**EXPLANATORY STATEMENT**

# *Carbon Credits (Carbon Farming Initiative) Act 2011*

*Carbon Credits (Carbon Farming Initiative—Commercial and Public Lighting) Methodology Determination 2015*

**Background: Emissions Reduction Fund**

The *Carbon Credits (Carbon Farming Initiative) Act 2011* (the ***Act***) enables the crediting of greenhouse gas abatement from emissions reduction activities across the economy. Greenhouse gas abatement is achieved either by reducing or avoiding emissions or by removing carbon from the atmosphere and storing it in soil or trees.

In 2014, the Australian Parliament passed the *Carbon Farming Initiative Amendment Act 2014*, which established the Emissions Reduction Fund (ERF). The ERF has three elements: crediting emissions reductions, purchasing emissions reductions, and safeguarding emissions reductions.

Emissions reduction activities are undertaken as offsets projects. The process involved in establishing an offsets project is set out in Part 3 of the Act. An offsets project must be covered by, and undertaken in accordance with, a methodology determination.

Subsection 106(1) of theAct empowers the Minister to make, by legislative instrument, a methodology determination. The purpose of a methodology determination is to establish procedures for estimating abatement (emissions reduction and sequestration) from eligible projects and rules for monitoring, record keeping and reporting. These methodologies will help ensure that emissions reductions are genuine—that they are both real and additional to business-as-usual.

In deciding to make a methodology determination the Minister must have regard to the advice of the Emissions Reduction Assurance Committee (ERAC), an independent expert panel established to advise the Minister on proposals for methodology determinations. The Minister must not make or vary a methodology if the ERAC considers it inconsistent with the offsets integrity standards, which are set out in section 133 of the Act. The Minister will also consider any adverse environmental, economic or social impacts likely to arise as a result of projects to which the determination applies.

Offsets projects that are undertaken in accordance with the methodology determination and approved by the Clean Energy Regulator (the Regulator) can generate Australian Carbon Credit Units (ACCUs), representing emissions reductions from the project.

Project proponents can receive funding from the ERF by submitting their projects into a competitive auction run by the Regulator. The Government will enter into contracts with successful proponents, which will guarantee the price and payment for the future delivery of emissions reductions.

Further information on the ERF is available on the Department of the Environment website at: [www.environment.gov.au/emissions-reduction-fund](http://www.environment.gov.au/emissions-reduction-fund).

**Background: Commercial and Public Lighting**

The *Carbon Credits (Carbon Farming Initiative—Commercial and Public Lighting) Methodology Determination 2015* (the Determination) provides for crediting emissions reductions from projects that improve the energy performance of ***lighting systems*** in commercial and industrial buildings, as well as public areas, such as pedestrian, street and traffic lighting. By improving existing lighting systems less electricity is consumed and emissions associated with the generation of electricity are reduced.

Under this Determination, a ***lighting upgrade project*** is made up of one or more ***lighting upgrades*** which may involve modifying, replacing or supplementing a lighting system for the purpose of decreasing electricity usage of that system as a whole. Examples of activities include:

* modifying or replacing illumination equipment (such as ***lamps*** and ballasts);
* installing lighting control systems (such as motion sensors, sensor lights, and programmable and manual dimmers), which affect the way lighting systems consume electricity; and
* installing equipment that generates electricity for direct use by the lighting systems (such as ***integrated photovoltaic luminaire units***).

The Determination provides for lighting upgrades in multiple buildings or public spaces to be included in a single project.

Under the Determination, the abatement delivered by a lighting upgrade is calculated by subtracting the electricity consumption of the project lighting system from the electricity consumption of the baseline lighting system, and multiplying that result by an electricity emissions factor. The electricity consumption of a baseline or project lighting system is estimated based on the ***nominal lamp power*** of each lamp or ***luminaire circuit power*** of each ***luminaire.*** The calculations also use deemed values to take account of:

* electricity consumed by control gear (such as transformers);
* hours of operation (based on the type of building or type of space serviced by the lighting system);
* lighting control devices (such as motion sensors);
* the effect of reduced heat loads on air conditioning/ heating where applicable; and
* shutdown periods.

An additional option is included to allow a public lighting project to use information and data contained in a ***public lighting inventory*** and the National Electricity Market Load Tables for Unmetered Connection Points published by the Australian Energy Market Operator, as the basis for calculating baseline and project emissions. This option has been provided to align with current reporting and record keeping practices in the public lighting sector and to take advantage of the robust electricity consumption information included in the load tables.

By using deemed values and readily available information to calculate abatement, ongoing monitoring requirements have been minimised, to facilitate aggregation and ease of use by proponents. This approach has been determined as striking an appropriate balance between simplicity and accuracy on a site by site basis. The approach is intended to be conservative on a sector-wide level.

The additionality of projects under the Determination is addressed through the exclusion of new builds, major renovations and refurbishments, upgrades to non-operational lighting systems, and circumstances involving a change in use or size of a premises, all of which could potentially involve business‑as‑usual lighting upgrade activities.

Project proponents who could use the Determination include owners, operators or tenants of commercial and industrial buildings, local and state governments, electricity companies, lighting manufacturers or suppliers and other lighting project aggregators.

The Determination is based on similar methods under the New South Wales Energy Savings Scheme (ESS) and the Victorian Energy Efficiency Target scheme (VEET). In line with advice from stakeholders, the Department has sought to maintain consistency with methods from existing state energy efficiency schemes. There are, however, some differences due to differences in overall scheme design. Major differences include:

* the treatment of public lighting, whereby an option is provided enabling use of data from a public lighting inventory and the National Electricity Market Load Tables for Unmetered Connection Points in abatement calculations;
* the inclusion of an adjustment factor to account for shutdown periods due to circumstances that don’t reflect normal patterns of usage of the lighting system or the building, such as vacancy between tenancies, or shutdowns due to unplanned maintenance;
* as with all other determinations under the ERF, the abatement is credited on delivery rather than upfront as it is in the state schemes; and
* the inclusion of a disclosure provision, that requires proponents to disclose proposed lighting levels to an end user when seeking the end user’s agreement to an upgrade, ensuring that quality of lighting is considered in the normal process of contract negotiation.

**Application of the Determination**

The Determination sets out the detailed rules for implementing and monitoring offsets projects that reduce greenhouse gas emissions associated with existing commercial and public lighting systems.

Proponents are encouraged to read the Determination in combination with any applicable regulations, rules, and guidance documents.

The Determination reflects the requirements of the Act’s offsets integrity standards and helps to ensure that emissions reductions are real and additional to business-as-usual. The offsets integrity standards require that an eligible project should result in carbon abatement that is unlikely to occur in the ordinary course of events and is eligible carbon abatement under the Act. In summary, the offsets integrity standards also require that:

* amounts are measurable and capable of being verified;
* the methods used are supported by clear and convincing evidence;
* material emissions which are a direct consequence of the project are deducted; and
* estimates, assumptions or projections used in the Determination are conservative.

Project proponents wishing to implement projects under the Determination must make an application to the Regulator under section 22 of the Act. They must also meet the general eligibility requirements for an offsets project set out in subsection 27(4) of the Act, which include compliance with the requirements set out in the Determination, and the additionality requirements in subsection 27(4A) of the Act. The additionality requirements are:

* the newness requirement;
* the regulatory additionality requirement; and
* the government program requirement.

The government program requirement is provided for in the *Carbon Credits (Carbon Farming Initiative) Rule 2015*. Subsection 27(4A) of the Act provides that a methodology determination may specify requirements in lieu of the newness requirement or the regulatory additionality requirement. The Determination does not specify any requirement in lieu of the regulatory additionality requirement, and so the general requirement applies to lighting upgrade projects. Section 15 of the Determination specifies a requirement in lieu of the newness requirement. This is explained in section 15 of Attachment A to this Explanatory Statement.

**Public consultation**

The Determination has been developed by the Department of the Environment in collaboration with the Regulator and a group of expert stakeholders from the built environment and energy efficiency sectors. The stakeholder group reviewed versions of this Determination prior to the release of an exposure draft Determination for public consultation.

The exposure draft Determination was published on the Department’s website for public consultation from 17 March 2015 to 15 April 2015. Ten submissions were received. Details of non-confidential submissions are provided on the Department of the Environment website, [www.environment.gov.au](http://www.environment.gov.au).

**Determination details**

Details of the Determination are at Attachment A. Numbered sections in this Explanatory Statement align with the relevant sections of the Determination. The definition of terms highlighted in ***bold italics*** can be found in the Determination.

For the purpose of subsections 106(4), (4A) and (4B) of the Act, in making this Determination the Minister has had regard to, and agrees with, the advice of the ERAC that the Determination complies with the offsets integrity standards and that the proposed Determination should be made. The Minister is satisfied that the carbon abatement used in ascertaining the carbon dioxide equivalent net abatement amount for a project is eligible carbon abatement from the project. The Minister also had regard to whether any adverse environmental, economic or social impacts are likely to arise from the carrying out of the kind of project to which the Determination applies and other relevant considerations.

A Statement of Compatibility prepared in accordance with the *Human Rights (Parliamentary Scrutiny) Act 2011* is at Attachment B.

Attachment A

**Details of the Methodology Determination**

**Part 1 Preliminary**

1 Name

Section 1 sets out the full name of the Determination, which is the *Carbon Credits (Carbon Farming Initiative—Commercial and Public Lighting) Methodology Determination 2015.*

2 Commencement

Section 2 provides that the Determination commences on the day after it is registered on the Federal Register of Legislative Instruments.

3 Authority

Section 3 provides that the Determination is made under subsection 106(1) of the Act.

4 Duration

Under subparagraph 122(1)(b)(i) of the Act, a methodology determination remains in force for the period specified in the determination. The Determination will remain in force for the duration set out in this section unless revoked in accordance with section 123 of the Act or section 42 of the *Legislative Instruments Act 2003*.

Section 4 provides that the Determination will be in force from its commencement (as provided for in section 2) until the day before it would otherwise be repealed under subsection 50(1) of the *Legislative Instruments Act 2003*.

Instruments are repealed under that provision on the first 1 April or 1 October following the tenth anniversary of registration of the Determination on the Federal Register of Legislative Instruments. In accordance with subparagraph 122(1)(b)(i) of the Act, paragraph 4(b) of the Determination sets out the time that the Determination would expire.

If the Determination expires in accordance with section 122 of the Act or is revoked under section 123 of the Act during a crediting period for a project to which the Determination applies, the Determination will continue to apply to the project during the remainder of the crediting period under subsections 125(2) and 127(2) of the Act. Project proponents may apply to the Regulator during a reporting period to have a different methodology determination apply to their projects from the start of that reporting period (see subsection 128(1) of the Act).

Under section 27A of the Act, the Emissions Reduction Assurance Committee may also suspend the processing of applications under a determination if there is reasonable evidence that the methodology determination does not comply with one or more of the offsets integrity standards. This does not impact applications for declaration already received by the Regulator before such a suspension or declared eligible offset projects which apply the determination.

5 Definitions

Section 5 defines a number of terms used in the Determination.

Generally, where terms are not defined in the Determination but are defined in section 5 of the Act, they have the meaning given by the Act.

Under section 23 of the *Acts Interpretation Act 1901*, words in the Determination in the singular number include the plural and words in the plural number include the singular.

Key definitions in section 5 of the Determination include those set out below.

***baseline***, when used to describe a lighting upgrade, means the equipment that was part of the lighting system before commencement of the lighting upgrade as per schedules 1, 2 and 6.

***control gear*** is defined to mean equipment that converts electricity to a different voltage, current or waveform, for the purpose of powering a lamp.

***excluded area*** is defined as an area that is part of a BCA Class 1 or Class 4 building, or part of a BCA Class 2 building other than a common area. This definition works to expressly exclude lighting upgrades in residential dwellings.

***integrated photovoltaic luminaire unit*** is defined in item 19 of Schedule 1.

***lamp*** is defined, in relation to an eligible upgrade project, to mean a lamp (including an LED lamp) of a type listed in Schedule 1.

***lighting control device*** is defined to mean equipment that controls the amount of power delivered to a lamp or luminaire, in response to sensors or user input.

***lighting equipment*** includes any control gear, lighting control device, lamp or luminaire.

***lighting system*** means one or more sets of lighting equipment that together deliver all the artificial light that is intended to be provided to a particular area.

***lighting upgrade***, which is defined in subsection 8(2), means the modification, replacement or supplementation of a lighting system.

***lighting upgrade project*** means an offsets project that involves one or more lighting upgrades as described in subsection 8(2), that can reasonably be expected to decrease the energy usage of an existing lighting system by increasing its energy efficiency, and result in eligible carbon abatement.

***luminaire*** is defined, in relation to an eligible upgrade project, as a luminaire of a type listed in Schedule 1.

***luminaire circuit power*** means the electrical power drawn by a luminaire and its associated control gear, whether from built in or external power supplies.

***net abatement amount***is defined by reference to a lighting upgrade project for a reporting period to mean the carbon dioxide equivalent net abatement amount for the project in the reporting period for the purposes of paragraph 106(1)(c) of the Act. The term is used throughout the Determination and has been included to assist with readability.

***nominal lamp power (NLP)*** means the electrical power, in watts, drawn by a lamp.

***project***, when used to describe a lighting upgrade, means the equipment that was part of the lighting system following the lighting upgrade, as per schedules 1, 2 and 6.

***project lighting equipment*** is defined to mean lighting equipment included in a lighting system when it is commissioned.

***public lighting inventory*** means the inventory of the lighting equipment of a public lighting system that:

* is maintained by:
* the public authority or other body responsible for the serviced area (for example, a local council); or
* the provider of the service (for example, an electricity company) for the purposes of billing the public authority or other body; and
* records the number and type of lamps and luminaires and their locations.

***public lighting system*** means a lighting system for a road or public space of a classification specified in *AS/NZS 1158 Lighting for roads and public spaces*.

***serviced area*** is defined to mean the physical area to which a lighting system delivers all the artificial light that is intended to be provided.

6 Factors and parameters from external sources

The calculation of the net abatement amount in the Determination includes factors and parameters determined from other sources, e.g. the National Construction Code Climate Zones are referred to when determining the air conditioning factors.

Section 6 specifies that such factors or parameters should be determined by using the version of the external source that is current at the end of the reporting period, unless the Determination specifies otherwise (see paragraph 6(2)(a)) or it is not possible to define or calculate the factor or parameter by reference to the instrument or writing as in force at the end of the reporting period (see paragraph 6(2)(b)).

It is not expected that paragraph 6(2)(b) will apply under this Determination. However, if paragraph 6(2)(b) does apply, it is expected that project proponents will use the version of instruments or writing in force at the time at which monitoring or other actions were conducted (see section 10 of the *Acts Interpretation Act 1901* and section 13 of the *Legislative Instruments Act 2003* which operate such that references to external documents which are legislative instruments are to versions of those instruments as in force from time to time).

Subsection 26(3) sets out reporting requirements to be followed when paragraph 6(2)(b) applies.

7 Definitions in other instruments relating to lighting equipment

This section provides that the definitions of ***EEI***, ***ELV***and ***LED*** in section 5, lamp and luminaire types in Schedule 1, and control gear types in Schedule 2, are determined by reference to definitions in an Australian or international standard that applied at the time the lighting system is commissioned. This is intended to ensure that, if any of these standards change over the life of the project, whether the project meets a project requirement is assessed by reference to the definitions in standards that applied at the time the lighting upgrade was first commissioned.

**Part 2 Lighting upgrade projects**

8 Lighting upgrade projects

The effect of paragraphs 27(4)(b) and 106(1)(a) of the Act is that a project must be covered by a methodology determination, and that the methodology determination must specify the kind of offsets project to which it applies.

Section 8 provides that the Determination applies to an offsets project with the following characteristics:

* It involves one or more lighting upgrades that have a serviced area of a type that is not an excluded area and is listed in Schedule 4 or 5 (i.e. residential dwellings, such as houses, are expressly excluded).
* Each upgrade can be reasonably expected to decrease the energy usage of an existing lighting system by increasing its energy efficiency, and to result in eligible carbon abatement.

Such a project is a ***lighting upgrade project***.

A ***lighting upgrade*** consists of one or more of the following in relation to a lighting system:

* modifying the lighting system;
* replacing the lighting system; and
* supplementing the lighting system.

**Part 3 Project requirements**

9 Operation of this Part

The effect of paragraph 106(1)(b) of the Act is that a methodology determination must set out requirements that must be met for a project to be an eligible offsets project. Under paragraph 27(4)(c) of the Act, the Regulator must not declare that a project is an eligible offsets project unless the Regulator is satisfied that the project meets these requirements.

Part 3 of the Determination specifies a number of requirements that must be met in order for a project to be an eligible offsets project. These requirements are set out in sections 10 to 15.

10 Information to be included in application for declaration

Section 22 of the Act provides that a person may apply to the Regulator for the declaration of an offsets project as an eligible offsets project. Section 10 of the Determination requires information to be included in the application about each lighting upgrade forming part of the project. For each lighting upgrade identified at the time of the application, the application must include:

* the location of the lighting system;
* the types of baseline and project lighting equipment, including lamps, luminaires, control gear and control devices (as per schedule 1, 2 and 6);
* the types of serviced area (as per schedule 4 or 5);
* the nature of the upgrade (whether it is a modification, replacement or supplementation of the lighting system, or a combination of these).

For each class of potential lighting upgrades that are not individually identified at the time of the application, the application must include a description of the class.

The concept of class is intended to allow project proponents to have a lighting upgrade approved as part of an eligible offsets project in circumstances where the proponent is not able to provide all details about each lighting system to be upgraded at the time of making the application. Two potential lighting systems are of the same class if they have the same type or types of baseline lighting equipment (as per schedules 1 and 2), service the same type of serviced area (as per schedules 4 and 5) and will be upgraded using the same modifications or the same type or types of new lighting equipment (as per schedules 1, 2 and 6).

For example, a class of lighting upgrades could involve the replacement of a particular type of luminaire commonly used in street lighting systems with a new more efficient type of luminaire. Such a class could be identified where the location of those lighting systems is not yet known, or where the specific lighting systems that will be upgraded have not been identified by the proponent. Specific details about all lighting systems that are upgraded will need to be provided later, in a future offsets report in accordance with the reporting requirements set out in the *Carbon Credits (Carbon Farming Initiative) Rule 2015* (the legislative rules) and Part 5 of this Determination.

11 System requirements

Section 11 of the Determination sets out the system requirements for a project to be an eligible offsets project.

Subparagraph 11(1)(a)(i) requires that the area serviced by a lighting system must be the same area before the upgrade and when the lighting system is commissioned after the upgrade. This is to ensure that the energy savings achieved are due to improved energy efficiency of the system and not merely a reduction in area being serviced.

* Note that if a lighting system, or part of it, is subsequently dismantled or made inoperative in a way that has an effect that is not minor or trivial, on the abatement for the lighting system, then the lighting system must be removed from abatement calculations in accordance with section 19.

Subparagraph 11(1)(a)(ii) requires that the area serviced by a lighting system must be of a type listed in Schedule 4 or 5 and of the same type pre upgrade and when the lighting system is commissioned after the upgrade. This is to exclude projects that involve changes in the use of the serviced areas, which would likely trigger lighting upgrades as a business-as-usual practice.

Paragraph 11(1)(b) requires that a lighting system must be fully operational immediately prior to commencement of an upgrade. This requirement is included as it would be normal business practice and cost effective to upgrade a system that is not in working order, and therefore, the abatement from such an upgrade could be non-additional. As per the definition in section 5, a lighting system is fully operational if it is capable of providing the artificial light intended to be provided to its serviced area, and therefore, if individual lighting equipment units fail but do not render the entire system unable to provide such service, the lighting system is still considered to be fully operational.

Paragraph 11(1)(c) requires that before the commencement of the upgrade and after the upgrade all lamps and luminaires must be of a type listed in Schedule 1 (subparagraph 11(1)(c)(i)) and control gear of a type listed in Schedule 2 (subparagraph 11(1)(c)(ii)).

Paragraph 11(1)(d) requires that any project LED lamp or LED luminaire must have an L70 lamp life value (which is an estimate of the life of the LED product represented by the average number of operating hours taken for its brightness to depreciate to 70 per cent of its initial level) of greater than or equal to 30,000 hours. This is to ensure that emerging technologies that are not yet subject to regulation are performing as claimed. Subsections 11(3) and 11(4) then set out data requirements for evidence of L70 as follows:

* The requirement can be evidenced by a ***NATA equivalent testing laboratory*** L70 test report, registration on the NSW ESS Emerging Lighting Technologies Public Register, the ***VEET*** Product Register (as ‘approved’), or the ***LCA*** Solid State Lighting Quality Scheme.
* However, if the upgrade involves relamping in which an LED lamp is connected to an existing transformer, and the transformer is not listed as being compatible in the LED product specifications (as publicly released in Australia by the manufacturer or supplier), only a ***NATA equivalent testing laboratory*** L70 test report can be used, and the LED lamp must be tested with the existing transformer. This test result will reflect the actual performance and as such, ensure compatibility of the units.

Paragraph 11(1)(e) requires that baseline and project energy consumption must be capable of being calculated under Part 4 of the Determination.

Paragraph 11(1)(f) specifies that the lighting upgrade must not be part of associated construction or reconstruction works that require development approval under State or Territory law, unless the development approval would not have been required were it not for the lighting upgrade. This is included on the basis that to trigger development approval, it is likely the construction or reconstruction works would have been significant enough to make the associated lighting upgrade project cost effective and accordingly the abatement would be non-additional.

Paragraph 11(1)(g) requires that if the lighting upgrade involves the installation of a piece of lighting equipment that is covered by the ***GEMS Act***, then that item must be listed on the ***GEMS Register*** at the time the lighting system is commissioned.

Subsection 12(2) requires that the upgrade must be undertaken by, or completed under the supervision of, a licensed electrician. This is to safeguard the integrity of the abatement by ensuring that the upgrades are implemented appropriately and that due consideration is given to technical and safety aspects. The electrician must also provide a signed statement confirming:

* they supervised the upgrade;
* the date the system was commissioned;
* the area was the same size and of the same type as listed in Schedule 4 or 5 pre and post upgrade;
* the system was fully operational before the upgrade;
* all lamps, luminaires and control gear both pre and post upgrade were of a type listed in schedule 1 (for lamps and luminaires) or schedule 2 (for control gear).

12 Disclosure requirement

Section 12 requires a proponent to disclose proposed lighting levels to the end user (i.e. any third party whom the proponent would require agreement from to undertake the upgrade). This information must be disclosed with reference to relevant standards (*AS/NZS 1158* for public lighting and *AS/NZS 1680* for non-public lighting). This requirement is to ensure that relevant lighting quality information is made available to parties that are impacted by the upgrade and accordingly considered in the normal course of negotiation between the supplier and end user.

For public lighting, disclosure can take the form of:

* modelling (subparagraph 12(2)(a)(i)) which is conducted is accordance with AS/NZS 1158 in relation to the nominated lighting category and signed off by a qualified person who is either:
  + a Member, Fellow or Registered Lighting Practitioner of the Illuminating Engineering Society of Australia and New Zealand, or
  + a Professional Member, Fellow or Certified Lighting Designer of the International Association of Lighting Designers; or
* a report (paragraph 12(2)(b)) providing estimated lighting levels and quality of the project lighting system prepared by a person who is either:
  + a Registered Lighting Practitioner of the Illuminating Engineering Society of Australia and New Zealand, or
  + a Certified Lighting Designer of the International Association of Lighting Designers.

For non-public lighting, disclosure can take the form of:

* modelling (subparagraph 12(2)(a)(ii)) which is conducted using modelling software (AGi-32 DIALux, RELUX, including updated versions or an equivalent commercial lighting planning program that uses IES files for photometric data to conduct similar analysis and generates results of a comparable level of accuracy) and signed off by a qualified person who is either:
  + a Member, Fellow or Registered Lighting Practitioner of the Illuminating Engineering Society of Australia and New Zealand, or
  + a Professional Member, Fellow or Certified Lighting Designer of the International Association of Lighting Designers; or
* a report (paragraph 12(2)(b)) providing estimated lighting levels and quality of the project lighting system prepared by a person who is either:
  + a Registered Lighting Practitioner of the Illuminating Engineering Society of Australia and New Zealand; or
  + a Certified Lighting Designer of the International Association of Lighting Designers.

IES is a data file format that uses the standard file format for photometric data developed by the Illuminating Engineering Society.

13 Election to use device load values

Section 13 allows proponents who undertake upgrades on public lighting systems with a public lighting inventory (as defined in section 5) to elect to use ***device load values*** (also defined in section 5) in the calculations of baseline energy consumption. This allows public lighting projects to draw data for a lamp or luminaire directly from the National Electricity Market Load Tables for Unmetered Connection Points, published by the Australian Energy Market Operator, which specifies a load value for the lamp or luminaire in the state or territory in which the lighting upgrade is taking place. For states and territories not represented in the tables, the average of the load values specified in that document for that lamp or luminaire in all the states or territories for which a value is given can be used.

This election to use device load values applies for the life of the project for the calculation of baseline energy consumption. However, for the calculations of project energy consumption, the proponent could choose the device load values or data from other sources as set out in sections 18 and 24.

14 Disposal of equipment

Section 14 applies if, as part of the project activities, lighting equipment is removed from a place, for example, if existing less efficient lamps are replaced with more efficient lamps. The removed lighting equipment must be disposed of and not refurbished or re-used. This prevents carbon leakage, whereby replaced, inefficient lighting equipment could remain in use with no overall reduction in emissions.

The requirement not to refurbish or re-use replaced equipment does not prevent the lighting equipment being broken down into components and those components being recycled.

For example, a project proponent may comply with section 14 by rendering the lighting equipment not usable or refurbishable before disposing of it, or by providing lamps to a dedicated lamp recycling company to be broken down and the component parts recycled, or by disposing of the equipment in another way that assures the equipment will not be re-used or refurbished.

Under section 30 of the Determination, project proponents are required to keep a record of the disposal of lighting equipment, including evidence that the disposal was conducted in accordance with section 14 and any other applicable legislative requirements.

15 Requirement in lieu of newness requirement

Transitional provisions in the Act allowed prospective proponents who gave notice of their intention before the date of Proclamation of that Act to have the newness of their projects assessed as at the time of their notice, provided that they made the section 22 application before 1 July 2015. The effect of this section is to extend this deadline to 1 July 2016 for this Determination.

**Part 4 Net abatement amount**

**Division 1 Preliminary**

16 Operation of this Part

Paragraph 106(1)(c) of the Act provides that a methodology determination must specify how to calculate the carbon dioxide equivalent net abatement amount for a reporting period for a project that is an eligible offsets project. This is called the net abatement amount in the Determination.

17 Overview of gases accounted for in abatement calculations

This section provides a summary of the emissions sources that are assessed in the Determination in order to determine the net abatement amount. The emissions sources which need to be taken into account when calculating abatement for the project are set out in the following table:

| Greenhouse gases and emissions sources | | | |
| --- | --- | --- | --- |
| Item | Relevant emissions calculation | Emissions source | Greenhouse gas |
| 1 | Baseline emissions  Project emissions | Electricity consumption | Carbon dioxide (CO2)  Methane (CH4)  Nitrous oxide (N2O) |

18 Data to be used in calculations

Section 18 specifies sources of data to be used in establishing nominal lamp power and luminaire circuit power for the purpose of calculating energy consumption in relation to a lighting upgrade.

*Data covered by this section to be ascertained as at time of commissioning*

Subsection 18(1)(a) requires that if the data is being drawn from a register (as specified below) that is updated periodically, the data must be taken from the version that was current at the time the lighting system was commissioned. While subsection 18(1)(b) states that if the data is drawn from a test report or other source (meaning sources mentioned in subsections (4) to (8) other than a test report), then the data must be drawn from a version that could reasonably be considered as current at the time.

*When GEMS data may or must be used*

Subsections 18(2) and 18(3) set out the requirements for when data from the GEMS Register may or must be used.

* For the purposes of establishing baseline energy consumption for lighting products which the GEMS Act requires energy consumption data be published on the GEMS Register, the proponent may choose to use either the GEMS Register or options applicable to other baseline lamps and luminaires.
* For project lighting products for which the GEMS Act requires energy consumption data be published on the GEMS Register, then the data must be drawn from the GEMS Register.

*Nominal lamp power of a non-LED lamp – baseline and project energy*

Subsection 18(4) requires that for the purposes of establishing the baseline or project nominal lamp power of a lamp (other than an LED lamp or a lamp for which data is required to be drawn directly from the GEMS Register as specified in subsection 18(2)) the proponent must use corresponding power consumption data for the lamp from one of the following sources:

* product specifications publicly released in Australia by the manufacturer or supplier;
* a test report prepared by a NATA equivalent testing laboratory; or
* a power rating label affixed by the manufacturer on the lamp.

*Nominal lamp power of a LED lamp – baseline energy*

Subsection 18(5) specifies that for the purposes of establishing the baseline nominal lamp power of an LED lamp the proponent must use corresponding power consumption data for the lamp from one of the following sources:

* product specifications publicly released in Australia by the manufacturer or supplier;
* a test report prepared by a NATA equivalent testing laboratory;
* a power rating label affixed by the manufacturer on the lamp.

*Nominal lamp power of a LED lamp – project energy*

Subsection 18(6) sets out that to establish the nominal lamp power of an LED lamp for project energy calculations, the proponent must use corresponding power consumption data for the lamp from one of the following sources:

* a test report prepared by a NATA equivalent testing laboratory; or
* the NSW ESS Emerging Lighting Technologies Public Register; or
* if the lamp is listed in the [VEET Product Register](https://www.veet.vic.gov.au/Public/ProductRegistrySearch.aspx) as ‘approved’—that Register; or
* the [LCA Solid State Lighting (SSL) Quality Scheme](http://www.lightingcouncil.com.au/site/ssl/label_Results.php).

The relatively more stringent requirements in subsection 18(6), when compared with subsection 18(4), reflect the fast evolution of LED technology and associated product innovation, necessitating a higher level of proof of energy savings to safeguard the accuracy of the abatement calculations.

*Luminaire circuit power – baseline energy*

Subsection 18(7) sets out that to establish the luminaire circuit power of an LED luminaire or induction luminaire for baseline energy calculations, the proponent must use corresponding power consumption data for the luminaire from one of the following sources:

* product specifications publically released by the manufacturer (e.g. website or printed marketing material);
* a test report prepared by a NATA equivalent testing laboratory;
* a power rating label affixed by the manufacturer on the luminaire;
* the NSW ESS Emerging Lighting Technologies Public Register;
* if the luminaire is listed in the [VEET Product Register](https://www.veet.vic.gov.au/Public/ProductRegistrySearch.aspx) as ‘approved’—that Register; or
* the [LCA Solid State Lighting (SSL) Quality Scheme](http://www.lightingcouncil.com.au/site/ssl/label_Results.php).

*Luminaire circuit power – project energy*

Subsection 18(8) sets out that to establish the luminaire circuit power of an LED luminaire or induction luminaire for project energy calculations, the proponent must use corresponding power consumption data for the luminaire from one of the following sources:

* a test report prepared by a NATA equivalent testing laboratory;
* the NSW ESS Emerging Lighting Technologies Public Register;
* if the luminaire is listed in the [VEET Product Register](https://www.veet.vic.gov.au/Public/ProductRegistrySearch.aspx) as ‘approved’—that Register; or
* the [LCA Solid State Lighting (SSL) Quality Scheme](http://www.lightingcouncil.com.au/site/ssl/label_Results.php).

It is expected that new luminaire technologies, in particular LED luminaires, are more likely to be used in upgraded systems compared to existing systems. Similar to the requirement in subsection 18(6) for lamps, a higher level of proof of luminaire circuit power is required for new technologies, such as LED products, to safeguard the accuracy of the abatement calculations.

The table below summarises the section 18 data requirements.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Where energy consumption data can be drawn from** | **Types of lamps and luminaires** | | | | | |
| ***Baseline*** | | | ***Project*** | | |
| For GEMS\* lamps and luminaires, GEMS Register is an additional option to the following data sources. | | | For GEMS\* lamps and luminaires, GEMS Register must be used. | | |
| non-LED lamps | LED lamps | LED and induction luminaires | non-LED lamps | LED lamps | LED and induction luminaires |
| Product specifications publically released in Australia by the manufacturer or supplier | ✓ | ✓ | ✓ | ✓ |  |  |
| A power rating label affixed by the manufacturer on the lamp or luminaire | ✓ | ✓ | ✓ | ✓ |  |  |
| A test report prepared by a NATA equivalent testing laboratory | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| The NSW ESS Emerging Lighting Technologies Public Register |  | ✓ | ✓ |  | ✓ | ✓ |
| The [VEET Product Register](https://www.veet.vic.gov.au/Public/ProductRegistrySearch.aspx) (where classified as ‘approved’) |  | ✓ | ✓ |  | ✓ | ✓ |
| The [LCA Solid State Lighting (SSL) Quality Scheme](http://www.lightingcouncil.com.au/site/ssl/label_Results.php) Register |  | ✓ | ✓ |  | ✓ | ✓ |

\* Note: where the table refers to ‘GEMS lamps and luminaires’, it is referring to only those lamps and luminaires for which the GEMS Act requires energy consumption data to be published on the GEMS Register.

19 Lighting systems to be used in calculations

The project proponent is given the discretion to choose not to include a particular lighting system in the calculations for a reporting period.

However, a project proponent must not include a lighting system in the calculations if, at any time during the reporting period, either of the following circumstances applies:

* the type of serviced area of the lighting system changed to a type of area that is:
  + an excluded area as set out in subsection 8(3) (i.e. a residential dwellings); or
  + listed in Schedule 4 or 5 but with lower annual operating hours; or
* the lighting system, or part of it, has been modified, dismantled or made inoperative in a way that has an effect, that is not minor or trivial, on the abatement for the lighting system.

If either of these circumstances were to arise, the method for calculating the net abatement amount would not accurately account for emissions reductions achieved. For example, if the type of serviced area changed from health care to office, emissions could be reduced merely because of the change of the operating hours and not because of an improvement in the energy efficiency of the lighting system. If a lighting system was disconnected and removed from a building being demolished or completely refitted, or a control device was disconnected so that the system is permanently operating at the maximum lighting level, this would have an effect that is not minor or trivial and accordingly the system must be excluded from the calculations. On the other hand, if an individual lamp broke down and was isolated for safety reasons before it could be replaced, but did not have a major impact on the energy consumption of the system, it would not trigger the requirement to exclude the system from the calculations.

Excluded lighting systems are not to be included in abatement calculations, including the baseline and project energy consumption calculations.

**Division 2 Method for calculating net abatement amount**

20 Summary

The net abatement amount (that is, the carbon dioxide equivalent net abatement amount for a project for a reporting period) is the sum of the abatement from all lighting systems in the project in the reporting period.

The abatement for each lighting system is the baseline emissions minus the project emissions for the lighting system.

21 Net abatement amount for the project (*A*)

***Equation 1*** provides that the net abatement amount for the project is worked out by adding together the abatement for each lighting system in the project (*Ai*) which is given by equation 2.

22 Abatement for a lighting system (*Ai*)

***Equation 2*** provides that the abatement for each lighting system (*Ai*) is worked out by:

* taking away the project energy consumption for the lighting system (*ECP,i*) (worked out using equation 5) from the baseline energy consumption (*ECB,i*) (worked out using equation 3) for the lighting system; and
* multiplying that result by the electricity emissions factor relevant to the lighting system (*EFelec,i*). The relevant factor depends on whether the system is connected to an electricity grid or some other source and is found in the NGA Factors document or determined in accordance with subparagraph 22(1)(b)(i) based on information provided by the supplier of the electricity.

23 Baseline energy consumption for a lighting system (*ECB,i*)

***Equations 3 and 4*** are used to estimate the amount of energy that would have been consumed by the lighting system as it stood immediately before the commencement of the lighting upgrade during the reporting period.

The baseline energy consumption of a lighting system (*ECB,i*) is worked out in equation 3 by adding together the baseline energy consumption of each lamp or luminaire forming part of the lighting system (*LB,i,j*). The baseline energy consumption of each lamp or luminaire is worked out using equation 4.

Equation 4 provides that the baseline energy consumption associated with each lamp or luminaire in a lighting system is worked out as follows:

* Firstly, the ***LCP*** value is determined:
  + For a lamp, the LCP value equals the lamp circuit power, which is taken to be the applicable value in Schedule 3.
  + For an LED luminaire or an induction luminaire, the LCP value is equal to the luminaire circuit power, which is determined in accordance with section 18.
  + For a public lighting system that has chosen to use a public lighting inventory, the LCP value is equal to the ***device load value***, which is drawn directly from the ***AEMO*** Unmetered Load Tables. Once a proponent of a public lighting project has elected to use a public lighting inventory as the basis for calculations, the proponent must continue to use the inventory approach for the remainder of the project.
  + If the LCP value for a lamp or a luminaire is unable to be determined by the above methods, then it is set to zero to ensure that the calculation of the baseline energy consumption remains conservative.
* The LCP value is then multiplied by the number of days that the lamp would have been in use in the reporting period. This is determined by first dividing the annual operating hours specified in Schedule 4 or 5 for the lamp or luminaire by 365 (to determine the operational hours in a day for the lamp or luminaire) and multiplying this result by (***ti***), the number of full days in the reporting period after the lighting system is commissioned. If the type of serviced area has changed during the reporting period to one with higher operating hours, the original operating hours should be used. This is to ensure that the project is not over credited.
* A vacancy adjustment factor of 0.95 is applied to most lighting systems to take account of the possibility that a lighting system is out of operation, or the use of the serviced area is suspended, for reasons other than normal usage, such as vacancy between tenancies or unplanned maintenance for example, following a natural disaster. This factor was developed based on national average vacancy rates for the types of buildings that are covered by this Determination, taking into account the portion of the potential vacancy periods that would already be filtered out by the eligibility requirements set out in this Determination, such as new builds and major refurbishments.
* A vacancy adjustment factor of 1 (which means the energy consumption is not discounted) is applied to public lighting systems, traffic lights and lighting systems that service underground areas with 24 hour public or vehicle assess with limited natural lighting other than car parks, e.g. tunnels.
* This result is then multiplied by the following:
  + the lighting control factor applicable to the device as set out in Schedule 6;
  + the air conditioning factor applicable to the serviced area; and
  + the factor 10-6 (conversion from Wh to MWh).
* In determining the air conditioning factor, factors in Schedule 7 must be used for the following systems:
  + a lighting system located in ***NCC Climate Zones*** 1 to 5 where the serviced area is air conditioned using refrigerated cooling (note that this does not cover an area that is serviced by only evaporative cooling and/ or mechanical ventilation);
  + a lighting system located in NCC Climate Zones 6 to 8 where the serviced area is heated.

Otherwise a factor of one should be used.

24 Project energy consumption for a lighting system *(ECP,i*)

***Equations 5*** and ***6*** are used to estimate the amount of energy that was consumed by the upgraded lighting system during the reporting period (*ECP,i*) (the project energy consumption).

The project energy consumption of a lighting system (*LP,i,j*) is worked out by adding together the project energy consumption of each lamp or luminaire in the upgraded lighting system (*LP,i,j*). The project energy consumption of each lamp or luminaire is worked out using equation 6, which is similar to equation 4 except for the following:

* Determining the ***LCP*** value:
  + The LCP value for an integrated photovoltaic luminaire unit is taken to be zero.
  + For a public lighting system that has chosen to use a public lighting inventory the LCP value can be determined by using either:
    - the device load value, which is drawn directly from the AEMO Unmetered Load Tables or
    - the lamp circuit power or luminaire circuit power derived from corresponding power data in a test report prepared by a NATA equivalent testing laboratory.
  + For other lamps or luminaires:
    - for a lamp other than an LED lamp, the LCP value is equal to the lamp circuit power specified in column 4 of Schedule 3, in watts, for the lamp or luminaire of the lighting system that corresponds to the lamp or luminaire in column 2 connected to the control gear in column 3 or
    - for an LED lamp, the LCP value is equal to the lamp circuit power determined in accordance with section 18 or
    - for an LED luminaire or an induction luminaire, the LCP value is equal to the luminaire circuit power determined in accordance with section 18.
* The lighting control factor is the one applicable to the device used in the project lighting system, as set out in Schedule 6.

Several of the terms used in equation 6, including vacancy adjustment factor, operating hours and air conditioning factors, have the same values as in equation 4.

**Part 5 Reporting, notification and record-keeping requirements**

Subsection 106(3) of the Act provides that a methodology determination may subject the project proponent of an eligible offsets project to specified reporting, notification, record‑keeping and monitoring requirements.

Under Parts 17 and 21 of the Act, a failure to comply with these requirements may constitute a breach of a civil penalty provision, and a financial penalty may be payable.

Reporting periods

The Act and subordinate legislation provide for flexible reporting periods generally between six months and two years in duration (with monthly reporting available if abatement in a reporting period meets or exceeds 2000 tonnes of carbon dioxide equivalent).

Audit requirements

The Act provides for a risk-based approach to auditing emissions reductions. Subsections 13(1) and 76(4) of the Act provide for legislative rules to be made by the Minister, specifying the level of assurance, and the frequency and scope of the audit report that must be provided with offsets reports for different types of projects. These can be found in the *Carbon Credits (Carbon Farming Initiative) Rule 2015.*

Reporting, notification and record-keeping requirements

In addition to the requirements in the Determination, the Act and the *Carbon Credits (Carbon Farming Initiative) Rule 2015* specify other reporting, notification, record-keeping, and monitoring requirements that apply to all ERF projects.

**Division 1 Offsets report requirements**

25 Operation of this Division

Under paragraph 106(3)(a) of the Act, a methodology determination may set out requirements to include specified information in each offsets report. Division 1 sets out information that must be included in an offsets report about a lighting upgrade project.

26 Information that must be included in an offsets report

Further to requirements under the Act and the *Carbon Credits (Carbon Farming Initiative) Rule 2015*, section 26 sets out specific additional information that must be included in each offsets report for a lighting upgrade project for a reporting period.

Section 26 provides that each offsets report must, for each lighting system included in the calculation of the net abatement amount, include information on the location of each lighting system and whether it was included in the most recent previous offsets report; or is an old upgrade that was excluded from the most recent previous report; or is a new upgrade that has not been included in a previous report.

Further information is required for a lighting system that was included in calculations for an earlier reporting period, but is not included in the reporting period covered by the offset report. This includes the reason for exclusion and whether the exclusion is temporary or permanent. This information allows for easy comparison of an offsets report with a previous or future report.

Subsection 26(3) specifies additional reporting requirements that apply if it is not possible to define or calculate a factor or parameter by reference to external sources as in force at the end of the reporting period. This information allows the Regulator to assess whether the use of another version of the external sources by the proponent in calculating the abatement is appropriate and justified.

**Division 2 Notification requirements**

27 Operation of this Division

The effect of paragraph 106(3)(b) of the Act is that a methodology determination may set out notification requirements for an eligible offsets project. Division 2 sets out certain notification requirements.

28 Notification requirements

This section requires the project proponent to notify the Regulator of any safety or product performance issues that have been identified with lighting equipment installed or proposed to be installed in relation to the project. The notification of safety issues must occur as soon as practicable after the proponent becomes aware of the issue, while the notification of product performance issues must occur within 30 days after the proponent becomes aware of the issue. Only product performance issues that are not minor or trivial are required to be notified.

Subsection 28(3) further requires that a notification of a product performance issue must be given to the Regulator within 30 days after the proponent becomes aware of the issue if a product recall notice has been issued, or the performance issue affects more than 5% of the lighting systems or 50 lighting systems, whichever is smaller.

**Division 3 Record-keeping requirements**

29 Operation of this Division

The effect of paragraph 106(3)(c) of the Act is that a methodology determination may set out record-keeping requirements for an eligible offsets project. Division 3 sets out certain record‑keeping requirements.

30 Record-keeping requirements

Subsection 30(1) requires that proponents must keep a record of the disposal of lighting equipment, including evidence that the disposal was conducted in accordance with section 14 and any other legislative requirements.

If the lighting upgrade involves the installation of an item of equipment that is required under the GEMS Act to be a product listed on the GEMS Register, then subsection 30(2) requires the proponent to keep a record to demonstrate that the item was listed on the Register at the time of commissioning.

Subsection 30(3) further requires that for each lighting upgrade, the project proponent must keep records of the following:

* the date the system was commissioned;
* the type of the serviced area;
* if disclosure is required under section 12 of the Determination, then evidence that this has been met;
* if the type of serviced area changed then the date this happened and the new type of serviced area or an indication that it is an excluded area as per subsection 8(3);
* if the lighting system, or part of the system, is modified, dismantled or made inoperative (in a way that has an effect, that is not minor or trivial, on the abatement for the lighting system) then the date this occurs;
* the statement by the licensed electrician required in subsection 11(2).

In addition to the above record-keeping requirements, there are general requirements under the Act and legislative rules that apply to all ERF projects. Proponents are required to keep evidence of their compliance with project requirements and that calculations are done correctly according to the methodology. For example, to show that the number of suspension days in a reporting period is correctly determined, proponents need to keep evidence, such as business records or a statement made by a third party tenant, to demonstrate that the premises has been used for the intended purpose and the lighting system is fully operational during the reporting period.

**Part 6 Dividing a lighting upgrade project**

30 Division of project for reporting purposes

This section provides that for the purpose of submitting an offsets report to the Regulator pursuant to subsection 77A(2) of the Act, a project may be divided into parts, each of which includes one or more lighting upgrades.

**Schedules**

Schedules 1 to 7 contain information and data required to be used under the Determination, including the abatement calculations. The information and data is largely based on the Commercial Lighting method under the NSW Energy Saving Scheme (ESS), to ensure consistency as far as practicable. Changes from the ESS figures were made following stakeholder consultation and review by technical experts.

**Schedule 1 – Lamp and luminaire types**

This schedule contains all the lamp and luminaire types that may be included in baseline or project lighting systems. If baseline lighting equipment or project lighting equipment includes a technology that is not covered by this schedule, the lighting upgrade relating to that equipment must not be included in a project. For example, T5 adaptors are intentionally not included in the schedule, due to safety concerns surrounding their use.

Although incandescent lamps are included in the schedule, they are only allowed to be used in traffic signals. This approach aligns with the Government’s Incandescent Light Bulbs Phase-Out program, from which the use of incandescent lamps in traffic lights is exempt. Lighting systems that include incandescent lamps (for applications other than traffic lights) may not be included in projects under this Determination due to the fact that the upgrade of incandescent lamps to other more energy efficient lighting technologies is considered to be business-as-usual.

**Schedule 2 – Control gear types**

This schedule contains all the control gear types that may be included in baseline and project lighting systems. As defined in section 5, control gear means equipment that converts electricity to a different voltage, current or waveform, for the purpose of powering a lamp. For the purpose of this Determination, control gear is external to the lamp and does not include those that are built-in and form part of a luminaire.

**Schedule 3 – Lamp circuit power**

This schedule provides the equations that must be used to determine the lamp circuit power, in watts, for different lamp types when they are powered by different control gear types. For example, for a T8 linear florescent lamp that is powered by a magnetic ballast (EEI=B2), the equation under item 6 should be used, i.e. lamp circuit power = nominal lamp power + 8. This calculated lamp circuit power is then used as the LCP value in equation 4 or equation 6 to calculate the baseline or project energy consumption.

**Schedule 4 – Annual operating hours for types of serviced area – specific kind of area**

This schedule provides the deemed values of annual operating hours for different types of serviced area. This table is largely based on the Commercial Lighting method under the NSW Energy Saving Scheme, with a number of items adjusted following feedback received during consultation on the Determination.

**Schedule 5 -** **Annual operating hours for types of serviced area – general area**

Schedule 5 provides the deemed values of annual operating hours for general areas under different building classes in the Building Code of Australia (BCA). These values should only be used if the type of serviced area of a lighting system is not covered by Schedule 4 and is not an excluded area as per subsection 8(3) (i.e. a residential dwelling). Item 13 covers other places not mentioned in Schedule 4 or this Schedule. This item is included as a conservative catch all, where types of serviced area are not represented in the schedules. For example, a lighting system that is used to assist the grass in a football stadium to regrow between matches, is not covered by these schedules other than item 13 of Schedule 5, therefore, the deemed value of 1000 hours is used as its annual operating hours.

The operating hours in Schedules 4 and 5 were developed based on normal usage patterns of lighting systems, which include normal shutdown periods, such as public holidays, but not periods due to reasons other than normal usage, such as vacancy between tenancies or shutdown due to unplanned maintenance. Accordingly, a vacancy adjustment factor of 0.95 is applied to lighting systems, other than public lighting, to account for these situations.

**Schedule 6 – Lighting control factors**

Schedule 6 provides the deemed values for lighting control factors when different lighting control devices are used to serve a lighting system. It also includes definitions of each lighting control device to provide certainty on when the factors are applicable.

**Schedule 7 – Air conditioning factors**

Schedule 7 provides the deemed values of air conditioning factors for lighting systems that are located at different NCC Climate Zones. The factors were developed using a similar approach to that taken by the NSW ESS, except that both heating and cooling were taken into account. Climate data was used to establish the number of heating and cooling days in each climate zone, and to estimate the impact of the reduction in energy consumption associated with upgrading lighting, on heating and cooling demand on air conditioning systems. For climate zones 1 to 5 that are cooling dominated, the corresponding air conditioning factors are greater than 1, which means the energy consumption reduction as a result of improved lighting efficiency reduces the overall energy consumption associated with cooling. On the other hand, for climate zones 6 to 8 that are heating dominated, the corresponding air conditioning factors are smaller than 1, which means the energy consumption reduction as a result of improved lighting efficiency increases the overall energy consumption associated with heating. The air conditioning factors are included in the calculation to improve the accuracy of the estimation of the associated abatement.

Attachment B

**Statement of Compatibility with Human Rights**

*Prepared in accordance with Part 3 of the Human Rights (Parliamentary Scrutiny) Act 2011*

***Carbon Credits (Carbon Farming Initiative— Commercial and Public Lighting) Methodology Determination 2015***

This Legislative Instrument is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

**Overview of the Legislative Instrument**

The *Carbon Credits (Carbon Farming Initiative—Commercial and Public Lighting) Methodology Determination 2015* (the Determination) sets out the detailed rules for implementing offsets projects that avoid greenhouse gas emissions by reducing energy consumption associated with lighting. The Determination applies to lighting upgrades undertaken in commercial and industrial buildings, as well as lighting upgrades to public areas, such as pedestrian, street and traffic lighting.

Project proponents wishing to implement the Determination must make an application to the

Clean Energy Regulator (the Regulator) and meet the eligibility requirements set out under

the Determination. Offsets projects that are approved by the Regulator can generate Australian Carbon Credit Units, representing emissions reductions from the project.

Project proponents can receive funding from the Emissions Reduction Fund by submitting their projects into a competitive auction run by the Regulator. The Government will enter into contracts with successful proponents, which will guarantee the price and payment for the future delivery of emissions reductions.

**Human rights implications**

This Legislative Instrument does not engage any of the applicable rights or freedoms.

**Conclusion**

This Legislative Instrument is compatible with human rights as it does not raise any human rights issues.

**Greg Hunt, Minister for the Environment**