Building Upgrade Finance Cost Savings Methodology
Sub-method P1 – Lighting (predicted savings)

1. Purpose

This document sets out the sub-method for estimating the predicted electricity savings arising from upgrade works under a building upgrade agreement that improves the efficiency of lighting equipment in a building.

2. Definitions

Control Gear means the lighting ballast, transformer or driver.
ESS Commercial Lighting Calculation Tool means the calculation tool published by the NSW Energy Savings Scheme Administrator to assist with the calculation of energy savings under the NSW Energy Savings Scheme.
Existing Lighting Equipment means the equipment that provides lighting services that was already installed and in working order at the time of implementation, including luminaires and/or lamps, control gear, and control systems.
Lifetime Electricity Savings is the electricity savings delivered by the Lighting Upgrade over the Lighting System Lifetime.
Lighting is defined as lighting equipment in use in South Australia for the purpose of lighting for a building.
Lighting System Lifetime is the period over which the Lighting Upgrade will effectively deliver savings, expressed in years, as calculated by the ESS Commercial Lighting Calculation Tool.
Lighting Upgrade means the replacement and/or modification of Existing Lighting Equipment with New Lighting Equipment resulting in a reduction in the consumption of electricity compared to what would have otherwise been consumed.
New Lighting Equipment means the equipment that provides lighting services that is installed as a result of the Upgrade, including luminaires and/or lamps, Control Gear, and control systems.

3. Eligibility to use this submethod

This calculation sub-method may be applied to a lighting upgrade where:
1. The existing lighting equipment is in working order at time of the upgrade.
2. The following Activities are excluded:
   - Non-fixed task lighting equipment such as portable lighting or desk lamps
   - Installing T5 adaptor kits.

4. Utility Savings

The utility savings for this upgrade works is equal to:

$$Utility\ Savings\ (MWh) = \frac{Lifetime\ Electricity\ Savings\ (MWh)}{Lighting\ System\ Lifetime\ (yrs)}$$

Where:

- Lifetime Electricity Savings are calculated using the ESS Commercial Lighting Calculation Tool as expressed in "saved MWh"
- Lighting System Lifetime is calculated using the ESS Commercial Lighting Calculation Tool as expressed in 'Effective Deemed Lifetime".

With the exception of lamp only replacements of fluorescent tubes with LED tube products, energy savings for this Activity will be calculated using Equations 6, 7 and 9 of the commercial lighting energy savings formula in Section 9 of the NSW 'Energy Savings Scheme (Amendment No.2) Rule 2014.

For lamp only replacements of fluorescent tubes with LED tube products energy savings will be calculated using the ESS Commercial Lighting Calculation Tool using the lighting category 'LED Lamp Only 240V'.

Calculations will use the factors and values from Schedule A – Default Factors and Classifications of the NSW 'Energy Savings Scheme (Amendment No. 2) Rule 2014.

5. Supporting evidence

For verification purposes, the following records should be retained in relation to the Activity:

- An output report from the ESS Commercial Lighting Calculation Tool (http://www.ess.nsw.gov.au/Methods_for_calculating_energy_savings/Commercial_Lighting) - produced using the version of the Calculation Tool current at the time the Activity is undertaken
- Details of the original and upgraded lighting system, including number and type of lights.