KILL BILL$!

Powering down across the City of Charles Sturt

Community Energy Efficiency Program - Round 2

CEEP 2040 Final Report
April 2016
This activity received funding from the Australian Government
Executive Summary

The City of Charles Sturt (CCS) received funding through the Federal Government's Community Energy Efficiency Program (CEEP) Round Two, in order to achieve a higher standard of energy efficiency at the Civic Centre Complex and to implement a comprehensive community engagement program about energy efficiency.

The purpose of this report is to provide an overview of the Kill Bills - Powering down across the City of Charles Sturt project, including the outcomes of the energy efficiency upgrades, the community engagement components and the project learnings. This Final Report seeks to fulfill the requirements for a Final Report under the Funding Agreement.

Background

The City of Charles Sturt is a Local Government in South Australia, with a population of approximately 114,000 residents. It is located west of the Central Business District of Adelaide and extends to the coast. The Civic Centre is located in the suburb of Woodville.

Council demonstrates its commitment to environmental sustainability through the adoption of its Community Plan 2013-2027 and strategic environmental plans (previously Towards One Planet Living, and recently Living Green to 2020), and supports a dedicated team as well as a whole of Council approach to its implementation. Within these strategic plans, there is a particular focus on energy efficiency.

The opportunity to attract CEEP funding to fast-track capital works for energy efficiency and to focus efforts on a comprehensive community campaign about energy efficiency was highly desirable for Council.

Objectives

The objectives of the CEEP funding is to:
1. support a range of local councils and community organisations to increase the energy efficiency of different types of non-residential council and community-use buildings, facilities and lighting particularly where this would benefit low socio-economic and other disadvantaged communities.
2. demonstrate and encourage the adoption of improved energy management practices within councils, organisations and the broader community.

The Kill Bills project focused on achieving greater energy efficiency at the City of Charles Sturt’s Civic Centre Complex which includes the Council administration offices, Woodville Library, the Woodville Town Hall and the car park areas. The resulting improvement from the implementation of the project upgrades (see Section 2 for details) was 20% reduction in electricity consumption (172,265 kWh per annum).

The delivery of the suite of community engagement activities and materials (see Section 3 for details) was designed to encourage Council staff, community groups, the business community and residents to adopt improved energy management practices at their facilities/homes.
Achievements

The Kill Bill$ project successfully produced the following outcomes:

- **An energy efficiency improvement of 20%**
- **Energy cost savings** in the order of **$75,000 each year** – this money will be redirected into establishing a new Community Green Buildings Grant for not-for-profit community groups and sporting clubs to implement energy saving measures at their premises
- **The payback period is 6.5 years.**
- **Energy consumption savings** of 172,265 kWh/yr, equivalent to **130.9 tonnes CO2/yr**
- An opportunity for **new conversations with staff, community groups, residents and the business community** about energy efficiency
- **Improved energy efficiency practices and behaviour change** amongst Council staff and the community.

Project Challenges and Learnings

The Kill Bill$ project had many facets and the challenges and learnings are summarised as follows:

- Scoping report – included some items that were later identified as inappropriate, following additional staff consultation and expert input. This was partly due to a change in consultants following the initial energy audit, leading to a discontinuity and loss of ‘ownership’ of the original audit and its recommendation. An alternative scope was negotiated where required to secure the required energy savings.
- **Product delays impacting milestone timing during project delivery**
- Access to technical knowledge – including challenges in reaching agreement on the appropriate definition of contractors’ roles and responsibilities
- **Budget constraints for project management costs.**

Some of the positive learnings included:

- Positive reception of film-based engagement from the community
- Positive feedback from State Government department, NGOs working with disadvantaged communities and other Councils on quality of animated film

*The views expressed herein are not necessarily the views of the Commonwealth of Australia, and the Commonwealth does not accept responsibility for any information or advice contained herein.*
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1. Project Objectives

The objective of the Kill Bill$ - Powering Down Across the City of Charles Sturt project is to achieve a higher standard of energy efficiency at the City of Charles Sturt Civic Centre Complex (Woodville), which includes the Council administration offices and customer service centre, Council Chambers, the Woodville Library, the Woodville Town Hall and car parking areas.

This project aligns with Council’s environmental strategic objectives as outlined in Council’s Community Plan and Living Green to 2020 environmental plan.

The City of Charles Sturt identified energy efficiency opportunities at the Civic Centre Complex which was to result in electricity savings of approximately 25% on its electricity bill or $80,000 per year. Council has committed to re-directing the actual energy savings achieved through the Kill Bill$ project to establish a new Community Green Buildings Grant program for a period of at least 3 years, for not-for-profit community groups and sporting clubs to implement energy saving measures at their premises.

The project also aimed to implement an innovative community engagement strategy, including the delivery of a community-based short film competition about energy efficiency and development of accessible information for the community about saving energy.

Civic Centre Complex Entrance on Woodville Road, Woodville.
2. Energy Efficiency Activities

2.1 Technologies Selected

An energy audit of the Civic Centre Complex was undertaken in December 2012 and was used to determine the scope for the grant application. The broad categories identified were:

- Heating, Ventilation and Air Conditioning
  - Building Management System (BMS) tune-up
  - External shading

- Equipment
  - Plug-in load management for office equipment
  - Upgrade hot water units
  - Hot water unit timer controls

- Lighting
  - Lighting retrofit
  - Lighting controls
  - De-lamping

In 2014, technical specialists were engaged to develop the technical specifications based on the energy audit information. Additional assessments undertaken by these consultants recommended some amendments to scope due to challenges to the implementation of some scope items and to achieve additional energy savings. These changes were agreed to with the Australian Government in May 2015 due to the increased energy efficiency benefits of the alternative, which were funded by Council at no additional cost to the Australian Government.

Energy efficiency activities deleted from scope:

- Install instantaneous hot water systems — detailed design work indicated that the approved budget was not sufficient to undertake the works and that the proposed action would increase energy use due to the building configuration.
- Plug-in load management — The IT Manager checked with the lessors of the office equipment. The outcome of these discussions revealed concerns about warranties being void by introducing the plug-in products.
- Install ambient air cooling in server room — The IT Department supported raising the set point of the server room but did not support installing ambient air cooling in server room as this needs strict temperature control.
- External shading — Two quotations were received for this work and both were double the budget. Additionally there were concerns from staff with ongoing maintenance that would require costly scaffolding.

Alternative scope to achieve energy savings:

- Additional lighting upgrades, including using LED lighting technologies instead of fluorescent lighting options
• Upgrade 11 old, inefficient air conditioning units at the Civic Centre Complex, with significant additional energy efficiency benefits beyond those indicated in the original project scope
• Install solar window film on north west facing office windows (Level 1) and internal blinds

A specification was produced for each technology and a competitive tender was administered by Council. Tenders were evaluated against the following weighted criteria:
• Value for money
• Methodology
• Experience
• Schedule

The technical advisors provided recommendations to the assessment panel on the proposals received and Dunbar’s Electrical were selected to undertake the works. Dunbar’s Electrical are a local company.

The technologies installed as part of this contract are as follows:

<table>
<thead>
<tr>
<th>Building Management System – tune up</th>
<th>Reliable Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwyer – CO2 Sensor</td>
<td>Dwyer – Temperature sensor</td>
</tr>
<tr>
<td>Belimo - Motorised Damper</td>
<td>Air Diffusion – Return air grill</td>
</tr>
<tr>
<td>Lighting Upgrades</td>
<td>Thom Royal LED II</td>
</tr>
<tr>
<td>ESCO Power Save 4800M3</td>
<td>Phillips LD pot MR16 6W</td>
</tr>
<tr>
<td>Versalux Venice 3 Adjustable</td>
<td>Fagerhult ‘Bianca’ Wall 4000K</td>
</tr>
<tr>
<td>Fagerhult ‘Bianca’ Wall 4000K</td>
<td>Pieri te Smart Scan</td>
</tr>
<tr>
<td>Window Shading</td>
<td>Solar Gard Silver Low E – solar window film</td>
</tr>
<tr>
<td></td>
<td>Whisper Cellular (internal) blinds</td>
</tr>
</tbody>
</table>

A separate tender was run for the air conditioning upgrades, and these formed part of the scope of works from May 2015. Another local company was successful, and the contract awarded to Butterfields. The technologies installed as part of this contract are as follows:

<table>
<thead>
<tr>
<th>Air conditioning units</th>
<th>Temperzone:</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPA550RK0G10-P</td>
<td>OPA465RKTG01-P</td>
</tr>
<tr>
<td>OPA705RKTG10-P</td>
<td>OPA340RKTBH</td>
</tr>
<tr>
<td>OPA201RKTYYH</td>
<td>OPA:86RKTYYH</td>
</tr>
<tr>
<td>Daikin:</td>
<td></td>
</tr>
<tr>
<td>RZQS100AY1</td>
<td></td>
</tr>
</tbody>
</table>
The City of Charles Sturt had previously installed an Energy Monitoring System (EMS) at the Civic Centre Complex prior to the commencement of the CEEP project which made it possible for staff to monitor energy use and the outcomes of the improvements in real time. The software is a Schneider Electric product and the service provider is Azzo.

Below is an example of the information that can be obtained from the system:

Electricity Use—Civic Centre Complex — By Location (comparison of administration offices, Council Chambers, Town Hall and Library) — Last 12 months

Total Electricity Use — Civic Centre Complex - tracked over time — the reduction in energy can be seen from September 2015 onwards when the energy efficiency measures for Kill Bills began to be installed.
2.2 Site Activities and Results

A summary of the project activities is provided in Appendix A. The main benefits, issues and learnings from the energy efficiency upgrades at the Civic Centre Complex are provided in this section. The energy efficiency reporting table in Appendix B provides further information.

<table>
<thead>
<tr>
<th>Energy Efficiency Activities</th>
<th>Benefits, Issues and Learnings</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting upgrades</td>
<td>The LED technologies selected have been well received by staff. Lighting levels have improved. The main office lighting caused minor complaints from 3 staff that it was too bright. The specification was to replace the existing light fittings with the new LED panels. On reflection, a review could have been undertaken as part of the specification process to assess whether some lights could be de-lamped due to the improved light performance of the new light fittings, rather than simply replacing light for light. If this could have been achieved while maintaining a suitably even distribution of light, within the Australian Standards, additional energy savings may have been possible. The new LED car park lights cause less light spill than the old models, which is a benefit to neighbouring properties.</td>
<td>This site improved energy efficiency by 20%, reducing electricity consumption to 18MJ/m². Annual cost savings are in the order of $75,000.</td>
</tr>
<tr>
<td>Managing peak demand</td>
<td>Significant cost savings will result from flattening the peak demand of the facility, making energy efficiency outcomes more financially feasible than simply looking at the cost per kWh saved. The BMS tune up works, review of operating times and installation of new air conditioning systems all have helped to flatten out the peaks of energy use. At the start of the project the maximum demand was 548kVA, and the energy audit recommended this could be reduced to 350kVA and effect substantial cost savings in its electricity supply contract. This could account for approximately $29,000 savings each year on electricity bills. The South Australian Local Government Association ran a joint procurement exercise for electricity contracts for Local Governments (late 2015). There was a coordinated process for all councils to re-negotiate their peak</td>
<td></td>
</tr>
</tbody>
</table>
demand with the energy retailer. The City of Charles Sturt informed this process based on the recommendations of the energy audit.

The timing of this process meant that not all energy saving initiatives had been implemented, and therefore a more conservative figure of 390kVA was agreed upon as the new maximum demand with the energy retailer.

| Air conditioning | This body of work was included as part of an alternative scope negotiation part way through the project. This required a separate procurement process to be run and ordering time for materials. It was planned that all units would be replaced by December 2015, however due to delays in delivery times and personnel availability, the installation occurred in January and February 2016. This has impacted on the time available to record the energy efficiency outcomes of the project.

The new units are providing much better performance and integrate well with the new controls for the Building Management System. |
| Window shading | The original scope required an external shading solution for the target offices, however due to the building configuration, it was to be too costly to purchase and maintain.

The alternative solution for solar window film and internal blinds has improved staff comfort in terms of more stable thermal conditions and reduced sun glare. |
Before – lights to be replaced in Civic Centre (Woodville) car park

After – LED lights installed in Civic Centre (Woodville) car park
New office lighting at Civic Centre Complex - Light panels on left side of photo are the new LED panels, and those on right side are the old fluorescent lights that were all replaced.
3. Project Demonstration and Communications Activities

The City of Charles Sturt represents over 50,000 households and businesses, while the Civic Centre Complex supports some 300 staff and attracts approximately 160,000 visitors each year, including for visits to the library and for attendance at events/functions in the Town Hall.

The project demonstration and communications activities were planned to target as broad a reach as possible, and be relevant for our diverse community. A key strategy was to activate the vibrant arts community to develop engaging, entertaining and informative short films on energy efficiency to be enjoyed by the whole community.

In addition, accessible and language independent communications were developed for the multilingual community of Charles Sturt. This was mainly centred around the development of a short animated film that did not rely on text, but rather visual cues to engage with the viewer about saving energy in the home. A complementary web-based game was produced to help reinforce the learnings from the video and is hosted on Council's website.

Cemented into wider benefits is the extension of Council's anticipated $80,000 cost savings from the Kill Bills project to directly benefit its many community groups and sporting clubs, by the establishment of a new Community Green Buildings Grant Program. This grant program will help these groups to save energy in their premises within the City of Charles Sturt.

3.1 Short Circuit Film Competition

The Competition

In accordance with the approved Project Plan, Council developed the concept and Guidelines for the Short Circuit Film Competition during 2014. The purpose of the competition was to use film as a creative medium to communicate messages about energy efficiency in community buildings to the wider community, a new approach for Council. Under direction from the CEEP team, the focus of the grant and therefore the short film competition was to be about energy efficiency in community buildings rather than homes – so the films focused primarily on how to save electricity in buildings such as libraries, offices, sporting clubs and other community buildings. The short films were to be no longer than 1 minute in length and must relate somehow to the City of Charles Sturt. The Grand Prize was $10,000.

The promotions for the competition occurred during May through to July 2014. This included Port Road banners (which is a main arterial road that runs through the heart of the Council area), posters in local businesses and community centres, and fliers. Direct communications were made to local schools and arts organisations to encourage more entries. By 4 August 2014 (the closing date), Council received 19 quality entries.

People’s Choice Voting

From 18-31 August 2014, a People’s Choice vote was widely promoted to further involve the community and to encourage the viewing of the short film entries. This was undertaken
using an online portal, and generated activity on various social media platforms such as Facebook.

In order to include the whole community, viewing and voting stations were set up at Council libraries and the Civic Centre to capture visitors to Council.

By the end of the voting period, there were a total of 992 votes cast. The winner of the People’s Choice, most popularly voted film (with 221 votes) was Aleesha Price for *The Tale of Three Bulbs*.

This film maker was given an Award at the Awards Night 5 September 2014 for this achievement.

**Independent Panel Voting**

Council convened an independent panel of judges representing a mix of energy and film making experts to undertake the assessment process to determine the winning entrants. A weighted scoring system was prepared including creativity and the strength of the energy efficiency messages. The films spurred much discussion between panel members who were all impressed with the quality of the community made films, and it was resolved to award the following entries:

<table>
<thead>
<tr>
<th>Category</th>
<th>Category description</th>
<th>Film-maker(s)</th>
<th>Film Title</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Young Person – to 17yrs</strong></td>
<td>For the best film directed and produced by persons under the age of 18</td>
<td>Celso March</td>
<td>The Library</td>
</tr>
<tr>
<td><strong>Young Person – 18 to 24yrs</strong></td>
<td>For the best film directed and produced by persons between 18 and 24 years old</td>
<td>Alex Graham</td>
<td>Efficient vs Non-efficient</td>
</tr>
<tr>
<td><strong>School</strong></td>
<td>For an outstanding entry from a school</td>
<td>Underdale High School</td>
<td>Change Starts Here</td>
</tr>
<tr>
<td><strong>Not-for-profit organisation</strong></td>
<td>For an outstanding entry by a not-for-profit group or organisation (excluding schools)</td>
<td>Christian Family Centre, Seaton</td>
<td>Think Twice About Your Impact</td>
</tr>
<tr>
<td><strong>Runner up Prize</strong></td>
<td>Additional award category – runner up to the Grand Prize</td>
<td>Kale Brock &amp; Kane Overall</td>
<td>Education Can Change the World</td>
</tr>
<tr>
<td><strong>Runner up Prize</strong></td>
<td>Additional award category – runner up to the Grand Prize</td>
<td>William Rosenthal</td>
<td>Community Leaders</td>
</tr>
<tr>
<td><strong>Grand Prize</strong></td>
<td>For the best overall entry determined by the Judging Panel</td>
<td>Derek Crozier &amp; Alex Prideaux</td>
<td>Winning Strategy</td>
</tr>
</tbody>
</table>

Two runner-up prizes were awarded based on feedback from the judging panel. Council has covered this additional expense.

The Grand Prize of $10,000 was awarded to *Winning Strategy*. The film demonstrated high production values. It had a strong energy efficiency message which went beyond just light bulbs to also talk about energy used for heating, cooling and refrigeration (the larger energy users for most buildings).
At the time of writing this Final Report, all film entries remain available for public viewing at this location: http://www.charlessturt.sa.gov.au/shortcircuit

Awards Night

On Friday 5 September, Cr Craig Auricht (Ward Councillor, Hindmarsh) hosted 150 guests at ‘Tenth & Gibson’, Bowden, to enjoy watching the short films as part of the Awards Night. The event was held in an arts warehouse, and was catered with food, drinks and popcorn, and bean bags contributed to the relaxed atmosphere.

Professor John Boland, an energy efficiency expert and Lynette Day from the Energy Markets and Programs Division of the South Australian Government, helped the audience to better understand the energy efficiency messages that were raised in the film and what actions can be taken in our homes and community buildings to improve energy efficiency. Each attendee filled in an energy efficiency pledge card about an action that they would undertake at home.

Each of the films were introduced by the film maker and shown to the audience. The Awards were awarded at the end of the night.

Council has received many compliments about the event and the film competition. The films sparked much conversation at the end of the night and continue to do so when shown at Council events. Council has plans to continue to show the films when there is a screen available to reach more members of the community.

Photos from the Awards Night – 5 September 2014

Attendees at the Awards Night 2014
Bean bags were popular at the event

Grand Prize winners – Alex Prideaux and Derek Crozier
Example of social media activity during the event

Summary

2402 unique visitors to your experience

- 213 Mobile Views
- 2189 Desktop Views

Summary of views of films from Council’s website (2014)

The film competition was developed to engage with a broad community audience about energy efficiency through the activation of the arts community. The popularity of the competition from film makers, the full quota of guests at the Awards Night and the high number of views of the film entries indicate that this part of Council’s communication strategy has sparked interest in the community about energy efficiency.

Council receives positive feedback about this unique program whenever the films are shown in public forums. In particular, guests who attended the Awards Night provided feedback to Council staff that exploring the energy efficiency messages from the films in more detail with help from the guest speakers and writing a pledge to take positive energy saving actions at home, was an interesting and positive way to engage with this topic.
3.2 Communications with building users

Approximately 300 Council staff are based at the Civic Centre Complex. A number of information sessions for staff and visitors to the Complex were conducted about the Kill Bill$ project and energy efficiency from 2014 to 2016.

Staff also received regular updates via notices on the intranet (The Mine) about the various energy efficiency upgrades occurring in the building and the expected benefits.

Sample update to staff

A series of communication materials was also developed for a staff audience. The messages emphasised how the project’s energy savings would provide more funds to community groups via the new community grant program. Staff responded positively to this messaging and has resulted in staff exhibiting positive energy saving actions in the office environment such as turning off PCs overnight, supporting the less extreme air conditioning temperatures in order to save energy, and an increase in staff suggestions for further energy saving opportunities at the Civic Centre Complex.
3.3 Communications with community groups

Communications with community groups focused on promoting the work that Council has been doing to save energy at the Civic Centre Complex and to pass the actual energy savings on to community groups via establishing a new Community Green Buildings Grant program.

In November 2015, Council endorsed the grant guidelines for the new program. A series of communication materials were then developed to promote the grants to the community. Some examples below:

DL flier produced for community groups

Port Road banner

The response to the program so far has been positive, with 19 community groups or sporting clubs registering their interest for Year 1 of the program.

More information can be found here:
3.4 Communications with business

It was proposed that Council would host a business breakfast, as a key part of engaging with this sector about the Kill Bills project and energy efficiency issues. Working in partnership with Council’s Economic Development team, it was planned to participate in an established business forum, rather than trying to run a separate event. Respecting the valuable time of our business community was important when devising an engagement strategy with this sector.

The planned forum was eventually cancelled for reasons not associated with this project. The Department was notified of this change and it was agreed to delete this element from scope, including the attached budget.

Council produced a fact sheet for all businesses within the City of Charles Sturt (6,000 fact sheets were printed for distribution), with the aim of explaining the process of how Council achieved its energy savings through the Kill Bills project, and providing each business with a basis for their own energy saving action plan.

Feedback from a local business about the fact sheet included that it was interesting to learn about the work that Council had been doing to save energy, and the Action Plan was used by this business in a team meeting to table energy efficiency as a focus for staff to help reduce operational costs.

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**Our Energy Saving Action Plan**

Use this form to develop an energy saving strategy for your business.

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsibility</th>
<th>Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve energy use and costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Replace lighting with energy-efficient bulbs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implement energy-saving practices in the workplace</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conduct an energy audit to identify potential savings opportunities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implement energy-saving measures identified in the audit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitor energy use and costs to ensure continued savings</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Business fact sheet**

Are the costs of high energy bills a drain on your bottom line?

The fact that you live in the City of Charles Sturt has saved you money and has increased your energy efficiency. We have conducted an energy audit on your behalf to identify ways to reduce your energy consumption and costs.

---

**Business in Charles Sturt are saving energy.**

---

**Are the costs of high energy bills a drain on your bottom line?**

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3.5 Communications with residents

There were various stages of communications with residents throughout the project. Council’s quarterly magazine, Kaleidoscope, sent to over 50,000 residences in the City, was used to inform the community about the project and about energy issues generally.

The Kill Bills project has renewed Council’s focus on energy issues generally and the increase in community engagement about this topic appears to be of interest to residents. There has been an increase in resident enquiries to Council about energy efficiency issues since the project commenced.

Example articles in the quarterly magazine (Kaleidoscope) about the project
Which Bill Will You Choose? – Animated Film

Taking inspiration from the interest in the Short Circuit Film Competition, Council developed its own short film about energy efficiency. It was decided that it should be an animated film that relied on strong visual cues rather than be too reliant on text or voice-over in order to be accessible to as wide an audience as possible. This means that people with low-literacy or English as a Second Language, and people of all ages could engage with the energy messages.

Council sought quotations from local animators and engaged an experienced Adelaide-based company, MonkeyStack.

The brief was to produce a short, animated film suitable for distribution mainly on social media networks, about energy efficiency in the home. The film was also to include reference to the Kill Bills project that Council had been undertaking, further demonstrating the leadership role of Council on this issue. The premise of the film was to use humour as an engagement tool with the audience, while promoting the benefits of low-energy use living.

A series of creative development workshops occurred in order to develop the concept and characters. The ‘Big Bill’ character was formed and was to be non-threatening, big in size and demonstrate examples of high energy use behaviours in a household setting. A ‘Lil Bill’ character was then developed to show the more positive behaviours for low energy use living.

Consultation occurred with the Department of State Development (SA), Energy Advisory Service in order to understand what issues are of most concern or are least understood about energy use in the home. Feedback included the issue of dealing with the stress of high energy bills and not understanding where the energy use is coming from. This became a central focus for the script. Although there are costs associated with energy that cannot be controlled by the household (i.e. network charges), the actual consumption within the home comes down to a series of choices, ones that will contribute to making a Big Bill, and ones that will produce a smaller (Lil) Bill.

Council has received much positive feedback about the film from State Government Departments, social inclusion agencies working with disadvantaged communities (including Uniting Communities) and other councils (City of Onkaparinga), and have approved requests from these organisations to use the film for their constituents.

Post from Council’s Facebook page promoting the link to the animated film
Swap your Big Bill for a Lil Bill with just a few smart home energy improvements!

Post from Council’s Facebook page promoting the link to the animated film

In January 2016, approximately 15,000 people had viewed the film and Council anticipates the resource will continue to be popular with social media users.

The film can be viewed from Council’s website or directly from Council’s YouTube here: https://www.youtube.com/watch?v=weWfcGZblc

**Which Bill Will You Choose? – Web-based Educational Game**

A web-based game was developed using the characters from the short animated film to further re-enforce the energy saving messages for households as well as to demonstrate the work that Council has done to save energy at the Civic Centre Complex as part of the Kill Bill$ project.

The user can choose out of two options to explore – household setting or Council’s Civic Centre Complex.

The user interacts with the game by finding the energy use elements and learning what a ‘Big Bill’ behaviour/technology might look like, and the more preferred ‘Lil Bill’ options.
Example screen shot of household setting from the web-game

Example screen shot of Council’s Civic Centre Complex from the web-game

The web-game is available from Council’s website: http://www.charlessturt.sa.gov.au/SaveEnergy
The use of multiple strategies for communications helped to meet our communications objectives and increase the overall reach of energy efficiency messages within the community.

- The communication activities were well received by staff and the broader community.
- The diverse mix of communications meant that the project messages have reached our target audiences.
- The involvement of creatives and innovators in the process brought engaging strategies for the communications component of the Kill Bills project. This is demonstrated through the success of the Short Circuit Film Competition and Council’s own animated film and web-game development.
- The short film competition for the community was a unique and engaging strategy to engage with the arts community and wider community through viewing these community made films.
- The development of the creative animated film and web-game with the characters ‘Big Bill’ and ‘Lil Bill’ has engaged the community about saving energy and is an ongoing resource.
- Using the motivation of saving energy and associated costs to help not-for-profit groups was a successful approach for engaging staff in the project.
- The significant interest from community groups and sporting clubs in the newly established Community Green Buildings Grants demonstrates an effective communications strategy for this audience, and a real need in the community for assistance to save energy.
4. Outcomes and Benefits of the Project

4.1 Project Outcomes and Benefits

From the energy audit used in the funding application, it was anticipated that the annual cost savings to be achieved through the energy efficiency activities would be in the order of $80,000/year at the Civic Centre Complex. Based on the actual results following completion of the energy upgrades, and the current cost to Council of electricity, the cost savings appear to be in the order of $75,000/year.

Council anticipated that the Civic Centre Complex would use approximately 25% less energy than the baseline. The results of the package of works show an average energy efficiency improvement (MJ/m²) of 20%.

These results are a demonstration that Council has met its stated objective ‘to achieve a higher standard of energy efficiency at the City of Charles Sturt Civic Centre Complex (Woodville)’. Encouraging results show a strongly reducing trend. As the new equipment and strategies are fine-tuned, it is expected that the savings will increase to targets.

The positive results from this CEEP project provide a demonstration of the reduced costs and improved amenity that energy efficiency projects can provide. These learnings will be shared within Council for other building upgrade projects and will also continue to provide leadership to the community in this area via the communication materials produced.

Staff provided positive feedback about the improved amenity and comfort from the lighting upgrades and new air conditioning system and controls in their working environment. Light quality in the offices has improved and now meets appropriate WHS standards for task lighting. Temperature is more predictable due to the new air conditioning units and improved controls.

4.2 How the project contributed to CEEP objectives

The project contributed to the CEEP funding objectives as follows:

**CEEP Objective 1:** Support a range of local councils and community organisations to increase the energy efficiency of different types of non-residential council and community-use buildings, facilities and lighting, particularly where this would benefit low socio-economic and other disadvantaged communities.

**Project contribution:** The energy efficiency upgrades support Council to increase the energy efficiency of the Civic Centre Complex, and therefore reduce associated costs for energy consumption, which is a community hub located in a low socio-economic area. The complex not only contains Council’s Town Hall which is regularly hired by community groups, but also the Civic Library, Council Chambers, Council’s Customer Service Centre and administration staff offices. The energy efficiency upgrades achieved an energy efficiency improvement of 20%.

**CEEP Objective 2:** Demonstrate and encourage the adoption of improved energy management practices within councils, organisations and the broader community.


**Project contribution:** The community engagement, including for building users, has been instrumental in providing the demonstration and encouragement of improved energy management practices within Council and to the broader community. In some cases the technologies are visible to the public and/or staff, and the communications materials help to demonstrate positive energy saving actions to those not engaged with the building. The development of the film competition, the animated film for social media and the web-based educational game provide a model of best practice in engagement with people without text or word-based information, opening new awareness through humour.

### 4.3 Challenges and Learnings

Whilst the project has overall been a success in meeting the CEEP criteria, there were a number of challenges and learnings along the way.

**Issue 1: Energy audit information translating to scope**

There were a number of issues faced with having the scope for the funding determined by the original energy audit. The information in the audit required further work by specialists to create technical specifications suitable for tender documents, and this cost was not covered by the CEEP funding. The more detailed scoping exercise in many cases uncovered site or technology issues that may have impacted on cost or energy saving effectiveness.

For this project, the company that produced the energy audit was different to the company that prepared the technical specifications and provided the energy performance data and expertise. This lack of continuity in advice caused some issues along the way about ownership of energy-saving performance, and differences in professional opinions were aired that were not easy to resolve due to the project scope being determined and agreed via the original energy audit.

The original energy audit involved some staff engagement, however, during the project implementation some additional issues came forward. This resulted in Council needing to find alternative energy saving measures that were suitable for CEEP midway through the project. Finding cost-effective alternatives were difficult and resulted in Council contributing much more financially than first agreed.

**Issue 2: Supply delays for technologies**

There were supply delays for some lighting and air conditioning technologies that required negotiations with CEEP staff for project milestone extensions to occur. Despite asking for product lead in times during the tender process, some of these timeframes changed once the orders were placed.

While all upgrades were completed during the term of the project, the time available following completion of works to verify all energy savings for the project post-implementation was reduced.

**Issue 3: Determining actual energy savings**

Council had previously installed an energy monitoring system at the Civic Centre Complex which, in conjunction with reviewing monthly electricity bills, was to assist with the
measurement of the energy savings achieved by the project. Staff training and capacity building was required to make effective use of this information for the purposes of this project. This cost had not been factored into the project budget and required Council to fund this additionally.

The delays in completing the activities also meant that the upgrades were completed in February 2016, and the final report was due in April 2016, only leaving two months of actual energy data to be used to verify the project outcomes. Therefore, an estimate of energy savings, extrapolated from these two months of data was used to determine the actual energy savings achieved, on an annualised basis.

Seasonal variations must also be taken into account from when the baseline occurred to the final report. Monitoring the effects of the upgrades over time will allow greater confidence of the impact of the upgrades, and will determine the budget available for the resulting community grants.

4.4 Technology specific issues

Alternative Scope

The following scope items from the original energy audit were required to be changed part way through the project, with approval from the Department:

- Install instantaneous hot water systems – detailed design work indicated that the approved budget was not sufficient to undertake the works, and that the proposed action would increase energy use due to the building configuration.

- Plug-in load management (office equipment i.e. PCs) – The IT Manager checked with the leasors of the office equipment and the outcome of these discussions revealed concerns about warranties being void by introducing the plug-in products.

- Install ambient air cooling in server room – The IT Department supported raising the set point of the server room but did not support installing ambient air cooling in server room as this needs strict temperature control.

- External shading – two quotations were received for this work and both were double the budget and additionally there were concerns from staff with ongoing maintenance that would require costly scaffolding. The alternative proposal for solar window film and internal blinds met the requirements for staff comfort, maintenance and energy efficiency.

These items were replaced at no extra cost to the Department with additional lighting upgrades, upgrading old inefficient air conditioning units and installing solar window film and internal blinds on some office windows. Council provided the additional funds required to achieve this.

Building Management System – tune up

The tune-up activities for Council’s existing Building Management System (BMS) were needed, however were originally not as effective due to the controls being linked to old, inefficient air conditioning units. The requirement to find alternative energy saving activities
resulted in capital expenditure being brought forward by Council to upgrade these air conditioning units, which has provided the additional benefit of improving the effectiveness of the BMS tune-up works.

**Lighting levels**

The previous office lighting was quite dull and produced a light output well below Australian Standards for office-based task lighting. The new LED panels which replaced the fluorescent lamps created a much brighter environment. The majority of staff welcomed this change. Three staff expressed concern that it was too bright. Delamping at these areas has addressed these concerns.

The new LED car park lights have also improved light levels, though Council has received one comment that the light now appears patchy. The lighting design is in accordance with the appropriate lighting standard for a car park and light testing has verified that the light performance meets these standards.

**4.5 Energy efficiency outcomes**

**Results**

Prior to project implementation, the projected energy cost savings were $80,000/year. Based on actual installation, the annual projected savings are $75,000/year. The combined payback of all initiatives is 6.5 years.

With the final energy efficiency installations completed in February 2016, Council expects to confirm the kWh consumption reduction and see an associated reduction in electricity bills going forward. It is recognised that many factors influence actual electricity consumption such as the weather, staff behaviour, occupancy, hours of operation and level of service, despite the installation of energy efficient technologies. However, avoided costs are no doubt achieved as without this project, costs may have been higher still.

**Other Benefits**

Attracting CEEP funding enabled Council to leverage funding for these energy efficiency upgrade works. Not only have the upgrades resulted in reductions in energy use, but there have also been improved levels of comfort within the building, particularly from a thermal and lighting perspective.

By reducing the operational cost (electricity bills) of Council’s Civic Centre Complex, Council’s budget can be better utilised to provide services to the community, such as the establishment of the new Community Green Buildings Grants program.

The funding has also provided a greater organisational focus on the issue of energy management, and has helped to identify a resource gap. Council has reorganised some staff roles and responsibilities so that there is now an officer who can focus on energy issues as a key duty. This resource will be able to continue the efforts towards improving energy efficiency across the organisation and promotion to the community.
The CEEP Program, with its community engagement focus has helped Council to meet its targets for engaging with the community about energy efficiency. The program has helped to improve the educational materials available for the community across many platforms, and provides a great base to continue to work from.

5. Budget

The project overall was achieved under budget, and was delivered within the approved timeframes. Due to the economic climate over the project life, competitive pricing meant that the anticipated costs for most elements of the project, were delivered under the budget estimates.

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Budget Contribution</th>
<th>Project Activity</th>
<th>Original Project Costs</th>
<th>Actual Project Costs</th>
<th>Total Project Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Industry, Science and Innovation (CEEP)</td>
<td>$276,000</td>
<td>Energy Efficiency Audit</td>
<td>$3,000</td>
<td>$8,580</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Communications Activities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Short Circuit Film Competition</td>
<td>$51,000</td>
<td>$46,797</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Develop, print and distribute key messages</td>
<td>$29,000</td>
<td>$33,636</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staff and site user engagement, promotion to community and sporting clubs and administration</td>
<td>$12,200</td>
<td>$5,925</td>
<td>$614,681 (including additional project management contributions by Council)</td>
</tr>
</tbody>
</table>

City of Charles Sturt $138,000 (original contribution) + $213,900 (alternative scope addition) = $351,900

| | | Business Breakasts | $4,500 | $1,944 | |
| | | Materials and Install | | | |
| | | Heating, Ventilation and Air conditioning | $399,500 | $358,156 | |
| | | Equipment upgrades | $3,150 | $2,300 | |
| | | Lighting upgrades | $125,550 | $108,012 | |
| | | Project Management– not included in Funding Agreement | | $49,331 | |
As outlined in Sections 2 and 4, an alternative scope was required during the project due to challenges in delivering all of the original scope items. A revised budget (consisting of additional funding contributions by Council only) was approved by the Australian Government.

The main change was the addition of air conditioning upgrades (not included in original scope). This activity was to help achieve the required energy savings and was fully funded by Council. The actual cost (approx. $185,000) was around $40,000 less than Council budgeted following a competitive tender process.

Most other project activities came in under budget given the competitive economic climate over the life of the project.

Project management costs were not included in the original Funding Agreement with the Australian Government. It was apparent that Council needed technical assistance to successfully complete the project and were therefore required to provide additional project management funds to cover this cost. Including this critical element in any future funding opportunities is a learning from this project, as this cost was not budgeted by Council and a Council budget variation was required part way through the project.

The City of Charles Sturt believes it has achieved value for money for this project with the efficient use of Australian Government funding and Council contributions. The Department and Council are confirming the methodology for managing project savings.

6. Project operation, mechanisms and processes

6.1 Approach to project management

The project management of the project was undertaken by Council staff. There was an overall project manager assigned to deliver all elements of the project and reporting requirements. This officer was assisted by a contractor management resource experienced in building capital upgrade projects, who managed the day-to-day site contact with the contractors for the energy efficiency upgrades. Regular project and site meetings were held over the life of the project to ensure timeframes and outputs were met, and issues were identified and managed in a timely manner.

Due to a lack of expertise available within Council, energy efficiency consultants were engaged to develop the technical specifications for the works and to verify the completed works and resultant energy savings. The intermittent involvement of this resource presented some challenges and at times there were delays in delivery of information.

6.2 Contractor management

There was much discussion at the procurement phase for the energy efficiency works about how best to package up the project elements. It was finally agreed that one head contractor be engaged for all works in order to have one point of contact for contractor management. This approach proved to be quite successful; however the contractor had some issues with managing sub-contractor delivery of some project items.
6.3 CEEP Project Administration

Despite there being a change in Government over the life of the project, Council enjoyed the continuity of one main Departmental officer for the Kill Bills project. Staff developed an effective working relationship with this officer which resulted in timely responses to issues and reports.

6.4 Incorporating Lessons

The administration costs for Council of managing the Kill Bills project (including the significant reporting requirements) were not identified in full in the original funding application, and therefore Council had to contribute more time and budget for this than originally anticipated. This will inform any future projects of this nature.

The change of energy efficiency consultant following the original energy audit and prior to the commencement of the project itself also presented some challenges. This included a degree of professional disagreement between the two groups of consultants, and associated lack of ownership of the original audit's recommendations (which had subsequently been incorporated into the project scope). Future projects will take into account the benefits both of continuity of expert advice and input, and of more thorough staff and stakeholder engagement as part of the original energy audit, and prior to confirming project scope.

Consultation with staff is key when proposing upgrade changes. Although consultation had occurred during the prior energy audit, the project identified that this didn't occur in enough detail to reveal challenges with scope delivery. This resulted in alternative scope needing to be found part way through the project.

7. Conclusion

The City of Charles Sturt is committed to demonstrating positive energy efficiency action to the community and encouraging our community to do the same. The Community Energy Efficiency Program (CEEP) has enabled Council to implement more energy savings at its highest energy use building, as well as establish valuable communications materials for the community.

The achievement of the energy saving targets not only builds momentum for future energy upgrades by Council, but with the establishment of the new Community Green Buildings Grants, there is a multiplier effect of the project benefits within the community. The success of the various film campaigns and use of social media has benefitted people in low socio-economic groups targeting awareness of household behaviours as contributing to higher energy bills.
Appendix A – Project Activity Summary

The City of Charles Sturt has been moving on its own Big Bill in favour of a smaller bill at the Civic Centre Complex on Woodville Road. With funding assistance from the Australian Government, Council has implemented a number of energy saving measures to achieve these savings and contribute to a more sustainable environment.

The following Table summarises the energy efficiency actions undertaken by Council for the Kill Bills project:

<table>
<thead>
<tr>
<th>Heating, Ventilation and Air-conditioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Management System (BMS)</td>
</tr>
<tr>
<td>Tune-up:</td>
</tr>
<tr>
<td>Reduce air conditioning operating hours</td>
</tr>
<tr>
<td>The air conditioning system was previously programmed to come on 2 hours before the building was occupied each day, and stay on for at least 2 hours after most staff left for the night. Operating hours have been adjusted to reduce this time, without compromising on staff comfort.</td>
</tr>
<tr>
<td>A number of areas of the building were identified during the review of the BMS as having air conditioning on, even though the rooms were unoccupied. These areas are now programmed to come on only when these rooms are in use, such as the Council Chambers.</td>
</tr>
<tr>
<td>For areas that are used after hours, specific zone controls (on-demand buttons) have been implemented so that only specific areas are cooled/heated for a timed period.</td>
</tr>
<tr>
<td>The original estimate for reduced heating/cooling time is expected to be significantly exceeded from the estimated 470 hours per year by implementation of these additional detailed initiatives.</td>
</tr>
<tr>
<td>Building Management System (BMS)</td>
</tr>
<tr>
<td>Tune-up:</td>
</tr>
<tr>
<td>Stop and start optimisation</td>
</tr>
<tr>
<td>Integrating the optimisation function will reduce the air conditioning operating time if the internal and external conditions are suitable to reduce the run time of the air conditioning and save energy.</td>
</tr>
<tr>
<td>This program is continually self-adjusting and optimising. Typically it takes at least a year to develop a full log of the building due to varying ambient conditions throughout the year, and then a longer term program can be fine tuned.</td>
</tr>
<tr>
<td>Building Management System (BMS)</td>
</tr>
<tr>
<td>Tune-up:</td>
</tr>
<tr>
<td>Install carbon dioxide (CO2) sensors</td>
</tr>
<tr>
<td>Previously, the air conditioning systems and BMS had a pre-determined setting for the minimum fresh air quantity required for the building.</td>
</tr>
<tr>
<td>CO2 sensing and control systems have now been installed on every air conditioning unit located at the Civic Centre Complex. The sensors are located within the occupied zone (they are a combined temperature and CO2 sensor) and are also installed in the main return air ductwork for averaging purposes.</td>
</tr>
<tr>
<td>The general observation is that the internal CO2 levels are now very close to ambient CO2 conditions (within 100-200ppm). Significant energy savings are expected from this initiative.</td>
</tr>
<tr>
<td>Building Management System (BMS) Tune-up:</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Duty cycle systems</td>
</tr>
<tr>
<td>Building Management System (BMS) Tune-up:</td>
</tr>
<tr>
<td>Install supply air sensors</td>
</tr>
<tr>
<td>Building Management System (BMS) Tune-up:</td>
</tr>
<tr>
<td>Equipment</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>Whisper Cellular blinds</td>
</tr>
<tr>
<td>Upgrade air conditioning units</td>
</tr>
<tr>
<td>Time control for hot water units</td>
</tr>
<tr>
<td>Lighting</td>
</tr>
<tr>
<td>Decommission 150W halogen uplights</td>
</tr>
<tr>
<td>Replace downlights in corridors, meeting rooms and chambers</td>
</tr>
<tr>
<td>Decommission 150W post-mounted metal halide uplights in main foyer (Customer Service public area - lower level)</td>
</tr>
<tr>
<td>Replace 150W metal halide downlights with 45W LED and CFL downlights with 22W LED in main foyer (Customer Service public area - upper level)</td>
</tr>
<tr>
<td>Control lighting in common areas</td>
</tr>
<tr>
<td>Install voltage regulators for library lighting circuits</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>Replace car park lights with LEDs</td>
</tr>
</tbody>
</table>

This project received funding from the Australian Government. Department of Industry, Innovation and Science.

The views expressed herein are not necessarily the views of the Commonwealth of Australia, and the Commonwealth does not accept responsibility for any information or advice contained herein.
# Appendix B – Energy Reporting Table

## Project Energy Efficiency Improvement Template

<table>
<thead>
<tr>
<th>PROJECT TITLE</th>
<th>Kill Bills Civic Centre Energy Efficiency Upgrade</th>
<th>PROJECT ID</th>
<th>CEEP2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>FUNDING RECIPIENT</td>
<td>City of Charles Sturt</td>
<td>DATE</td>
<td>8 April 2016</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Revision A</td>
<td></td>
</tr>
</tbody>
</table>

## Building, Facility or Site 1

<table>
<thead>
<tr>
<th>Name of Building</th>
<th>City of Charles Sturt Civic Centre Complex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location (address)</td>
<td>72 Woodville Road, Woodville, SA,</td>
</tr>
<tr>
<td>Type of building, facility or site</td>
<td>Office administration building and library</td>
</tr>
</tbody>
</table>

### Activity Type and Measure
- Upgrade of HVAC system ($201,139)
- Lighting upgrade ($136,117)
- BMS tune up, CO2 control of outdoor air, Demand Management ($118,790)
- Window film and blinds ($9,823)
- Timers & other equipment ($2,599)

### Energy Efficiency Estimate Method
- Energy audit completed by Sustainable Focus
- Energy efficiency review produced by Greenway Architects/ Secon Consulting Engineers

### Baseline Energy Usage
- 881,788 kWh or per annum

### Baseline Energy Efficiency
- 3,174,435 MJ per annum
- The original baseline energy efficiency figure was included in the original grant submission and was taken from the retail meter for the 2011 calendar year. As the project has taken sometime to be implemented, the baseline energy usage was updated for the 12 months up to April 2015 in the Revised Project Plan (May 2015).

### Energy Efficiency Improvement
- Reduction in energy over the last 12 months 291,821 MJ/yr or 88,447 kWh/yr or 67.2 tonnes/yr of CO$_2$ (10.0%)
- 8.45 MJ/yr per m$^2$ or 972 MJ/yr per full time employee
- Due to the a/c replacement not being complete until the end of January 2016 there is sufficient data to extrapolate for a full year of energy savings.
  - However if we do extrapolate on the energy saving of February and March 2016 (20.2%)
  - Projected reduction in energy over the 12 months if the same saving is made as February and March 2106 would be 620,155 MJ/yr or 172,265 kWh/yr or 130.9 tonnes/yr of CO$_2$ (20.2%)
  - 18.0 MJ/yr per m$^2$ or 2,067 MJ/yr per full time employee
Reporting Data (Measuring Energy Efficiency and Additional Data)

- A total area of 34,550 m² and 300 occupants
- 85 per cent average operational occupancy level
- Office 3000 hours and Library 3400 hours

Cost of Activity

- $468,468

Estimated Cost Savings

- Assumes unit tariff rate of 27c/kWh (this overall charge per kilowatt hour includes all rates and fixed charges)
- Based on last 12 months recorded data $22,112 per annum
- Projected (based on February & March 2016 meter readings) 12 months recorded data $46,512 per annum
- Additional cost saving can be made when maximum demand tariff is renegotiated with energy retailer which is anticipated to be $29,000 per annum.
- Total projected cost saving $75,512 per annum plus additional cost saving when all works are completed, BMS tuned and control strategy fully implemented.

Reasons for not achieving energy saving target

1. Insufficient time after upgrade to building services to determine what the energy savings will be. We have a maximum of 2 months data which can be distorted significantly by weather conditions, bedding in control system strategies.
2. Demand management initially set (1 month ago) to shed load at 300kVA which caused staff to complain due to unfavourable conditions within the office building. Resulting is some of the older a/c units load shedding being disabled. By removing those a/c units for the load shedding control strategy the energy use during hot weather (peak energy use) would increase significantly. The older a/c units are also harder to control as they have either 1 or 2 stage compressors.
3. Stage 1 A/C replacement completed 1 month ago (approximately a third of the buildings a/c units) but the control by the BMS is still being commissioned. The newer a/c units have variable capacity (speed) and are better suited to the demand management strategy and work more effectively with the staff noticing less any changes.
4. The stop and start optimisation requires time for the intelligence of the system to have sufficient data to determine when is the best time to start and stop mechanical plant.
5. Adjust the internal temperature in the building relative to the ambient external temperature facility is set up. But similar to point 2 if the control strategy is overridden then the projected energy savings will not be achieved.
Appendix C - Declaration

DECLARATION

The Authorised Officer of the organisation makes the following declarations:

☐ I declare that I am authorised to submit this Final Report (including any attachments) on behalf of

  City of Charles Sturt
  (Name of organisation)

☐ I declare that the information provided in this Final Report is true and accurate.

☐ I understand, and acknowledge that giving false or misleading information in this Final Report is

☐ I understand that final payment will only be made in accordance with the Funding Agreement
including on satisfactory completion of Milestones.

Authorised Officer Signature: ........................................ Date: 9/5/16

Name: Paul Sutton

Position: CEO

Organisation: City of Charles Sturt

Witness Signature: ........................................ Date: 9/5/2016

Name: Fiona Jenkins

Position: Coordinator Environment + Sustainability

Organisation: City of Charles Sturt

The use and disclosure of information provided in this Final Report is regulated by the relevant provisions and penalties of the
Public Service Act 1999, the Privacy Act 1988, the Freedom of Information Act 1982, the Crimes Act 1914 and the general laws
of the Commonwealth of Australia.

Information contained in the Final Report may be disclosed by the Department for purposes such as promoting the program
and reporting on its operation and policy development. This information may also be used in answering questions in Parliament
and its committees. In addition, the selected project information will be made publicly available. Public announcements may
include the name of the grant recipient and of any project partners; title and description of the project and its outcomes; and
amount of funding awarded.