous improvement of the ESS. The NSW Government sought input from stakeholders to ensure the adopted changes are appropriate and reflected industry standards.

This paper includes a summary of submissions received in response to the ESS Rule changes proposed in the public consultation, and an explanation of the Government's response and final Rule changes.

All Rule changes are scheduled to commence on 31 July 2018, unless stated otherwise such as the commercial lighting upgrade changes (1 November 2018) or the changes regarding the Household and Small Business Upgrade Program (20 April 2018).

The Energy Affordability Package was announced by the NSW Premier Gladys Berejiklian, on 3 September 2017. One of the key actions of this package is to help households and small businesses save energy and money through the Household and Small Business Upgrade Program. To ensure this program can commence and operate effectively, Rule changes relating to the program will commence on 20 April 2018.

For Lighting Upgrades under the Commercial Lighting Sub-Method, Clause 9.4 of the version of the Rule in force until 31 July 2018, the *Energy Savings Scheme (ESS) Rule (Amendment No. 1) 2017*, must be used until 31 October 2018.

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1 Introduction

The NSW Energy Savings Scheme (ESS) is the premier energy efficiency program in NSW. The *Electricity Supply Act 1995* (the Act) states that the primary objective of the ESS is to create a financial incentive to reduce the consumption of energy by encouraging energy saving activities. The ESS works by placing an obligation on 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 Savings activity.

The Act allows the Minister for Energy and Utilities to approve rules (the ESS Rule) that set out how ESCs can be created, eligible participants, types of eligible activities, calculation methods and Energy Savings factors.

1.1 The Rule amendment process

In 2014 and 2015 the NSW Government consulted on a statutory review of the ESS and on proposed reforms. The ESS Review process is documented at:

<http://www.resourcesandenergy.nsw.gov.au/ESS-review>

The ESS Review Position Paper outlines the government's intention to proceed with annual updates to the ESS Rule. The regular annual updates to the ESS Rule 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 or sub-methods for Energy Savings, and
- make other enhancements to the ESS Rule to maintain its integrity and/or reduce transaction costs.

The NSW Government also intends to conduct a major review of the ESS Rule every three years. The next major review will take place in 2018-19.

1.2 The Position Paper

As part of the annual review, the NSW Government conducted a targeted consultation with a wide cross-section of ESS stakeholders during July and August 2017, on the proposed changes to the ESS Rule. This targeted consultation was method-specific and included issue papers that detailed the issues identified, the policy intent, and proposed changes for each method. Stakeholder feedback and written submissions were considered in drafting changes to the ESS Rule for public consultation.

An eight-week public consultation on the draft ESS Rule commenced in December 2017, and included an information forum on 13 December 2017.

Written submissions to the public consultation were received from 16 stakeholders across the energy efficiency industry. Stakeholder feedback from public consultation has been considered by the NSW Government in preparing this paper and necessary changes have been included in the ESS Rule. This is described in more detail in the following sections.

2 General Rule updates

2.1 Commencement date and transitional arrangements

Refer to the ESS Rule: §11.9 and §11.10

The NSW Government proposed that the gazettal of the amendments to the Rule will specify the date that the amendments will come into effect. The NSW Government proposed to insert a new clause at 11.9 to provide clarification on the specific transitional arrangements that apply to commercial lighting.

A total of five submissions were received in response to the proposal to preserve preceding transitional arrangements within the Rule. All stakeholders supported the proposal.

Government response

The NSW Government will proceed with the proposed commencement of the Commercial Lighting Formula changes on 1 November 2018, providing a six month period from gazettal to commencement. All other changes will commence on 31 July 2018. The NSW Government's response to comments on the proposed length of transitional arrangements that apply to commercial lighting is provided in section 5.2 of this paper.

Changes from the proposed Rule

An additional clause has been inserted at 11.10 to provide further clarification on the specific transitional arrangements that apply to commercial lighting.

2.1.1 Gazettal and commencement of Rule changes related to the Household and Small Business Upgrades Program

One of the key actions of the Energy Affordability Package is to help households and small businesses save energy and money through the Household and Small Business Upgrades Program.

To ensure this program can commence and operate effectively, several Rule changes need to commence earlier than the standard Rule change to support the program's implementation. The following changes will be gazetted and commence on 20 April 2018, prior to other changes presented in this Position Paper:

- Exempt Energy Program definition (Section 2.3)
- Updates to Regional Network Factors (Section 2.4)
- Updates to a Small Business Building definition (Section 5.4.2)
- Updates to Activity Definition E5 (Section 5.4.7)

2.2 Data gathering

Refer to the ESS Rule: §6.8

The NSW Government proposed to collect additional customer data to evaluate the effectiveness of the ESS and its linkages to other energy savings programs. This would potentially include the National Metering Identifier (NMI) for electricity savings, and the Delivery Point Identifier (DPI) for gas savings. The NSW Government considered a request for the NMI and DPI within the data provision requirements in clause 6.8 of the ESS Rule.

There were nine submissions received to the proposal to expand clause 6.8 of the ESS Rule to include collection of additional customer data. Three submissions were generally supportive of the proposal, although one was unclear about the proposed approach of NMI collection on sites that potentially have more than one NMI or a shared NMI. Several submissions raised concerns about obtaining customers' consent and potential increases in delivery costs. Another submission highlighted the importance of collecting such customer data at both the macro level, to evaluate the effectiveness of the scheme; and at the micro level, to indicate possible audit and enforcement targets.

In addition, there were suggestions to exclude certain methods from additional data collection requirements. There were two proposals for an alternative data collection method, including collection of additional information on sample projects.

Government response

The intent of collecting additional customer data, such as NMIs and DPIs, is to effectively track specific locations of each ESS implementation. The NMIs and DPIs are intended to serve as unique identifiers. Such data would enable effective evaluation of the ESS and its operation. It would also allow the linkage of ESS implementations to projects taking part in other energy savings programs.

Considerations on the best approach of collecting additional customer data, such as NMIs and DPIs, are ongoing. In response to stakeholder feedback, the NSW Government will not make changes to clause 6.8 and instead undertake further research as part of the 2018-19 Rule change process.

Changes from the draft Rule

No text relating to the proposed change to clause 6.8 was included in the draft Rule. Therefore, there have been no changes from the draft Rule.

2.3 Exempt Energy Program definition (not included in public consultation paper)

Refer to the ESS Rule: §10.1 and §9.8.1

The NSW Government proposes to introduce a co-payment exemption in the Rule for programs that are approved by the Minister for the Environment, such as the Energy Affordability Package.

This change is related to the Household and Small Business Upgrade Program. At the time of the ESS public consultation in December 2017, this program was still in development and consequently, this rule change was not included as part of the consultation.

The Household and Small Business Upgrades Program will incentivise energy efficiency service providers to deliver energy efficiency upgrades to households and small businesses. A specific focus of the program will be on supporting regions, sectors and activities that have had limited uptake in the ESS to date.

One of the mechanisms that will be used to achieve this is a competitive tendering process where Accredited Certificate Providers (ACPs) create Energy Savings Certificates from certain types of activities through the Energy Savings Scheme.

Under the first round of the program, the Home Energy Efficiency Retrofit (HEER) sub-method will be used to deliver lighting upgrades to households and small businesses. The NSW Government will monitor the delivery of these upgrades, and may find it necessary to streamline compliance obligations related to the \$30 Purchaser co-payment. This would be achieved by exempting the program from the co-payment requirement under the Rule, and instead enforcing the co-payment through ACP contracts. These contracts have been drafted to allow for this.

To provide the flexibility to streamline compliance obligations if required, the NSW Government proposes to introduce a provision enabling the Minister for the Environment to make an order to exempt the program from the co-payment requirement under the Rule.

Changes to the draft Rule

The draft Rule has been amended to create an 'Exempt Energy Program' category in the definitions sub-clause 10.1 and to amend sub-clause 9.8.1 to state that Exempt Energy Programs are not subject to the co-payment requirement under the ESS Rule.

2.4 Updates to Regional Network Factors (not included in public consultation paper)

Refer to the ESS Rule: Table A24

The NSW Government proposes to update the Regional Network Factors table to include postcodes that cross state boundaries.

This change is related to the Household and Small Business Upgrade Program. At the time of the ESS public consultation in December 2017, this program was still in development and consequently, this rule change was not included as part of the consultation.

A review of the postcodes used to determine if an implementation is eligible for the increased Regional Network Factor of 1.03, identified several postcodes within NSW that cross state boundaries and are not currently assigned a Regional Network Factor. Under the Household and Small Business Upgrade Program, contracts with service providers undertaking regional delivery use this list to determine eligibility for the program. At present, households and businesses in the excluded postcode areas will not be able to access the program unless this list is updated. The NSW Government proposes to update Table A24 to ensure all households and businesses in NSW have access to the program.

Changes to the draft Rule

Table A24 has been updated to include postcodes that cross state boundaries.

3 Project Impact Assessment with Measurement and Verification Method

The Project Impact Assessment with Measurement and Verification (PIAM&V) Method provides a flexible, measurement and verification based approach for ACPs to calculate Energy Savings. The PIAM&V Method is designed to incentivise a broad range of energy saving activities, including those not currently covered by the existing Deemed Energy Savings Method. The PIAM&V Method accounts for changes in operating conditions, which means that Energy Savings from a large variety of activities can be accurately estimated. The NSW Government has identified changes to strengthen the PIAM&V Method.

3.1 Lighting product requirements

Refer to the ESS Rule: §7A.21

The NSW Government proposed that LED lights installed under the PIAM&V Method must also meet the relevant equipment requirements outlined in the commercial lighting sub-method.

There were nine submissions received to this proposed requirement. Three submissions supported the proposed change. Six submissions raised concerns on the proposed change. The main concerns raised by stakeholders were:

- There are instances where bespoke lighting is installed as part of a PIAM&V project. These lights are not designed to be sold to other customers, making it very costly for manufacturers to get the lights approved. ACPs, energy savers and manufacturers usually work on the designs and specifications of these lights for an extended period, which ensures the quality of the lighting products;
- Introducing this requirement may prevent some energy savers from having their lights upgraded, leading to less energy being saved;
- The complex nature of the PIAM&V method already minimises the number of sub-quality products being used.

Four of the nine submissions supported having a level of safety requirements for lighting products installed under the PIAM&V method. Two submissions expressed concerns relating to the PIAM&V Method being used as an alternative to the lighting sub-method.

Government response

The NSW Government is committed to ensuring products installed under the ESS meet Australian and NSW regulations and standards, particularly safety standards.

In response to stakeholder submissions, the NSW Government will not proceed with the proposal to require LED lights installed under PIAM&V to meet the relevant equipment acceptance criteria outlined in the commercial lighting sub-method. Instead, a product safety certificate will be required for all lighting products installed under PIAM&V, to ensure they meet relevant safety standards.

Another risk identified by the NSW Government is that service providers may implement lighting projects under the PIAM&V Method to avoid the changes to asset lifetimes under the commercial lighting sub-method.

To mitigate this risk, the NSW Government will review and update the decay factors in the PIAM&V Tool for projects involving lighting upgrades, to reflect the changes to asset lifetime values under commercial lighting.

Changes to the draft Rule

The proposed change has been removed from the draft Rule and we now require products to be accepted as meeting the safety requirements specified by the Scheme Administrator, as specified in Clause 7A.21. Clause 7A.21 provides the Scheme Administrator with the ability to accept and cease to accept products as meeting the equipment requirements relating to safety, as set out in clause 7A.21A.

Decay factors in the PIAM&V tool will be reviewed and updated to reflect changes to the commercial lighting asset lifetime values.

In addition, the definition of “Equipment Requirements” in Clause 10.1 has been updated to specify that additional requirements as published from time to time by the Scheme Administrator, according to clauses 7A.21A, 8.4B and 9.2A, are included in this definition.

3.2 Measurement Procedures

Refer to the ESS Rule: §7A.5

The NSW Government proposed to amend the Rule to clarify that Additional Energy Savings can be calculated for one or more Measurement Periods provided the start date and end date are within the required timeframes.

No submissions were received for this proposed change.

Government response

The NSW Government will proceed with the change.

Changes to the draft Rule

The proposal has been adopted with minor amendments to the wording of the clause.

3.3 Energy consumption, Independent Variables and Site Constants

Refer to the ESS Rule: §7A.6

The NSW Government proposed to remove the term “estimates for the” from clause 7A.6 (a).

No submissions were received for this proposed change.

Government response

The NSW Government will proceed with the change.

Changes to the draft Rule

There have been no changes from the draft Rule and the proposal has been adopted in full.

3.4 Forward Creation when using the Default Decay Factors

Refer to the ESS Rule: §7A.12

The NSW Government proposed that ACPs are not required to use a Persistence Model to set a Maximum Time-Period for Forward Creation when using default decay factors.

Three submissions were received for this proposed change and all indicated support for the change.

Government response

The NSW Government will proceed with the change.

Changes to the draft Rule

There have been no changes from the draft Rule and the proposal has been adopted in full.

3.5 Top-up certificate creation

Refer to the ESS Rule: §7A.14

The NSW Government proposed to allow ACPs to top-up ESCs for one or more years at the same time, provided they calculate Additional Energy Savings for each year separately.

Six submissions were received for this proposed change and all indicated support for the change.

Government response

The NSW Government will proceed with the change.

Changes to the draft Rule

The proposal has been adopted, and an additional clarification of the term 'Counted Energy Savings' was added.

3.6 Annual certificate creation

Refer to the ESS Rule: §7A.14A

The NSW Government proposes to introduce the clause 7A.14A to specify that energy savings during a Measurement Period are taken to occur at the end of the Measurement Period.

During the consultation, it was brought to the attention of the NSW Government that when ACPs are using the PIAM&V method for annual certificate creation, the current Rule does not specify the date when energy savings are taken to occur.

Government response

Under the Act, ACPs can only create ESCs for energy savings that occur during a particular year, no later than six months after the end of that year. If the annual Measurement Period for a Recognised Energy Saving Activity (RESA) starts and finishes in July, then the ACP may not be able to claim any energy savings that occurred in the previous year, as more than six months would have passed since the end of that year. On this basis, the NSW Government will proceed with the introduction of clause 7A.14A.

Change to the draft Rule

The newly introduced Clause 7A.14A will specify that energy savings during a Measurement Period are taken to occur at the end of the Measurement Period. This will allow ESCs to be created for all Energy Savings occurring during the Measurement Period.

3.7 Measurement and Verification Professional

Refer to the ESS Rule: §7A.15 (a)(i)

The NSW Government proposed a minor change to the wording of this clause.

No submissions were received for this proposed change.

Government response

The NSW Government will proceed with the change.

Changes to the draft Rule

There have been no changes from the draft Rule and the proposal has been adopted in full.

4 Metered Baseline Method

The Metered Baseline Method (MBM) compares energy consumption before and after an energy savings project is implemented. Savings are calculated based on actual measured energy consumption before and after an activity has been implemented. The NSW Government has identified changes to strengthen this Method.

4.1 Lighting product requirements

Refer to the ESS Rule: §8.1

The NSW Government proposed that LED lights installed under the MBM must also meet the relevant equipment requirements outlined in the commercial lighting sub-method.

There were eight submissions to this proposed change. Three submissions supported this change while five opposed it. Concerns raised about this proposed change are similar to the concerns in section 3.1 of this paper:

- There are instances where bespoke specialised lights are installed as part of an MBM project. These lights are not to be sold to other customers, making it very costly for manufacturers to get the lights approved. ACPs, energy savers and manufacturers usually work on the designs and specifications of these lights for an extended period, which ensures the quality of the lighting products;
- Introducing this requirement may prevent some energy savers not having their lights upgrade, leading to less energy being saved;
- The complex nature of the MBM already minimises the number of sub-quality products being used.

Government response

The NSW Government is committed to ensuring products installed under the ESS meet Australian and NSW regulations and standards, particularly safety standards.

In response to stakeholder submissions, the NSW Government will not proceed with the proposal to require LED lights installed under MBM to meet the relevant equipment acceptance criteria outlined in the commercial lighting sub-method. Instead, a product safety certificate will be required for all lighting products installed under MBM, to ensure they meet the relevant safety standards.

Changes to the draft Rule

The proposed change has been removed from the draft Rule and we now require products to be accepted as meeting the safety requirements specified by the Scheme Administrator, as specified in Clause 8.4A. Clause 8.4A provides the Scheme Administrator with the ability to accept and cease to accept products as meeting the equipment requirements relating to safety, as set out in clause 8.4B.

In addition, the definition of “Equipment Requirements” in Clause 10.1 has been updated to specify that additional requirements as published from time to time by the Scheme Administrator, according to clauses 7A.21A, 8.4B and 9.2A, are included in this definition.

4.2 NABERS for Apartment Buildings (not included in public consultation paper)

Refer to the ESS Rule: Schedule A Tables A20 and A21

The NSW Government proposes to expand the Metered Baseline NABERS sub-method to allow energy savings to be calculated for NABERS-rated apartment buildings.

At the time of the ESS public consultation in December 2017, the NABERS rating tool for apartment buildings was still in development. Therefore, the Benchmark NABERS Rating Index values (Table A20) and Annual Ratings Adjustment values (Table A21) were unavailable for inclusion in the draft Rule. For this reason, the proposal was not available for public consultation.

Inclusion of NABERS for apartment buildings

The NABERS sub-method currently covers all NABERS energy performance rating methodologies, including offices, hotels, shopping and data centers, and hospitals.

In 2018, the NABERS program is launching a rating tool to measure energy performance of the common areas of apartment buildings. With the introduction of this new tool, the NSW Government will allow the NABERS sub-method to calculate energy savings for NABERS rated apartment buildings through the ESS. This inclusion will provide more opportunities for residential sector stakeholders to access the ESS.

Annual rating adjustment

The purpose of the annual rating adjustment is to consider the average annual improvement of the building stock. There is no evidence to suggest that the apartment building sector is improving at the same rate as, for example, commercial office building stock in Australia. In addition, apartment buildings have not been subject to policy drivers like the Federal Commercial Building Disclosure (CBD) program or improvements in the building code. Based on this evidence, the annual rating adjustment for historical baseline NABERS ratings that are 2-7 years old for apartment buildings will be set at zero.

Changes to the draft Rule

The new NABERS Rating tool for apartment buildings has been added to section 8.8.1 (a) of the ESS Rule. Table A20 and A21 have been updated to include the values for apartment buildings.

5 Deemed Energy Savings methods

The Deemed Energy Savings Method allows energy savings to be calculated for commercial and residential projects using simple tools and look-up tables. This simplifies Energy Savings calculations and makes it easier to participate in the ESS. In addition, ESCs can be claimed upfront after implementation, thereby helping to offset capital costs.

5.1 Updates to Sale of New Appliances sub-method

The Sale of New Appliances (SONA) sub-method provides incentives for customers to purchase new appliances that are more efficient than the market average. Incentives are provided to encourage the purchase of appliances that have Energy Rating Labels and have been tested according to the relevant Australian Standard including: clothes washers, clothes dryers, dishwashers, refrigerators, freezers and televisions.

5.1.1 Adjustment to the SONA Equipment Electricity Savings

Refer to the ESS Rule: §9.3 Schedule B

The NSW Government proposed that the Equipment Electricity Savings be updated to use a baseline that reflects the sales-weighted average star rating of appliance sales across NSW in 2017.

There were three submissions received to the proposed updated SONA Equipment Energy Savings tables. Although all agreed with the proposed updates, two stakeholders suggested that the 0.5-star threshold, along with an adjusted market average, would have a negative impact on the incentives retailers need to bring about enduring behaviour change.

Government response

Applying a minimum 0.5-star threshold above market average continues to be an effective method of helping to ensure certificates generated represent real energy savings. Awarding certificates for above market average performance incentivises retailers to sell more efficient appliances, and assists households to purchase new appliances that are more efficient than the market average.

The NSW Government is also currently conducting a review of the SONA methodology to better understand its market impact and how to further incentivise the sale of highly efficient appliances.

Changes to the draft Rule

There have been no changes from the draft Rule and the proposal has been adopted in full. In addition, the term “rated capacity” has been updated within the equipment requirements for Activities B1 to B7 under the SONA method.

5.2 Updates to the Commercial Lighting Energy Savings Formula

5.2.1 Updates to the Asset Lifetime

Refer to the ESS Rule: §9.4 Schedule A Table A10.6

The NSW Government proposed the following updates to the Asset Lifetime to reflect the transformation in the lighting market in NSW.

Asset lifetime values

A total of six submissions were received in response to the proposed updates to asset lifetimes. In general, the submissions supported the proposed changes, with some suggestions for improvements.

Four of the submissions suggested simplifying the asset lifetime value table (Schedule A Table A10.6) by consolidating the asset lifetime values into building/space types.

One submission suggested that LED to LED replacements require their own class in Table A9.3, to account for additional energy efficiency gains in LED equipment.

Several submissions raised concerns that the proposed asset lifetime values are not based on transparent or reliable data.

Transition period

Feedback on the proposed transition period for changes to the commercial lighting formula was mixed.

The purpose of the transition period was understood, but five submissions raised concerns about the short length of the transition period and potential cost to ACPs. It was suggested that a more effective approach would be to keep the proposed transitional period for implementations, but allow the registration and creation of certificates to occur as per the normal process, whereby ESCs can be created up until 30 June of the year after the implementation/energy savings occurred.

Rounding asset lifetime values

Three submissions disagreed with the proposal to round asset lifetime values to the nearest year, stating that it would affect the MWh savings and calculation of ESCs.

Government response

Asset lifetime values

The NSW Government position and proposed asset lifetime values have been informed by expert modelling using best available data, recommendations detailed in the Lighting Market Impact Evaluation (LMIE) report, and industry feedback received during the targeted and public consultation. These changes will support a gradual transition for participants and maintain the integrity of the scheme. All documentation related to this change was provided to stakeholders as part of the public consultation in Appendices A, B and C.

The NSW Government works to continuously improve and develop the Scheme and will be undertaking additional work to build on the existing data and modelling used to determine the asset lifetime values. All suggestions based on clear research and evidence will be taken into consideration as part of this work. The NSW Government saw the benefit in consolidating the asset lifetime value table (Schedule A Table A10.6), to simplify and streamline this proposed change. We also agreed with the suggestion that LED to LED replacements require their own class in Table A9.3, however, with the removal of “Equipment Group” from the asset lifetime table, this is no longer an issue.

Transition period

The transition period proposed by the NSW Government is based on industry feedback and provides stakeholders with six months from gazettal to implementation of the Rule changes. These changes support an orderly transition for participants, supporting scheme and business continuity, and, where required, allowing time to amend business models.

Rounding asset lifetime values

The NSW Government agrees that the asset lifetime values should remain rounded to one decimal place.

Changes to the draft Rule

Asset lifetime values

In response to stakeholder feedback, the NSW Government has revised and simplified the asset lifetime groupings under Schedule A Table A10.6. This is shown in Table 1 below.

Table 1 Asset Lifetime (in years) by Building/Space Group

Building/Space Group	Asset Lifetime (in years)	Regional Asset Lifetime (in years)
A (Others)	7.3	10.0
B (Office)	7.4	10.0
C (Industrial)	11.7	11.7
D (Retail)	7.4	10.0
E (Public)	12	12.0

Car parks and wholesale storage and display areas are now classed under Group C (Industrial) building/space group, instead of Group A (Others). Asset Lifetimes have been adjusted to reflect these changes.

The NSW Government has also adjusted the regional factors for industrial spaces to reflect the increase in asset lifetime value.

Rounding asset lifetime values

Asset lifetimes will remain rounded to one decimal place and will not be rounded to the nearest year.

Transition period

There have been no changes from the draft Rule and the proposal has been adopted in full.

5.2.2 Maximum Nominal Lamp Power for high bay lamps

Refer to the ESS Rule: §9.4 Schedule A Table A9.2

The NSW Government proposed to set a maximum Nominal Lamp Power (NLP) cap for removed high-intensity discharge (HID) high bay lamps of 400W for replacement of lamps with non-integrated ballasts, and 450W for replacement of lamps with integrated ballasts, due to the risk that the NLP may be misreported when calculating energy savings.

A total of eight submissions were received in response to the proposed changes. The majority of submissions disagreed with the proposal to set a cap for removed HID high bay lamps of 400W for replacement of lamps with non-integrated ballasts, and 450W for replacement of lamps with integrated ballasts. Although there was general agreement about the risk, a number of concerns were raised, including the impact on energy efficiency upgrades in certain space types, e.g. sports fields and outdoor carparks, and lower incentives for lighting activities that have yet to mature. One submission suggested an alternative approach would be to exempt certain space types from the cap.

Government response

The NSW Government considers the risk of misreporting of NLP justifies the proposed change. However, in response to concerns regarding outdoor lighting upgrades, the cap will only be applied to indoor areas.

Changes to the draft Rule

The NSW Government has set a maximum Nominal Lamp Power (NLP) cap for removed HID high bay lamps of 400W for replacement of lamps with non-integrated ballasts, and 450W for replacement of lamps with integrated ballasts, for indoor areas. If an ACP claims baseline NLP for an outdoor area (i.e., above the cap), it will need to establish that the lamp is outdoors to the satisfaction of the Scheme Administrator.

5.2.3 Addition of the Maintained Emergency Lighting sub-clause

Refer to the ESS Rule: §9.4.1

The NSW Government proposed to include a sub-clause to only allow the replacement of existing Maintained Emergency Lighting with new, more efficient Maintained Emergency Lighting.

All five submissions received for this proposal supported the addition of the Maintained Emergency Lighting sub-clause.

Government response

The NSW Government will proceed with the change.

Changes to the draft Rule

There have been no changes from the draft Rule and the proposal has been adopted in full.

5.2.4 Mercury Vapour and Metal Halide lamps with built in ballast

Refer to the ESS Rule: §9.4 Schedule A Table A9.2

The NSW Government proposed to amend Table A9.2 to include a “built in” category for mercury vapour and metal halide lamps with integrated ballasts to address shifts in the market.

All five submissions received for this proposal supported the inclusion of a “built in” category for mercury vapour and metal halide lamps with built in ballast.

Government response

The NSW Government will proceed with the change.

Changes to the draft Rule

There have been no changes from the draft Rule and the proposal has been adopted in full.

5.3 Updates to the Public Lighting Energy Savings Formula

Refer to the ESS Rule: §9.4A

The NSW Government proposed to introduce standalone, simplified equations to the public lighting sub-method so that the Energy Savings are not impacted by the proposed changes to the commercial lighting sub-method. The proposed equation removed the control multiplier and air-conditioning multiplier as they are not relevant to public lighting upgrades.

All seven submissions received for this proposal supported the introduction of standalone, simplified equation for the public lighting sub-method.

Government response

The NSW Government will proceed with the change.

Changes to the draft Rule

There have been no changes from the draft Rule and the proposal has been adopted in full.

5.4 Updates to Home Energy Efficiency Retrofits sub-method

5.4.1 Addition of Building Code of Australia (BCA) Class 3 to HEER and ROOA

Refer to the ESS Rule: §10.1

The NSW Government proposed to include BCA Class 3 buildings under the current definition for a Small Business Building.

All five submissions received for this proposal supported the inclusion of BCA Class 3 buildings under the current definition for a Small Business Building. Three of the submissions recommended the removal of the existing requirement for a Small Business Building to be less than 200 square metres.

Government response

Following the introduction of the Household and Small Business Upgrades Program, there is now a requirement to amend the Small Business Building definition to include additional types of small businesses. For this reason, the proposed addition of BCA Class 3 buildings to the Small Business Building definition is no longer required.

Changes to the draft Rule

The NSW Government will not proceed with this change as it is no longer relevant. Please see proposed change in section 5.4.2 below.

5.4.2 Update to Small Business Building definition (not included in public consultation paper)

Refer to the ESS Rule: §10.1

The NSW Government proposes to amend the Small Business Building definition to include additional types of small business.

This change is related to the Household and Small Business Upgrades Program. At the time of the ESS public consultation in December 2017, this program was still in development and consequently, this rule change was not included as part of the consultation.

The eligibility of a small business within the ESS is currently based on the Small Building Business definition, defined by floor area and BCA classification. This definition unintentionally excludes certain types of small businesses from the Household and Small Business Upgrades Program, including where the business occupies part of a larger mixed-use building.

The purpose of this change is to allow the eligibility requirement to be based on energy consumption of the business, enabling more small businesses to participate in the Household and Small Business

Upgrades Program, simplifying the method, and reducing administration costs. The *National Energy Retail Law* already establishes an upper consumption threshold of 100MWh/year for small electricity customers. It is intended that this definition is also used to define small business sites for the purposes of the HEER sub-method by using the definition that a Small Business Site is where the business occupying that site is a small customer under the *National Energy Retail Law*.

It is intended that business customers that elect to be treated as a large customer through aggregation are not included in the definition.

It is recognised that small businesses that are incorrectly defined as a large customer will not be able to access the method. These businesses should be sufficiently incentivised to work with their retailer to address the issue, and will be able to access the method when rectified.

Where the business is part of an embedded network (i.e. a customer of an exempt seller), it is intended that these businesses are also included in the definition of a small business by demonstrating they have an annual electricity consumption below the upper consumption threshold (currently 100MWhr/year).

It is intended that the Scheme Administrator will have the discretion to determine whether a Site is a small business based on the information provided.

Changes to the draft Rule

The NSW Government has included updated definitions for Small Business Site, Small Customer, Upper Consumption Threshold, Exempt Seller and Large Customer in sub clause 10.1. In addition, all references to 'Small Business Building' have been replaced with 'Small Business Site'.

5.4.3 Updates to savings factors for building fabric activities

Refer to the ESS Rule: §9.8

The NSW Government proposed to update the Energy Savings provided for the building fabric activities. The NSW Government also proposed to change some of the eligibility requirements to improve accessibility and encourage greater Energy Savings. Finally, the NSW Government proposed further changes to encourage greater Energy Savings and include two additional activities in the ESS Rule: sealing exhaust fans and installing external blinds.

Windows

The NSW Government proposed revising the savings factors for thermally efficient windows and secondary glazing, and basing the factors on U values rather than Windows Energy Rating System (WERS) star ratings. There were no submissions received for this proposed change.

Government response

The NSW Government will proceed with the change.

Changes to the draft Rule

There have been no changes from the draft Rule and the proposal has been adopted in full.

Draught Proofing

The NSW Government proposed revising the savings factors for draught-proofing activities, and introducing a longer lifetime period of 10 years for products with a warranty period that exceeds five years.

There were three submissions received for this proposal. Two submissions did not support the use of the warranty period as an indicator of the lifetime of the product and suggested that the length of warranty is related to the perceived cost and risk to the customer. The other submission supported the use of the warranty period as an indicator of product lifetime products, and suggested a focus on the quality and legitimacy of the warranty.

Government response

The NSW Government considers that it is reasonable to apply a longer lifetime period for products with longer warranty periods.

Changes to the draft Rule

There have been no changes from the draft Rule and the proposal has been adopted in full.

Chimney Dampers

The NSW Government proposed to increase the lifetime period for chimney dampers from five years to 10 years, and to exclude chimney balloons.

There were two submissions received to this proposal. Although both submissions agreed with extending the lifetime of the chimney dampers, they believed a lifetime period of 20 years would be more appropriate.

Both submissions made comments about the proposed warranty period of five years not being an effective way to ensure better quality dampers are used in the Scheme.

Government response

The proposal to extend the lifetime of installed chimney dampers from five to 10 years was made due to the removal of chimney balloons, leaving only more robust dampers as eligible equipment under this Activity. Increasing the lifetime of these dampers to 10 years also allows the Scheme to harmonise with both the Victorian and South Australian energy efficiency schemes.

Although the lifetime of a damper may exceed 10 years, deemed methods remain conservative in calculating energy savings to incorporate a number of variables that the product may be affected by over its lifetime. Warranty periods are an effective way of understanding the potential lifetime of products offered. The warranty period has been reduced to three years to reflect standard industry practice.

Changes to the draft Rule

The NSW Government has updated the Equipment Requirements in Activity Definition E9 to reflect the reduction in minimum warranty periods for chimney dampers from five to three years. The NSW Government has excluded chimney balloons from this activity and the assumed lifetime has been extended from five to ten years.

Exhaust fans

There were three submissions that responded to the introduction of exhaust fans. Two submissions suggested that the installer could complete and sign a post-implementation declaration to confirm the fan allows the egress of air to the outside. Other suggestions included a statement or declaration that asks the installer to confirm that installation of the damper has not impeded normal operation of the exhaust fan, or a pre/post photo of the implementation taken by the installer.

Two submissions stated that the replacement of an existing exhaust fan with a new self-sealing exhaust fan is a high-cost activity, and that the proposed addition to Schedule D is therefore appropriate. One submission explained that this would depend on the cost of the equipment and price available for associated ESCs.

There were two other general comments made. One submission stated that given eligible exhaust fan replacements are restricted to residential buildings, there is a missed opportunity as Small Business Buildings would likely have a heavier air conditioning load and therefore higher savings factors from the replacement of exhaust fans.

One response requested that eligibility requirements should be extended so that exhaust fans could exhaust air either directly to the outside or into the attic space of a residential building.

Government response

The NSW Government will consider the evidence requirement suggestions provided and work with the Scheme Administrator to update the guidance materials related to the egress of air when the exhaust fan is in operation.

The NSW Government agrees that savings factors from exhaust fans may be higher for Small Business Buildings, and will investigate providing updated savings factors for small businesses during the 2018-19 Rule Change process.

At this stage the NSW Government will not change eligibility requirements to allow exhaust fans to exhaust directly into an attic space.

Changes to the draft Rule

There have been no changes from the draft Rule and the proposal has been adopted in full.

External blinds

The NSW Government proposed to include the installation of an external blind to a window or door as an eligible Activity in E10. This would replace the existing activity of applying window films to doors and windows.

Three submissions were received from stakeholders. Of those that responded, all agreed that the requirement that the window or door must not face south could be easily evidenced through a range of mapping tools and programs.

Two respondents believed a NSW White Card would be an appropriate measure to ensure safety for installers working at heights. One respondent mentioned that the Scheme should not preference one license or certificate over another. It was further suggested that the ESS could align with the Victorian Scheme, and change the wording to “performed by a person holding a suitable license enabling work at the necessary height”.

The NSW Government also consulted on whether deemed savings factors should be discounted for manually operated blinds, as there is a risk that the user behavior would not be as assumed in the modelling. One submission raised questions about the ability for an automatic blind system to be over-ridden, and believed that savings factors from manual and automatic operation should be analysed separately.

Government response

The NSW Government believes the evidence requirements for ensuring a window or door does not face south would be sufficient, and will determine evidence requirements with the Scheme Administrator.

Instead of referencing the NSW White Card, installers will be required to hold the relevant licences and qualifications as required by SafeWork NSW.

The modelling process was thorough, and although deemed over a lifetime of 20 years, figures are kept conservative to ensure Energy Savings are not eligible where they have not occurred. The scope of this will also be reviewed in the 2018 -19 Rule Change to see if automatic blind systems should have increased deemed savings factors (DSFs), or if manual blind system DSFs should be reduced.

Changes to the draft Rule

There have been no changes from the draft Rule and the proposal has been adopted in full.

5.4.4 BCA Climate Zones

Refer to the ESS Rule: Table A26

The NSW Government proposed to provide a table in Schedule A to easily identify the relevant Climate Zone for each NSW postcode.

All three submissions received for this proposal supported the proposed changes to the BCA Climate Zones.

Government response

The NSW Government will proceed with the change.

Changes to the draft Rule

There have been no changes from the draft Rule and the proposal has been adopted in full.



5.4.5 Updates to Pool Pump factors

Refer to the ESS Rule: §9.8 Activity Definition D5

The NSW Government proposed to revise the method for calculating Energy Savings for Pool Pumps and update the savings factors. Equipment requirements were also changed so that the warranty period was reduced to three years, and the requirement that a pool pump must be in working order at time of replacement was removed.

There were six submissions received to the proposed updates to Activity Definition D5: Replace an existing pool pump with a high efficiency pool pump. Of the six submissions received, three indicated interest in becoming accredited to undertake pool pump replacements, and another two indicating they would further consider the viability of the activity. One submission mentioned that, due to the maximum number of certificates available being less than 10 per pool pump, it would be hard to find sufficient opportunities to support a viable business model in this industry.

Regarding evidence requirements, submissions that replied to this question believe the most efficient solution is to have a geo-tagged photo pre- and post-implementation of the name plate of the pool pump, alongside a post-implementation declaration form to be completed by the installer. This would be similar to other HEER Schedule E evidence requirements. One submission suggested photos of the front of the implementation address should also be provided, alongside a photo of the location of the property.

There was one submission that questioned whether the savings factors were representative of actual savings achieved by higher-efficiency pool pumps. The submission commented that savings are theoretical, assuming the pump was set up and operating correctly, and always used on its lowest setting. There was a request to be able to award for pump enhancements using additional electronics, reductions achieved with providing a more efficient chlorinator, and for installing an intelligent control system.

There was a request from one respondent to have the replacement of Pool Pumps Activity included in the Sale of New Appliances (SONA) sub-method. This was due to purported streamlining of evidence and validation requirements, reliance on expert advice (which typically comes from sellers in store) and the requirement to have to engage multiple trades to carry out this activity.

Government response

The NSW Government believes the proposed evidence requirements would be suitable for this Activity, and will look to streamline these with other evidence requirements across Schedules D and E, where appropriate.

We acknowledge that the Star Rating is not the only factor that determines energy use with a pool pump. Savings factors within this Activity are kept conservative to incorporate multiple variables that

cannot be accounted for when deeming. The Star Rating system does however provide a benchmark for comparison across all pool pumps that have been rated through the Australian Standard. Variables, such as improving the efficiency or nominal rating of a pump, are all factors that would be too complex to account for in a deemed method. Activities, such as improving pump efficiency, reductions in chlorinator electrical use and intelligent control systems would be best suited to a method where measurement boundaries can be established. The Project Impact Assessment method with Measurement and Verification allows for these activities, as it can account for variables/incremental changes and give a more accurate representation of savings.

The NSW Government has decided to keep this Activity within the HEER sub-method as opposed to the SONA sub-method for the following reasons:

- The verification/evidence requirements under HEER allow the NSW Government to appropriately assess whether the pool pump was upgraded or not;
- The installation of a pool pump does not always require a plumber or electrician; this is only the case where required by relevant legislation. Further information on this can be found via the Scheme Administrator's guidelines or on their website.

The NSW Government will investigate the energy savings from improvements in chlorinator efficiency for future Rule changes.

Changes to the draft Rule

There have been no changes from the draft Rule and the proposal has been adopted in full.

5.4.6 Ventilators

Refer to the ESS Rule: §9.8 Activity Definitions D13 and D14

The NSW Government proposed to include a new Activity Definition for Natural Roof Space Ventilators and a separate Activity Definition for Fan-forced Roof Space Ventilators, PV Powered Fan-Forced Roof Space Ventilators and Occupied Space Ventilators. These are considered high-cost upgrades and were proposed to be included under Schedule D.

Five submissions confirmed their interest in the new activity for ventilators under the ESS. Two submissions strongly supported the introduction of this activity with one of these noting that electricity saving factors in Tables D13 and D14 seem to be sufficiently high to consider engagement in this activity, especially in the case of small business buildings. The second of these submissions believed the saving factors were too conservative and proposed that the NSW Government should undertake further modelling.

Two submissions highlighted that ventilators are not their core competency. One of them would need to undertake additional due diligence to decide on their involvement in the activity. The other

submission commented that it is unlikely that they would be interested in this activity, unless they received a specific request from an established high-volume client.

Government response

Ventilators are a proven and increasingly popular technology that can meet a portion of a building's heating and cooling requirements and thus reduce energy consumption. Given the interest highlighted in the submissions, a new Activity Definition for Natural Roof Space Ventilators and a separate Activity Definition for Fan-forced Roof Space Ventilators, PV Powered Fan-Forced Roof Space Ventilators and Occupied Space Ventilators will be incorporated under Schedule D of the new Rule as proposed. This will provide more energy efficiency opportunities for households and small businesses under the ESS.

The NSW Government is committed to maintaining the accuracy of energy saving estimates and will continue to work with stakeholders to review the electricity saving factors where sufficient evidence is provided.

Changes to the draft Rule

There have been no changes from the draft Rule and the proposal has been adopted in full.

5.4.7 Updates to Activity Definition E5 (not included in the public consultation paper)

Refer to the ESS Rule: Schedule E5 Tables E5.1 and E5.2

The NSW Government proposes to update the savings factors in Tables E5.1 and E5.2 for the replacement of a T8 or T12 luminaire with a LED luminaire to include higher savings factors where the luminaire being replaced is a twin lamp luminaire.

This amendment was considered during the preparation for the Household and Small Business Upgrades Program. At the time of the ESS public consultation in December 2017, this program was still in development and consequently, this rule change was not included as part of the consultation

A review of this activity during the design of the Household and Small Business Upgrades program identified that it does not accurately reflect the energy savings when upgrading linear fluorescent luminaires with two or more lamps, which are common in small businesses. The purpose of the proposed changes is to allow energy savings to be calculated for replacements of linear fluorescent luminaires with two or more lamps with LED luminaires and enable more small businesses to access the scheme.

Changes to the draft rule

The NSW Government has updated the savings factors in Tables E5.1 and E5.2 for the replacement of a T8 or T12 luminaire with an LED luminaire to reflect the savings that can be achieved when replacing a luminaire with more than one lamp.

5.4.8 Updates to High Efficiency Appliances for Businesses

Refer to the ESS Rule: §9.9 Activity Definitions F8 and F9

The NSW Government proposed to clarify that only new boilers or water heaters can be installed under Activity Definitions F8 and F9.

All fourteen submissions received for this proposal supported the proposed change to Activity Definitions F8 and F9.

Government response

The NSW Government will proceed with the change.

Changes to the draft rule

There have been no changes from the draft Rule and the proposal has been adopted in full.

6 Glossary

Acronym	Definition
ACP	Accredited Certificate Provider
BCA	Building Code of Australia
CBD	Commercial Building Disclosure (Program)
DPE	Department of Planning and Environment
DPI	Delivery Point Identifier
DSFs	Deemed Savings Factors
ESC	Energy Savings Certificate
ESS	Energy Savings Scheme
HEER	Home Energy Efficiency Retrofit
HID	High-intensity discharge
IPART	Independent Pricing and Regulatory Tribunal
LCP	Lamp Power Circuit
LED	Light Emitting Diode
LMIE	Lighting Market Impact Evaluation
M&V	Measurement and Verification
NABERS	National Australian Built Environment Rating System
NLP	Nominal Lamp Power
NMI	National Metering Identifier
NSW	New South Wales
PIAM&V	Project Impact Assessment with Measurement and Verification
PV	Photovoltaic

RESA	Recognised Energy Saving Activity
ROOA	Removal of Old Appliances
SONA	Sale of New Appliances
WERS	Window Energy Rating Scheme

