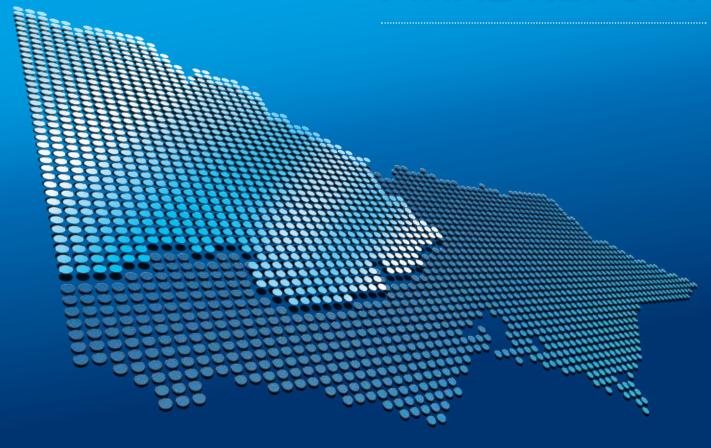
LIGHTING THE REGIONS FINAL REPORT





Changing street lights. Better. Brighter. Greener.

An important partnership between the following Local Government Areas and sustainability alliances:







































Chairman's foreword

Who would have thought that a handful of "street lighting nerds" could come together with various other, "soon to be converts", representing sixteen North West Victorian Councils, to deliver the largest energy saving partnership in Victoria's history.

The first gas street lights date back to around 1800. Mercury Vapour lights, the vast percentage of the lights we replaced, were invented around 1900 and LEDs, which we replaced them with, around 2000. The upgrade delivered by Lighting the Regions represents an enormous technological leap forward in the history of street lighting.

Lighting the Regions has encompassed sixteen Councils, two Sustainability Alliances, over a third of the state's area, 22,612 lights, savings of \$22M and 173,000 tonnes of greenhouse gas over the 20 year lifespan of the new lights. These are all seriously impressive numbers. A truly significant financial and environmental legacy could easily be seen as the entire story of this project. But, as the Chair of Lighting the Regions, I have a slightly different perspective.

My lasting impression is of a hugely varied group of regional councils, setting off together on a very large and complex journey into unchartered waters and pulling it off with grace and aplomb. I think it is important at this point, to recognise the degree to which the City of Greater Bendigo displayed regional leadership in supporting this project administratively. But they would be the first to admit that the delivery of this project and the many successes achieved along the way were driven by the broader partnership group and the fantastic spirit of collaboration displayed by all parties.



Ray Kingston speaking at the Lighting the Regions Regional Energy Efficiency Forum.

It is hard to qualify the exact reasons that so many of the intrinsic challenges and opportunities that occur during a project of this nature fell our way. But I can't help but surmise that this spirit of collaboration, backed up by some rigorous governance processes and ideals, played a major role. Successfully negotiating a dramatic upgrade in available technology during the project, coming in under budget, an innovative community based recycling program, fantastic partnerships with Powercor and VicRoads are just a few of the more notable "wins" Lighting the Regions can be proud of.

I would like take this opportunity to thank all those who have contributed to Lighting the Regions. In a rough chronological order, the Wimmera Mallee Sustainability Alliance, the Central Victorian Greenhouse Alliance, the City of Greater Bendigo, the other fifteen partner Councils, the Project Partnership Group, the Project Steering Group, Project Manager Andrea Joyce, Powercor, Ironbark Sustainability, SASI Marketing, Gerard Lighting and VicRoads. It has been a great pleasure working closely with many of you and I thank all of you for your enthusiasm and cooperation.

I am immensely proud to have played a role, in the delivery of Lighting the Regions. It has been an exciting, fascinating and overwhelmingly positive ride. Lighting the Regions was conceived as a lighthouse project to inspire households and businesses to explore the benefits of energy efficiency upgrades. I think and hope we may have accidentally also become a model and an inspiration for future successful Local Government collaborations.

Ray Kingston, Chair Lighting the Regions Project Steering Group

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Executive summary

Street lighting is commonly the single largest source of greenhouse gas emissions from local government authorities around Australia, often accounting for 30 to 60 percent of emissions. There are approximately 2.28 million street lights in service in Australia, contributing almost 1.5 million tonnes of greenhouse emissions each year and costing nearly \$400 million in energy and maintenance costs. A change to more energy efficient street lights can provide local government with savings in excess of 70% and result in significant reductions in greenhouse gas emissions.

The Lighting the Regions project is the largest street light upgrade partnership project ever undertaken in Australia. Sixteen local government authorities form the partnership, covering approximately 35% of the state of Victoria and providing benefits to more than 300,000 residents. Survey data indicate that the key barriers to carrying out street light upgrades are the capital cost and working with external stakeholders.

This project demonstrated that local governments can successfully work with a range of external stakeholders in a complicated and rapidly changing technical environment to achieve significant savings for their organisations and hence their communities. The partnerships are the cornerstone of this project, with the sustainability alliances providing the impetus for the sixteen local government authorities to come together and develop a bid for funding from the Australian Government. This injection of capital provided the crucial resources to allow the local governments involved to undertake the street light upgrade.

Lighting the Regions was able to undertake an upgrade to LED technology across each of its sixteen local government areas. The fact that big and small councils could dig deep and provide additional funding to change to LEDs demonstrates their commitment to energy efficiency outcomes and foresight in adopting cutting-edge street light technology.

The project successfully upgraded 22,612, mostly Mercury Vapour street lights to LED technology, resulting in annual energy savings of 25,430,230MJ. Greenhouse gas savings for the project over the 20 year life of the

new lights is estimated at 172,626 tonnes CO₂e. Simple net savings over the same 20 year period is calculated at \$22,169,219. Savings are already being reflected in council power and maintenance bills and annual savings for local government are estimated as \$1,049,470. This represents an average payback period of 5 years for the local government investment in the project and a Return on Investment (ROI) of 20%.

The method for the recycling and reuse of the redundant Mercury Vapour street lights was one of the highlights of the project. The model developed for Lighting the Regions has been used in similar street light upgrade projects in other parts of Victoria. The use of social enterprises to dismantle and recycle the redundant street lights provided a range of social, environmental and economic benefits to rural communities across the region. Meaningful employment was provided, virtually no components ended up in landfill and local organisations and individuals were able to be upskilled in e-waste processing.

The Lighting the Regions project featured a significant communications program that was rolled out before, during and after the streetlight installation process. This involved an integrated campaign working with project partners to facilitate community engagement, mainstream television and press advertising, mobile billboard and vehicle signage, brochures, information kits, branded promotional items, displays, editorial and media coverage, community and celebration events, social media and an interactive website.

The objective of the communications program was to ensure that the communities involved in the project were well informed of the project as it was rolled out across the region. The communications program also aimed to raise awareness, engage and celebrate energy efficiency across the diverse regional and rural communities and extend this to improved energy efficiency outcomes in the home and local businesses.

A total of twenty two Community and Celebration events were held as part of the project to engage with local communities and raise awareness of the project and energy efficiency in the home. The events partnered with local community and environmental groups to raise the profile of the project and encourage groups to continue with their own local energy efficiency initiatives.

Over the duration of the project, the Lighting the Regions website had an impressive 24,040 page views, with 15,985 visitors to the website. A significant number of visitors connected directly to the website, with approximately 75% of visitors typing the URL directly into the browser. This demonstrated the strength of the project's communications strategy call to action to visit the website for further information through marketing collateral, events and information kits, brochures, press and television advertising.

Feedback on the Lighting the Regions brand identity was that it had an aspirational association connected to community and family wellbeing. The brand imagery conveyed a sense of safety associated with better street lighting and the project positioning statement - Better, Brighter, Greener - encapsulated the key benefits of the project. Surveys indicated a raised awareness by families as a key target market for future energy saving initiatives and projects.

The mobile billboard worked well as a communication asset in a range of high profile locations, particularly in small townships such as Edenhope and Kaniva. The billboard prompted word of mouth discussions in the local community and also achieved good visibility when placed on highway locations such as on the Murray Valley Highway at Kerang.

The Lighting the Regions events allowed qualitative feedback on the project particularly in smaller rural locations such as Hopetoun, Charlton and Bridgewater. In many of these towns the number of lights upgraded were only a small percentage of the total project, but feedback from residents voiced that it was important for them not to be forgotten or excluded in large State infrastructure projects.

The events also allowed grass roots connectivity with local groups championing energy efficiency and environmental projects. Groups such as the Hepburn, Goldfields, Trentham and Mount Alexander Sustainability Groups are all active in their areas and were able to cross-promote local initiatives such as sustainable living workshops with the Lighting the Regions project. It is recommended that future lighting or energy efficiency initiatives include a grass roots engagement strategy with such groups.

Raised awareness of energy efficiency practices was far higher at surveyed events, as time could be spent with people showing them where to find information on lighting and energy efficiency practices in the Lighting the Regions brochures. It is noted that although people gained an increased awareness from the printed marketing collateral and website visitation, the decision to actually implement household energy changes is still based on individual value propositions of which initial LED lightbulb costs was a key factor. It is recommended in future projects some historical pricing information on household LED light bulb costs be included in the brochures to demonstrate the increased affordability of household LED changeovers compared to the high costs of previous years.

Project objectives

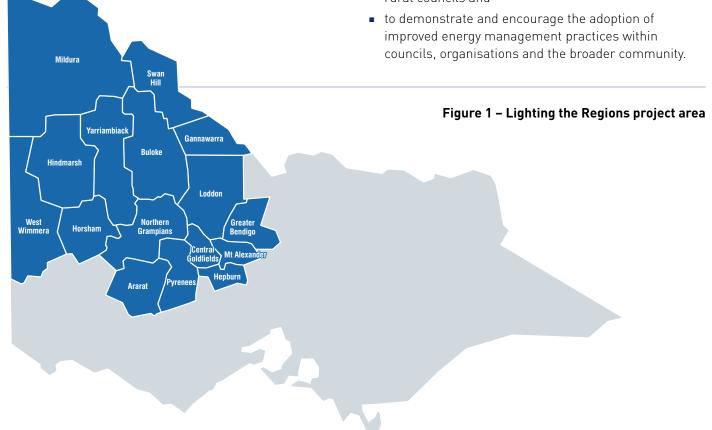
Lighting the Regions is the largest streetlight partnership project ever undertaken in Australia that covers 16 local government areas in north and north western Victoria. The project covers an area of 84,000 km², encompasses 35% of the state of Victoria and services approximately 300,000 residents. The aim of Lighting the Regions was to replace up to 23,000 inefficient, Category P streetlights with more efficient technology and was managed with the following objectives in mind:

- to maximise energy savings within the project budget
- to maximise greenhouse gas reduction
- to reduce council and ratepayers electricity and maintenance costs, and
- to share the learnings of the project and promote energy efficiency within the community.

The project was funded in part by the 16 local government partners and received a significant funding contribution from the Australian Government through the Community Energy Efficiency Program (CEEP).

The Lighting the Regions objectives were closely aligned with those of CEEP, which was a program, established to assist local governments and non-profit community organisations improve their energy efficiency, with the following key objectives:

to support a range of 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 socioeconomic and other disadvantaged communities or support energy efficiency in regional and rural councils and



Project energy efficiency activities

Energy efficiency activities

The key energy efficiency activity for this project was the upgrade of almost 23,000 existing street lights to more energy efficient technology. Whilst there are a range of lights to be found in streets and public places across the Lighting the Regions area, this project was concerned with changing the street lights that are found in residential streets, commonly referred to as Category P lights. These lights are fully funded by the individual council, within whose municipal boundary they are located.

Category P lighting is applicable to roads on which the visual requirements of pedestrians are dominant. These are your typical, urban residential roads that carry low numbers of vehicles. In these situations, the lighted area usually covers the road reserve and the footpath.

Approximately 80% of all of the street lights across the project area are Category P lights. The 80 Watt Mercury Vapour street light is the current standard fitting for Category P street lighting in all the participating local government areas. The Distribution Network Service Provider (DNSP) is Powercor, which owns the street lighting infrastructure and must approve any light choice. Powercor currently has a number of approved energy efficient, Category P street light replacement options, including fluorescent technology and LEDs.



Street light installation at the Sacred Heart Cathedral, Bendigo.



Mayor Christine Henderson and Ben Bowman, from Mount Alexander Shire Council, with the old and new street lights.

Project scope

At the time of project commencement, fluorescent street light technology was the only energy efficient technology approved by Powercor and this formed the basis of the original funding bid. As the Project Plan was being developed, an 18 Watt LED was approved for use by Powercor on its street lighting infrastructure. A Business Case was subsequently developed for the LED street lights and, despite the significant increase in cost, all 16 participating councils agreed to provide additional funds to allow for a full LED upgrade.

The initial target for the project was the full cost (to council) Category P street lights. As the project was being implemented, it became evident that there were a significant number of standard 80 Watt Mercury Vapour streetlights along arterial roads across the area. Due to their location along arterial roads, the ongoing maintenance, and power costs are for these lights is shared between the individual council and the roads authority, VicRoads.

In many of the country towns across the project, the cost shared lights constitute the majority of streetlights within a town. It became clear that disregarding the cost shared lights in the project scope would reduce the effectiveness of the project and visually detract from its outcomes. VicRoads agreed to join the project and funded its share of the upgrade, contributing 60% of the cost of lighting hardware, installation and waste light recycling. This was a big win for the project and the only successful collaboration with VicRoads of its kind across the state.

Project energy efficiency activities

The focus for the project was the upgrade of full cost and cost shared Category P street lights to LED technology, the majority of which were 80 Watt Mercury Vapour lights. In situations where existing lighting standards could still be met, a small number of 50 Watt Mercury Vapour lights were upgraded to LED. Any fluorescent street lights in Category P applications were also upgraded to LED to provide consistency in light type along streetscapes and to further improve energy efficiency outcomes for the project.

Streetlight technology

The street light used for the project was the Sylvania StreetLED® Eco luminaire, which contains an LED module of 18 Watts and where appropriate, complies with the requirements of the AS1158 series. The total power consumption for the light is 21.9 Watts. The colour temperature of the StreetLED® is 4000K which is equivalent to the 80 Watt Mercury Vapour and it has a design life of 20 years.

As well as energy efficiency gains in the vicinity of 77%, the light distribution of the StreetLED® is also optimised to significantly reduce waste and spill light. The StreetLED® uses an LED module that is manufactured by Samsung and the luminaire itself is fully manufactured and assembled in Australia. LED light technology in this application eliminates the need for lamp replacement, significantly reducing maintenance requirements, resulting in cost savings in addition to power savings.



Three-dimensional render of the new LED energy efficient street light fitting.

Implementation

For reasons of legal liability, only the DNSP is permitted to work on its own assets. Powercor is able to contract certified installers to work on its assets, but will not allow a third party (such as local government) to employ contractors to do so. The physical upgrade of the street lights across the project area was undertaken by Powercor and its authorised contractors, Electrical Tree Services (ETS).

The Electrical Safety (Management) Regulations (2009) place obligations on the DNSP to employ an access authority system to facilitate access to the network by employees and authorised contractors. Powercor has well established processes and systems in place to select, engage and manage contractors working on their network, including reviewing contractor health and safety management systems and training and auditing for compliance with established safe work practices.

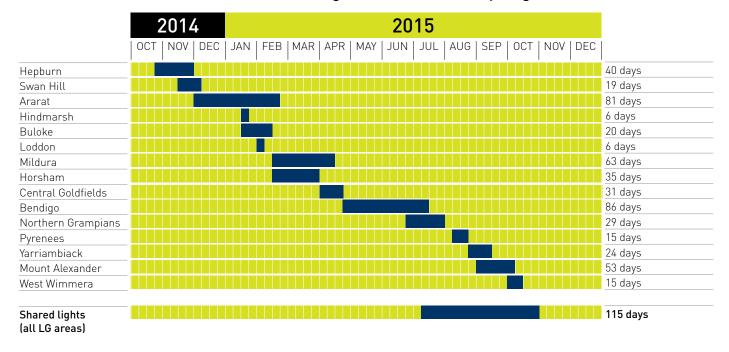
For Lighting the Regions, Powercor implemented a public tendering process that sought submissions from companies with suitably qualified employees to undertake the installation activities that met the appropriate Victorian Electricity Supply Industry (VESI) standard. The Lighting the Regions Project Manager actively participated in the selection process for the preferred sub-contractor.



ETS truck transporting Donald's old vapour lights for recycling.

Implementation of the light changeover occurred on a municipality by municipality basis and utilised teams of two installation technicians. For some of the larger municipalities, more than one team was deployed at the one time. For example, in the City of Greater Bendigo region, four teams worked concurrently to install over 7,000 lights.

Rollout of street light installations by region



During installation, checks for deterioration were undertaken and rectification works initiated if required. Once in place, activation and testing of the new lights occurred and Powercor records were updated accordingly. The installation process also involved traffic control and logistics to allow the work to be undertaken safely and efficiently.

The main issue experienced during the installation process was the number of errors in the Powercor street light database. The Powercor streetlight database is very large, covers a vast area and contains more than 160,000 records. The main error encountered was incorrect labelling of light type, particularly the differentiation

between non-standard and standard lights fittings and errors in listed wattages of lights. Inaccuracies in the record details meant that original listing of numbers of 80 Watt Mercury Vapour lights to be changed were far greater than those actually changed.

However, the addition of the cost shared lights to the program and the changeover of existing fluorescent lights in Category P applications meant that the final number of lights changed over was very close to that originally scheduled and there was consistency in light type and performance across the project area.

Project demonstration and communications activities

The Lighting the Regions project featured a significant communications program that was rolled out before, during and after the streetlight installation process. This involved an integrated campaign working with local Council project partners to facilitate community engagement, mainstream television and press advertising, mobile billboard and vehicle signage, brochures, information kits, branded promotional items, displays, editorial and media coverage, community and celebration events, social media and an interactive website.

The project commenced in October 2014 with a high profile launch at Hepburn by the Mayor of Hepburn, Cr Don Henderson; acting General Manager Energy Programmes Ausindustry Skills and Programmes, Mr. Mal Thorp; Project Chairperson Cr Ray Kingston, and key note speaker former national weatherman and now environmental and sustainability strategist Mr. Rob Gell. The event was covered by press and featured as the lead story across the Regional Victorian WIN Network.



The overall communications program was delivered as part of a multi-stage process that closely aligned to the schedule of street light upgrades across the sixteen Council regions. The roll out commenced in the Hepburn Shire and finished at Kaniva in the West Wimmera Shire. The project was accelerated due to a higher than anticipated street light changeover rate and the project finished well ahead of schedule.

The principal objective of the communications program was to ensure that the communities involved in the project were well informed of the project as it was rolled out across the region. The communications program also aimed to raise awareness, engage and celebrate energy efficiency across regional and rural communities and extend this to improved energy efficiency outcomes in the home and local businesses.

The process broadly consisting of the following outcomes:

- 1. Changing lights: Raising community awareness of the Lighting the Regions street light changeover project and the consequent energy efficiency, cost savings and benefits to the community.
- 2. Changing minds: Engaging our diverse regional and rural communities with energy efficiency to realise improved energy efficiency outcomes in the home
- **3. Building networks:** Sharing local energy efficiency knowledge and successes and expand these actions across the region.
- 4. Energy efficiency action together: Communicating the benefits of a regional approach to energy efficiency
- **5.** Celebrating with our communities the outcomes of the project

Billboard and project partners at the project launch in Hepburn Springs.

The Lighting the Regions project brand was applied consistently throughout the campaign with media kits distributed to all project partners pre commencement of installation roll out to ensure Council local area marketing was aligned with the integrated campaign. The positioning statement of Better, Brighter, Greener communicated the main campaign messaging of significant Council cost savings through new LED lighting technologies, improved residential street lighting and large reductions in greenhouse gas emissions.

A key communications challenge was raising project community engagement for those smaller Councils during a period of very short street light upgrades. As an example the Shires of Loddon (520 lights) and West Wimmera (348 lights) had a short changeover period when compared to Bendigo (7,302 lights). Stakeholder newsletters were developed to assist in the communication of roll out schedules to project partners, and regular communications on project activities were achieved through website updates.

As part of the communications program, Lighting the Regions participated at a number of regional and rural community events, ranging from Field Days, community markets and local agricultural shows. The project also engaged with regional communities through a number of cinema celebration events partnering with local community and environmental groups. Information kits on project outcomes for each individual Council region were distributed at the events detailing number of lights changed, estimated local Council savings and regional greenhouse gas emission reductions.

Throughout the communications strategy the Lighting the Regions website was the key project call to action for residents to find out more about the project and to also gain additional information via downloadable information about energy efficiency.

The website was very successful with 15,985 visitors over the period of the project, representing an estimated 7.5% of the adult population base in the project region. The visitors had 24,020 page views indicating people browsed across multiple pages.

As part of the communications strategy Council project partners were active in promoting the project through local press releases, publications, media columns and interviews, social media platforms and regional networks.

In October 2015 a Regional Energy Efficiency Forum was held in Bendigo to discuss the Lighting the Regions project and review other local government energy efficiency initiatives with a panel of industry experts. Attendees and project partners acknowledged the success of the Lighting the Regions project and looked towards future energy partnership projects in sustainable buildings, outdoor lighting, public lighting policies, sustainable transport and future funding opportunities.



Attendees at the Lighting the Regions Regional Energy Efficiency Forum, Bendigo.

Project demonstration and communications activities

The following table is a summary of some of the communication activities undertaken:

Activity	Target audience	Outputs
Changing ligi	hts	
Lighting the Regions website	 General community Other local government authorities 	 Up to date Information on light numbers as installation took place in each municipality Up to date events calendar Downloadable material on energy efficiency in the home and for businesses Short video on project
High profile launch	Project partners and Council dignitariesCommunityState and Federal agencies	 Introduction of the project to the community and also more broadly to senior council staff and dignitaries Promote the project widely
Changing mir	nds	
Media promotions	 Communities in municipalities where the lighting installation has commenced 	 A range of targeted press releases and advertorials in key print media that provides information about the project
Mobile Billboard	 Communities in municipalities where the lighting installation has commenced 	 The mobile billboard has been used extensively at community days, celebration events, the project launch and in each municipality as installation has occurred The mobile billboard was updated to coincide with the end of project and updated information on project completion
Building netv	vorks and energy efficiency together	
Community energy efficiency events	 Communities in municipalities where the lighting installation has commenced 	 Specific events that showcased the project: Natimuk Show, Mildura Powercor Tour de Depot, Warracknabeal Show, Talbot Farmers Market, Bendigo Marketplace stall, Distribution of project promotional publications and home energy efficiency brochure and small business energy efficiency brochure

Activity **Target audience Outputs**

Energy efficiency together and celebrating outcomes of the project

Post installation celebration events

- Community celebration events in municipalities where the lighting installation has been completed
- Regional Energy Efficiency Forum for Local Government partners
- Specific events that showcased the project: Horsham, Bendigo, Maryborough, Kerang, Swan Hill, Mildura, Kaniva, St Arnaud, Nhill, Charlton, Pyrenees, Daylesford, Castlemaine, Bridgewater, Yarriambiack.
- Distribution of project promotional publications and home energy efficiency brochure and small business energy efficiency brochure
- Sharing of ideas across local governments in Victoria for future collaborative projects

A more detailed synopsis of the communications program for Lighting the Regions can be found in Attachment B.



Community members at the Lighting the Regions Warracknabeal Show information stand, Yarriambiack Shire.

Outcomes and benefits of the project

Project outcomes

Street lighting is commonly the single largest source of greenhouse gas emissions from local government around Australia, typically accounting for 30 to 60 percent of greenhouse emissions. The aim of Lighting the Regions was to replace up to 23,000 inefficient, Category P streetlights with more efficient technology. This project was managed with the following key objectives in mind:

- to maximise energy savings within the project budget,
- to maximise greenhouse gas reduction,
- to reduce council and ratepayers electricity and maintenance costs, and
- to share the learnings of the project and promote energy efficiency within the community.

The Lighting the Regions objectives were closely aligned with those of CEEP, which was a program, established to assist local governments and non-profit community organisations improve their energy efficiency, with the following key objectives:

- to support a range of 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 socioeconomic and other disadvantaged communities or support energy efficiency in regional and rural councils and
- to demonstrate and encourage the adoption of improved energy management practices within councils, organisations and the broader community.

The Lighting the Regions project successfully upgraded 22,612 Category P streetlights to energy efficient 18 Watt LED street light technology. This resulted in maximising energy savings, reductions in greenhouse gas emissions and reduced the partner council's electricity and maintenance costs.

The roll out of the communications program for the project helped share the learnings across the region and promoted energy efficiency within the community and met the CEEP objectives in that the partner councils were supported in increasing the energy efficiency of the majority of their streetlights. The implementation of the communications program also demonstrated and encouraged the adoption of improved energy management practices within councils and across the broader community.

The Lighting the Regions partner councils includes nine of the top ten most disadvantaged rural and regional councils in Victoria, as outlined in the Australian Bureau of Statistics Socio-economic Index for Areas (SEIFA 2006). All sixteen participating councils are in the top three quintiles of disadvantage in Victoria and thirteen of the sixteen are ranked in the lowest 50 percent of the SEIFA Local Government Area Index of Relative Socio-economic Disadvantage. These communities were able to benefit from the successful completion of the project.



Information kits and marketing collateral at Lighting The Regions Talbot Market information stand, Central Goldfields Shire.

Energy efficiency outcomes

The successful upgrade of 22,612 Category P streetlights to LED technology will result in annual energy savings of 25,430,230MJ. These savings are in comparison to a baseline annual energy use of 33,199,546MJ. The energy savings calculated after project implementation are different to those estimated at the project scoping stage. Initially, the only approved energy efficient street light available was fluorescent technology (T5s and CFLs) and savings at the scoping stage were based on a changeover of 22,922 Mercury Vapour lights to T5 technology. At this time, annual energy savings were estimated as 23,474,776MJ, from an annual baseline energy use of 34,350,387MJ.

In addition to the change in lighting technology, the differences between the planned and actual energy efficiency figures can be attributed to a number of factors. The total number of lights changed was less than originally calculated and the mix of wattage of lights changed was different. Therefore, the baseline energy use is different before and after implementation, as are the energy efficiency calculations.

Implementation of Lighting the Regions has resulted in reductions in Operation, Maintenance and Repair (OMR) and electricity charges for all the council partners. When the project commenced, annual OMR charges for an 80 Watt Mercury Vapour light was \$53.01/light. When the 18 Watt LED was first approved, annual OMR costs were \$17.50/light. These costs changed at the beginning of 2016 to reflect the DNSP regular price reset.

Total project cost savings, estimated over 20 years were \$56M at the scoping phase. This figure was revised after implementation to \$26M over the same period. This can be attributed to factors other than the change in total number of lights upgraded and changes in OMR costs. Other factors have influenced this figure and include forecast reductions in the future rate of rise of electricity prices and prediction of future maintenance costs.

Estimated reductions in greenhouse gas emissions over 20 years for the project were 179,425 tonnes CO₂e at the project scoping phase. Estimates at the project conclusion are 172,626 tonnes CO2e. Greenhouse gas emissions are determined by using emission factors that equate energy savings to greenhouse gas savings. Emission factors are determined on a state-by state basis, depending on the state's energy mix. In Victoria, this year the emission factor that is relevant to Lighting the Regions calculations has reduced slightly, contributing to the now lower estimated greenhouse gas savings over the 20 year period.

Project return on investment

As there were a number of financial contributors to Lighting the Regions, a Return on Investment (ROI) calculation can be viewed from a number of investment viewpoints. For the purposes of this report, annual savings figures have been calculated from the 20 year savings figures. The 20 year savings figures are modelled and include the costs for light failure, control gear failure and other contingencies. The annual savings figure was used to calculate payback periods and ROI.

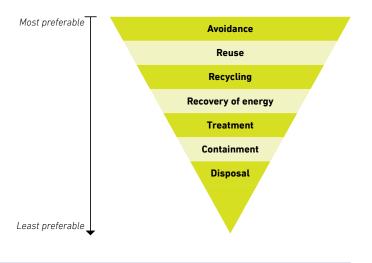
The annual savings for the whole of the project (full cost and cost share light totals) are estimated as \$1,108,461. When you remove the VicRoads proportion of the annual savings from these figures, the savings for the local government investment in the project is \$1,049,470. This represents an average payback period for the local government investment in the project of 5 years and an ROI of 20%.

If you consider the whole project cost from all contributors, the average payback period doubles to 10 years, with an ROI of 10%. Based on benchmarked figures for local government investment, both whole of project ROI and local government contribution ROI are considered a very sound investment.

Outcomes and benefits of the project

Recycling of redundant street lights

The waste management plan for the Lighting the Regions project was presented in Attachment D of the Project Plan. Lighting the Regions is a sustainability initiative and a suitable process for the treatment of the redundant lights was an integral component of the project. There was a requirement that as far as practical, all materials associated with the redundant lights would be reused or recycled. The following model for waste management and minimisation was followed.



Recycling represents a cost-saving opportunity for industry and can significantly reduce the volume of waste to landfill. In the context of this project, where waste could not be avoided, reused or recycled it was disposed

of appropriately in a licensed facility. Due to the size of the project area and to reduce transport costs, three recycling facilities were utilised for processing the redundant lights.

These organisations were:

- Eaglehawk Recycling, Bendigo
- Axis Worx. Horsham
- Christie Centre, Mildura.

All of the recycling facilities were social enterprises; two of them employing adults with disabilities and the other engaging long-term unemployed individuals. This was an important achievement for the project as it provided Triple Bottom Line outcomes with social, economic and environmental benefits. The use of social enterprises was also important for supporting local industries and minimised transport costs.

The redundant lights were collected directly after removal from the lamp post and placed wholly within the cardboard boxes that the new street lights were provided in. The redundant lights were then delivered by the lighting installers to the recycling facility with the Mercury Vapour globes remaining in situ. This ensured the safe transport of the lights to the recycling facility, where the globes were removed and carefully deposited in a stillage for pick up and processing.

The Mercury Vapour globes were transported to CMA Ecocycle; the only EPA-licenced facility in Australasia authorised to process Mercury Vapour globes. At this facility, the globes were crushed and the Mercury distilled and recovered for future use in the dental industry. Glass, plastic and phosphor powder were also recovered and recycled from the redundant Mercury Vapour globes.

The total weight of the redundant lights was 91.5 tonnes. The only component of the lights that was nor recycled or reused was a small rubber seal and hence the incursion to landfill is considered negligible.



Project partners and recycling centre workers with old and new street lights at Axis Worx, Horsham.



Disassembling the old vapour light at the Eaglehawk Recycling Centre.

The breakdown of the componentry and its treatment is listed in the following table:

Commodity line	Treatment	Total weight (tonnes)
Transformer	Recycle	22.8
Aluminium	Recycle	1.6
Cast Iron	Recycle	55.5
LG wire	Recycle	0.7
Metal	Recycle	1.5
Plastic/acrylic	Recycle/reuse	6.8
Mercury Vapour globe	Process and reuse	1.1
Rubber seal	Waste	1.5
Cardboard box	Recycle	
TOTAL		91.5 t

The total cost for the treatment of the redundant lights, including the processing of the Mercury Vapour globes was \$110,635. Indications are that this is far less than regular suppliers of redundant street lights pay per light for disposal. The value of the project for improving skills for the staff at the three social enterprises was reported as significant. All three of the businesses involved are keen to continue with a similar line of work now that their staff are skilled-up in this area.

Interest from VicRoads and Powercor in adopting a similar model for treatment of redundant streetlights is emerging. The social enterprise model for dismantling the redundant lights and the recycling of its componentry was developed by Lighting the Regions and used as a template for other streetlight upgrade projects in the state.



Workers with old vapour street lights at Christie Recycling Centre, Mildura.

Issues encountered

The main issue encountered at the time of installation was the level of inaccuracy of the Powercor streetlight database. The Powercor streetlight database is very large, covers a vast area and contains more than 160,000 records. Inaccuracies in the record details meant that original numbers of 80 Watt Mercury Vapour lights estimated to be changed were far greater than those actually changed. At the commencement of the project, a commitment to change up to 22,922, with a minimum of 21,000 lights was the agreed target.

The addition of 2,128 shared lights to the program and the changeover of existing fluorescent lights in Category P applications meant that the total lights changed over were very close to that originally scheduled and there was consistency in light type and performance across the project area.

Outcomes and benefits of the project

Ancillary benefits

The utilisation of social enterprises to dismantle and recycle the redundant street lights provided local employment opportunities for disadvantaged members of society. Reports from these organisations have indicated that the benefits of providing meaningful employment, combined with the opportunity to learn new skills was tremendously beneficial to those employees involved. The redundant light program also provided benefits to local industry in upskilling in a new area

The upgrade of 22,612 street lights across the region has resulted in more consistent, better quality Category P street lights. The new LED lights provide more directional light, minimising light spill sideways and upwards. Many streets have noticeably brighter lighting on the roadway and pedestrian areas and less light spill onto the front of houses. The before and after photos below from Ararat, illustrate some of these benefits.



Ararat before Lighting the Regions.



Ararat after Lighting the Regions.

Anecdotal reports from some councils within the project indicate that light glow from small towns has been noticeably reduced after the street light upgrade. In Bendigo, the sky glow was significantly altered after the upgrade of more than 7,000 Category P street lights to LED. The photos here show that upwards light spill of the new lights is much less that the Mercury Vapour lights that they replaced.

After a presentation on the project at the recent Australian Smart Lighting Summit in Melbourne, a Masters student from Sydney is keen to further analyse the visual changes at Bendigo.



Bendigo "sky glow" before Lighting the Regions.



Bendigo "sky glow" after Lighting the Regions.

Project evaluation

The Lighting the Regions monitoring and evaluation framework was developed at the Project Plan stage and consisted of two components:

- Project implementation, energy and greenhouse gas savings, and
- Raising community awareness of energy efficiency.

Project implementation, energy and greenhouse savings

The Lighting the Regions project was delivered on time, with installation commencing in October 2014 and concluding at the end of October 2015, with no incidents recorded during the installation period. The finalisation of all project acquittal activities is expected to be completed by the end of May 2016, meeting the CEEP timeline for project completion.

Early in the life of the project, the local government partners committed to providing an additional \$3M of funding to allow for an upgrade to LED technology. Due to sound procurement strategies for the project and economies of scale, not all of this additional local government funding was required. Therefore, in the context of the additional local government contributions, the project was delivered under budget.

From an overall project budget perspective, the provision of the additional council funding meant that a superior street light technology was able to be used and the outcomes achieved for the same Australian Government contribution were greatly enhanced.



Snapshot of the LTR project promotional video.

There were minor delays experienced with delivering some of the later components of the communications program. The Regional Energy Efficiency Forum and a number of community celebration events were scheduled for late in 2015 and early in 2016. Due to school holidays, the Christmas break and the availability and timing of suitable events to link into some events were delayed to ensure maximum attendance. This pushed out the final celebration event to late March 2016; however, all events were deemed a success and have been completed for the project.

Energy savings and greenhouse gas savings for the project changed from the original scope due to changes in light numbers and light type upgraded and also 2016 changes in the Victorian emission factor used in calculating greenhouse gas emissions. The annual energy baseline was calculated at the beginning of the project as 34,350,387MJ, with estimated savings of 23,474,776MJ due to project implementation. At the conclusion of the project, the energy baseline changed to 33,199,546MJ to reflect the changes in lights upgraded, with estimated energy savings of 25,430,230MJ.

Annual greenhouse gas savings were originally estimated to be 179,425 tonnes $\mathrm{CO}_2\mathrm{e}$. At the conclusion of the project, they are now estimated as 172,626 tonnes $\mathrm{CO}_2\mathrm{e}$. Both energy savings and greenhouse gas savings figures are very close to those originally estimated for the project, with the added benefit that a more consistent and much better quality street light has been rolled out across the region.

Annual savings figures (electricity and maintenance costs) for the whole of the project (full cost and cost share light totals) are \$1,018,461. When you remove the VicRoads proportion of the savings from these figures, the annual electricity and maintenance savings for the local government partners is \$1,049,470. This represents an average payback period for the local government investment in the project of 5 years.

Raising community awareness

Method

Independent evaluation of the raising community awareness component formed an important part of the communications program. SASI marketing worked closely with ResearchBods, a professional evaluation consultancy to assess how the project performed in raising community awareness. The methodology also reviewed the different types of project marketing collateral, brand messaging and website statistics for the project.

Research surveys were used to assess overall community awareness of the project, energy efficiency, cost savings, improved lighting benefits to the community, and attitudinal responses regarding improved energy efficiency outcomes in the home. Project brand recall, communication channels, media and key project messaging were also tested. The benefit of a collaborative regional approach to energy efficiency was researched and also the propensity for surveyed residents to engage with further energy saving initiatives.

The research methodology approach used a balanced representation of face to face Lighting the Regions event survey interviews combined with a large on-line database survey of the largest project partner with city based residents. By using both database survey and face to face survey interviews, the research gained both qualitative insights and quantitative statistics. The full report can be found in Appendix B.



Community members at St. Arnaud celebration event, Northern Grampians Shire.

This methodology resulted in collective research findings from both small regional and rural project partners. A total of six community and celebration events were surveyed over February and March 2016 in conjunction with a large on-line database survey undertaken in early April 2016. The face to face event survey interviews resulted in 242 completed surveys and allowed mini insights into regional attitudes towards local Councils and the Lighting the Regions project. The database survey of City of Greater Bendigo residents (4058 individuals) resulted in 244 completed surveys.

Insights

Over the duration of the project, the Lighting the Regions website had 24,040 page views, with 15,985 visitors to the website with a large number browsing multiple pages. A significant number of visitors connected directly to the website, with approximately 75% of visitors typing the URL directly into the browser. This demonstrated the strength of the project's communications strategy call to action to visit the website for further information through marketing collateral, events and information kits, brochures, press and television advertising.

Feedback on the Lighting the Regions brand identity was that the project brand had an aspirational association connected to community and family wellbeing. The brand imagery conveyed a sense of safety associated with better street lighting and the project positioning statement (Better, Brighter, Greener) encapsulated the key benefits of the project. The surveys indicated a raised awareness by families as a key target market for future energy saving initiatives and projects.

The mobile billboard worked well as a communication asset in high profile locations in small townships such as Edenhope and Kaniva. The billboard prompted word of mouth discussions in the local community and also achieved good visibility when placed on highway locations such as on the Murray Valley Highway at Kerang.

Project evaluation

The Lighting the Regions events allowed qualitative feedback on the project particularly in smaller rural locations such as Hopetoun, Charlton and Bridgewater. In many of these towns the actual numbers of lights upgraded were only a very small percentage of the total project, but feedback from residents voiced that it was important for them not to be forgotten or excluded in large State infrastructure projects.

The Lighting the Regions project had the opposite effect, with street lighting upgrade occurring in very small rural locations reinforcing a perceived Government commitment to all regions covered in the partnership project. An elderly woman in her nineties at the community event in Bridgewater commented that as a small child she helped light the wood powered lights in the streets near the flour mill. During her time lights have changed so much with technology, but it was good that small places like Bridgewater were part of the project getting new street lighting.

The events also allowed grass roots connectivity with local groups championing energy efficiency and environmental projects. Groups such as the Hepburn, Goldfields, Trentham and Mount Alexander Sustainability groups are all active in their areas and were able to cross promote local initiatives such as sustainable living workshops with the Lighting the Regions project. It is recommended that future lighting or energy efficiency initiatives include a grass roots engagement strategy with such groups.

Raised awareness of energy efficiency practices was far higher at surveyed events, as time could be spent with people showing them where to find information on lighting and energy efficiency practices in the Lighting the Regions brochures. It is noted that although people gained an increased awareness from the printed marketing collateral and website visitation, the decision to actually implement household energy changes is still based on individual value propositions of which initial LED lightbulb costs was a key factor. It is recommended in future projects some historical pricing information on household LED light bulb costs be included in the brochures to demonstrate the increased affordability of household LED changeovers compared to the high costs of previous years.



Cr. Michael Adamson from Swan Hill Rural City Council with a new energy efficient LED street light.



Lions Club members at the Kerang celebration event, Gannawarra Shire.

Budget

The original project aimed to deliver a streetlight upgrade from Mercury Vapour lights to fluorescent technology, with a total budget of \$11,177,234. Shortly after finalisation of the Project Plan, an approved LED streetlight became available and the local government partners agreed to provide more than \$3M in additional funds to affect an upgrade to better technology. The addition of VicRoads to the project in year 2 allowed the project to upgrade 2,128 Category P street lights that are operated in a cost share arrangement between councils and VicRoads. The addition of a new partner to the project added an additional \$625,632 to the overall project budget.

The following budget does not include Written Down Value (WDV) and Avoided Cost Credit (ACC). These are costs incurred by the local government partners in this project when removing a street light before the end of its "life". WDV and ACC are not CEEP-eligible expenditure and therefore, \$5,878 has been removed from these final figures.

During the life of the project, interest was accrued on the balance of project funds. These funds were used to fund approved activities such as street light hardware purchase and installation costs. For this budget report, interest accrued was split evenly between these two items.

Major activity	Department funding (GST exclusive)	Local Government contribution (GST exclusive)	Other (VicRoads contribution) (GST exclusive)	Project Interest Accrued	Project total (GST exclusive)
Contract services					
Streetlight hardware purchase	\$2,571,848	\$3,801,534	\$380,486	\$61,293	\$6,815,161
 Streetlight installation costs (redundant light treatment) 	\$2,104,366	\$950,758	\$245,146	\$61,293	\$3,361,563
Professional services					
 Project communications and raising community awareness 	\$227,680	\$225,490			\$453,170
 Technical consultancy services 	\$159,219	\$152,031			\$311,250
Administration, including project management	\$66,667	\$169,423			\$236,090
TOTAL	\$5,129,780	\$5,299,236	\$625,632	\$122,586	\$11,177,234

Budget

The new LED street lights have a much longer life span that the existing Mercury Vapour lights which provide significant future savings because the lights require fewer maintenance visits and do not require regular globe replacements. Likewise, energy consumption of the new LED light is more that 77% less than that of the original Mercury Vapour light.

The original funding from the Australian Government for the project was granted on a 2:1 basis (Australian to Local Government). Due to changes in the technology chosen for Lighting the Regions as the project progressed, the local government partners increased their proportional commitment. This resulted in an approximate 1:1 proportional funding model between the Australian Government and the Local Government partners. Lighting outcomes and energy savings increased as a result of the change in technology, translating to an improved investment outcome for the Australian Government for the same level of financial commitment

Opportunities were realised for local industries across the numerous parts of the project. This includes local company, SASI Marketing, who managed the communications and marketing component of the project. The social enterprises that undertook the dismantling and recycling of the redundant lights were located locally across the region in Mildura, Horsham and Bendigo. The street light hardware was fully assembled in NSW, also providing employment opportunities for the local community.



Lighting the Regions vehicle in front of the St. Arnaud town hall during the Northern Grampians Shire celebration event.



Lions Club members at the Nhill celebration event, Hindmarsh Shire.



Lighting the Regions Bridgewater Farmers' Market information stand, Loddon Shire.

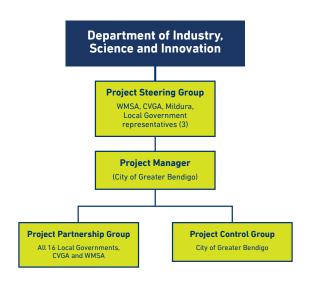
Project operation, mechanisms and processes

Project governance

As it was the largest of the local government partners in the project, the City of Greater Bendigo was requested to take on the role of Project Lead for Lighting the Regions. This involved being the lead proponent (Recipient) for the project in terms of administering the project on behalf of the project partners, including delivery of financial services and project management. A Project Manager was appointed and positioned with the City of Greater Bendigo. Street light experts, Ironbark Sustainability were contracted to assist with project delivery.

Due to the size and complexity of the project, early endeavours were made to develop an effective governance structure for the project. This was to ensure that the individual councils would have appropriate opportunities for communication during all phases of the project, options to escalate issues and resolve conflict if required. Some financial and contractual risks to the lead organisation, as the Recipient under the Funding Agreement, were identified early in the project. These were acknowledged by all parties and the development of good governance arrangements was seen as important in assisting with the ease of delivery.

The following diagram shows the governance structure that was agreed to by all project partners:



The Project Steering Group, as a representative body of the local government partners, was formed to provide direction and steerage for the project throughout all its phases. A Terms of Reference for the Project Steering Group was developed, amended and endorsed at the first formal meeting for the project. Membership of the Project Steering Group consisted of representatives of the two Sustainability Alliances, and four of the local government partners. The Project Steering Group met regularly throughout all phases of the project.

The Project Partnership Group was a broader representative group, consisting of a one person from each of the partner councils. This group met on an as-needs basis and provided active input into the project as it developed, particularly in relation to project communications as the installation rolled out within their own municipalities. There was also opportunity for the wider group to provide active input into the project development and implementation via representatives on the Project Steering Group.

The City of Greater Bendigo established its own Project Control Group to oversee the project delivery from an internal organisational perspective. The Project Control Group consisted of senior staff members in the areas of finance, legal service, procurement and was chaired by the Director of Presentation and Assets. This group meet at key intervals during the life of the project and provided a mechanism for high level input on technical, financial and management matters. The Project Control Group also ensured adherence to all relevant policies, procedures and procurement standards as the project progressed.

Technical resources

Due to the complex technical nature of a street light upgrade project of this scale, external specialist resources were required to assist with project delivery. Ironbark Sustainability provided specific street lighting expertise and project support to assist the Project Steering Group to deliver the many aspects of the project. This was provided in three main parts.

Project operation, mechanisms and processes

Part A involved further definition of the project specification as it related to the installation phase of the street light upgrade process. Consultation with each project partner was undertaken in preparation for the development of a Public Lighting Plan that was fit for purpose. This provided a clear pathway, assisting the installation contractors by defining the scope of the project within each council area. Any additional requirements to assist with preparation for the lighting installation phase were also identified.

Part B was the provision of expert technical services to facilitate and guide the Project Manager and Project Steering Group in procurement of the lighting hardware and installation phases. This included the provision of expert advice and assistance with the purchasing of the street lighting hardware for the project, including the preparation of any required documentation and the provision of information to assist with the selection of technology appropriate to this project.

Expert advice and assistance was provided with the negotiation and review of the contractual terms with the network distributor, including the provision of effective and rapid trouble shooting measures and assistance with high level negotiations prior to and during installation. Clear communications channels were developed and documented for installation activities between the contractors, the Project Manager and the council partners.

Part C was the provision of expert advice and technical services to ensure that the project could be completed to the satisfaction of the funding body and the project partners. This included expert advice and clarification on how to respond to and manage any data irregularities, such as additional lights, decorative lights and missing lights.



Lighting The Regions Project Partnership group. (Credit: Donald Buloke Times)

This included the development and updating of energy efficiency tables as the project progressed and was refined to meet agreed milestone reporting to the Department and any requested analysis of information for presentation purposes. Additional opportunities for reducing costs and greenhouse emissions by replacing additional lights were also identified and Business Case information provided.

Project learnings

The City of Greater Bendigo managed all administrative and financial components of the project, on behalf of the local government partners and was able to successfully exceed the predicted outcomes. A project of this scale, with such a large number of partners, delivered over a three-year time frame presented a number of challenges for the organisation. This included challenges in the area of procurement and the requirement to comply with Victorian Local Government procurement guidelines. The challenge was that these guidelines are targeted at the individual council scale, whereas this project was a partnership project with a number of councils involved. All issues were systematically addressed as the project progressed.

The original CEEP funding guidelines placed relatively low limits on total funding allowed for project management. The Project Steering Group felt it imperative that the project have its own project manager to allow for the most efficient and effective delivery of the project. The local government partners agreed to provide and additional \$200,000 to fund a project manager for the project.

Overall, the structure and processes developed to deliver Lighting the Regions have provided a sound model for the delivery of large, local government collaborative projects. The partners in this project have indicated a strong willingness to continue to identify opportunities to work together to achieve even greater outcomes into the future.

Conclusion

Effective partnership was at the core of the Lighting the Regions project, which was successfully delivered within its prescribed timelines. This project is a great example of how local governments are able to successfully work together and deliver a complex project that achieved significant cost and energy savings to benefit a diverse community of people.

The project was funded in part by the sixteen local government partners and received a significant funding contribution from the Australian Government through the Community Energy Efficiency Program (CEEP). Additional funding contribution was also provided by VicRoads.

The objectives of Lighting the Regions were:

- to maximise energy savings within the project budget,
- to maximise greenhouse gas reduction,
- to reduce council and ratepayers electricity and maintenance costs, and
- to share the learnings of the project and promote energy efficiency within the community.

Lighting the Regions meet all of its stated objectives, maximising energy savings by upgrading 22,612 existing street lights to LED technology, resulting in predicted annual energy savings of 25,430,230MJ. Greenhouse gas emission reductions are estimated at 172,626 tonnes of $\rm CO_2e$ over the 20 year life of the new lights. Energy savings are already being reflected in council bills for power and maintenance and annual savings are calculated at \$1,049,470 across all council partners.

The method for the recycling and reuse of the redundant Mercury Vapour street lights was a highlight of the project. The model developed for Lighting the Regions has been used in similar street light upgrade projects in other parts of Victoria. The use of social enterprises to dismantle and recycle the redundant street lights provided a range of social, environmental and economic benefits to rural communities across the region. Meaningful employment was provided, virtually no components ended up in landfill and local organisations and individuals were able to be upskilled in e-waste processing.

The Lighting the Regions objectives were also closely aligned with those of CEEP, which was a program established to assist local governments and non-profit community organisations improve their energy efficiency. This project was able to support a range of councils and community organisations to increase the energy efficiency of the majority of street lights within their municipalities.

The Lighting the Regions partner councils included nine of the top ten most disadvantaged rural and regional councils in Victoria. All sixteen participating councils are in the top three quintiles of disadvantage in Victoria and thirteen of the sixteen are ranked in the lowest 50 percent of the SEIFA Local Government Area Index of Relative Socio-economic Disadvantage. These communities were able to benefit directly from the successful completion of the project.

The Lighting the Regions project featured a significant communications program that was rolled out before, during and after the streetlight installation process. This involved an integrated campaign working with project partners to facilitate community engagement, mainstream television and press advertising, mobile billboard and vehicle signage, brochures, information kits, branded promotional items, displays, editorial and media coverage, community and celebration events, social media and an interactive website.

The main objective of the communications program was to ensure that the communities involved in the project were well informed of the project as it was rolled out across the region. The communications program also aimed to raise awareness, engage and celebrate energy efficiency across the diverse regional and rural communities and extend this to improved energy efficiency outcomes in the home and local businesses.

Conclusion

A total of twenty two Community and Celebration events were held as part of the project to engage with local communities and raise awareness of the project and energy efficiency in the home. The events partnered with local community and environmental groups to raise the profile of the project and encourage groups to continue with their own local energy efficiency initiatives.

Over the duration of the project, the Lighting the Regions website had an impressive 24,040 page views, with 15,985 visitors to the website. A significant number of visitors connected directly to the website, with approximately 75% of visitors typing the URL directly into the browser. This demonstrated the strength of the project's communications strategy call to action to visit the website for further information through marketing collateral, events and information kits, brochures, press and television advertising.

The Lighting the Regions events allowed qualitative feedback on the project particularly in smaller rural locations such as Hopetoun, Charlton and Bridgewater. In many of these towns the actual numbers of lights upgraded were only a very small percentage of the total project, but feedback from residents voiced that it was important for them not to be forgotten or excluded in large State infrastructure projects.

The events also allowed grass roots connectivity with local groups championing energy efficiency and environmental projects. Groups such as the Hepburn, Goldfields, Trentham and Mount Alexander Sustainability groups are all active in their areas and were able to cross-promote local initiatives such as sustainable living workshops with the Lighting the Regions project. It is recommended that future lighting or energy efficiency initiatives include a grass roots engagement strategy with such groups.



Bendigo's last streetlight installed (Project Manager Andrea Joyce, City of Greater Bendigo CEO Craig Niemann, and Powercor Project Manager Craig Guymer).

Raised awareness of energy efficiency practices was far higher at surveyed events, as time could be spent with people showing them where to find information on lighting and energy efficiency practices in the Lighting the Regions brochures. It should be noted that although people gained an increased awareness from the printed marketing collateral and website visitation, the decision to actually implement household energy changes is still based on individual value propositions of which initial LED lightbulb costs was a key factor. It is recommended in future projects some historical pricing information on household LED light bulb costs be included in the brochures to demonstrate the increased affordability of household LED changeovers compared to the high costs of previous years.



Bendigo's last LED streetlight successfully installed.

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 the
 City of Greater Bendigo
- 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 an offence under the Criminal Code Act 1995.
- ✓ I understand that final payment will only be made in accordance with the Funding Agreement including on satisfactory completion of Milestones.

Authorised Officer Signature:	bagnilan Date: 3	16116
Name: Craig Niemann		
Position: Chief Executive Officer		
Organisation: City of Greater Bendigo		
Witness Signature: Juan	Date: 3	16 12016
Name: Jemy WE	9	
Position:	Organisation: City of Ci	reader Berchojo
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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.

Attachment A

Project energy efficiency improvement template – Lighting the Regions whole of project

PROJECT TITLE	Lighting the Regions		PROJECT ID	CEEP2121	
FUNDING RECIPIENT	City of Greater Bendigo		DATE	4 May 2015	
Building, Facility or Site 1					
Name of Building, Facility o	r Site 1	Street Lights for th	e whole of the <i>Lighting the</i> i	Regions project	
Location (address)		Horsham RuralHindmarsh ShireYarriambiack Sh	e Council ire Council plans Shire Council y Council city Council ds Shire Council council council council council city Council city Council ity Council uncil	alities:	
Type of building, facility or s	Street lights				
Activity Type and Measure		Street light replace	ement		

Energy Efficiency Estimate Method

Figures are based on real street light data – bills and number of lights. As there is one replacement light technology used (18W LED lights) it is very straightforward to determine energy savings. Baseline Energy Use was calculated by street lighting experts Ironbark Sustainability. Inputs for the calculations are the number of lights (from council electricity bills) multiplied by wattage of each light and the following information from Ironbark Sustainability's independent financial analysis of Council's street lights.

The methodology for the calculation of energy volumes for such unmetered supplies is set out in the National Energy Market (NEM) Metrology Procedures, which are managed by the Australian Energy Market Operator (AEMO). The methodology relies upon knowledge of the energy consumption of each type of approved load at an unmetered connection point.

The values for assumed energy consumption are obtained from power consumption tests. The outcomes of these tests are agreed upon by AEMO, responsible persons, Registered Participants and other, relevant parties. The results are then presented and published in load tables managed by AEMO. The load tables must be updated whenever a new unmetered device comes into use. It is from these load tables that retailers and network service providers are able to calculate energy use from unmetered supplies. This is undertaken by maintaining an inventory of bulbs for each council so that costs can be appropriately allocated.

There are a total of 22,612 lights replaced. These consist of:

- 75 × 50W Mercury Vapour Lights (wattage 65w)
- 21,355 × 80W Mercury Vapour Lights (wattage 95.8w)
- 129 x 125W Mercury Vapour Lights (wattage 142w)
- 871 × 42W Compact Fluorescent Lights (wattage 46.4w)
- 106 × 32W Compact Fluorescent Lights (wattage 36.6w)
- 6 × 2x24W T5 Fluorescent Lights (wattage 47w)
- 70 × 2x14W T5 Fluorescent Lights (wattage 30.2w)

To calculate baseline energy use the calculation is:

 Number of Lights × Wattage × 365 (days/year) × 11.94 (hours operational per day based on the regulations cited above) / 1000 (to get to kWh) × 3.6 (to get MJ)

Baseline Energy Usage

Baseline energy use for the Lighting the Regions Project is 33,199,546 MJ per annum

Attachment A

Baseline Energy Efficiency

Local government's street lighting stock primarily comprises standard 80 Watt Mercury Vapour lights (80W MV), which uses 77% more energy than the efficient LED technology that has been used in this project:

- Total km of roads that are P category: 2,261 km
- Total number of Category P lights: 22,612
- Total energy consumption: 33,199,546 MJ
- Total energy consumption per km of road per year: 14,682 MJ/km/Year
- Total energy consumption per km of road per day: 40.22 MJ/km/Day

Note this project only refers to Pedestrian Category, or "P Category" roads. P Category roads are also known as minor roads. The objective of P Category lighting is to provide a lighted environment where due to the low vehicular traffic flow the visual requirements of pedestrians are dominant.

To accomplish this, it is necessary to illuminate both the roadways and the surrounding verges to allow pedestrians to identify obstructions, and to aid motorists in recognising that pedestrians may be present. The lighting levels requirements are far lower than for Major Road lighting (or "V Category" or "Vehicle Category") and the design is based upon the amount of light falling on the road reserve (boundary to boundary).

The above requirements are considered achieved if the lighting is designed and installed according to the requirements of the Australian/New Zealand Standard AS/NZS 1158 "Lighting for roads and public spaces" (Category P – sub-categories P1 - P5).

Energy Efficiency Improvement

Energy savings from street lighting are straightforward to predict because the exact number and type of lights and their operating conditions are well known, and do not change as it is regulated by AEMO (see above).

- The new lights are 18W LEDs (wattage 21.9w).
- 22,612 × 18W LEDs (wattage 21.9w)

To calculate new energy use the calculation is:

• Number of Lights × Wattage × 365 (days/year) × 11.94 (hours operational per day based on the regulations cited above) / 1000 (to get to kWh) $\times 3.6$ (to get to MJ)

The new energy use is 7,769,316 MJ per year.

This project will save 25,430,230 MJ, which amounts to a saving of 76.60% relative to the lights that have been replaced.

Reporting Data (Measuring Energy Efficiency and Additional Data)	Council has a total of 2,261 km of P-Category roads relevant to this project. • Average hours of operation of lights per day: 11.94 hours • Percentage of the day lights are operational: 49.8%
	Assumptions
	 Energy price increases based on page 123 Australian Government 2011, Strong Growth, Low Pollution: Modelling a Carbon Price. All savings and cost figures are GST exclusive For energy costs (from council billing data) all per/kWh costs are included OMR (maintenance) prices are for 2013 as stipulated in the relevant distribution business 2013 Public Lighting Charges Schedule. For LED, CFL and T5 additional costs have been modelled to cater for items not included in the distribution business offer Capital costs are based on MAV hardware tender "SL9311(R1) Energy Efficient Street Lighting Hardware" 1000-5000 units. For smaller or larger numbers these costs can vary. This information is commercial in confidence.
	 Capital costs (installation) are based on Ironbark's involvement in public tenders for installation throughout Victoria, projects where councils have tendered directly through distribution businesses, and discussions with relevant stakeholders in the sector (for example, councils, installers, distribution businesses, the Public Lighting Approvals Network or PLAN). Emission factor is 1.34kg CO₂e per KWh
	 An extra \$3 per year is included in the OMR of the T5 and CFL to cater for the control gear which is not included in the standard OMR.
	 NPV Discount Rate 4% (based on 10 Yr Australian Government Bond Rate October 2013)
	 For 2x24 T5 lights where new OMR prices were not provided, the old price has been altered by the same percentage as the new price of the 2x14W T5's
Cost of Activity	\$11,175,658
Estimated Cost Savings	Net Simple Savings per annum: \$1,108,512 to 2034

Attachment A

Energy efficient baseline and improvement table for all individual local government partners

Council	All	Horsham	Hindmarsh	Yarriambiack	Northern Grampians	Ararat	Bendigo	Mount Alexander
Total number of lights (actual; full-share)	20,484	1,277	478	554	737	886	7,040	756
50W MV	75		1	1	0	3	2	
80W MV	19,248	1,252	476	547	726	860	6,168	691
125W MV	107	7	1		0	1	28	2
42W CFL	871			6	11	17	744	45
32W CFL	106				0	1	79	14
2x24W T5	6				0	2	2	
2x14W T5	70	17			0	2	17	4
80W MV removal	1	1			0			
Total number of lights (actual; cost share)	2,128	106	111	179	155	130	261	140
50W MV	1				0			
80W MV	2,105	106	111	179	155	130	260	135
125W MV	22				0		1	5

Central Goldfields	Hepburn	Loddon	Pyrenees	Swan Hill	Mildura	Buloke	Gannawarra	West Wimmera
812	619	375	285	1,323	3,892	503	658	289
55	5		7			1		
714	604	371	254	1,280	3,888	493	637	287
6		3		34	4	3	16	2
5	3		22	9		6	3	
7	2	1	2			0		
1	1							
24	4						2	
106	161	145	99	110	105	160	101	59
1								
104	161	142	99	105	105	160	94	59
1		3		5			7	

Attachment A

Energy efficient baseline and improvement table for whole of project

Council	All	Horsham	Hindmarsh	Yarriambiack	Northern Grampians	Ararat	Bendigo	Mount Alexander
Energy Basel	line and Efficie	ency						
Total kWh Baseline	9,222,096	573,960	245,978	304,606	370,047	419,070	2,868,356	361,051
Total MJ Baseline	33,199,546	2,066,256	885,521	1,096,581	1,332,170	1,508,651	10,326,081	1,299,784
Total kWh new	2,158,143	131,997	56,216	69,959	85,135	96,969	696,825	85,516
Total MJ New	7,769,316	475,189	202,376	251,853	306,485	349,090	2,508,570	307,859
Total kWh Savings	7,063,953	441,963	189,763	234,647	284,913	322,100	2,171,531	275,535
Total MJ savings	25,430,230	1,591,068	683,145	844,728	1,025,685	1,159,561	7,817,511	991,925
Percentage energy efficiency improvement	76.60%	77.00%	77.15%	77.03%	76.99%	76.86%	75.71%	76.31%

Central Goldfields	Hepburn	Loddon	Pyrenees	Swan Hill	Mildura	Buloke	Gannawarra	West Wimmera
367,207	322,465	218,053	154,130	605,616	1,669,577	275,985	320,300	145,695
1,321,944	1,160,875	784,991	554,869	2,180,219	6,010,476	993,544	1,153,081	524,501
87,616	74,445	49,630	36,650	136,769	381,483	63,278	72,441	33,214
315,418	268,002	178,668	131,940	492,368	1,373,340	227,802	260,787	119,570
279,590	248,020	168,423	117,480	468,847	1,288,094	212,706	247,860	112,481
1,006,526	892,873	606,323	422,930	1,687,851	4,637,137	765,742	892,294	404,931
76.14%	76.91%	77.24%	76.22%	77.42%	77.15%	77.07%	77.38%	77.20%

Attachment A

Energy efficient baseline and improvement table for whole of project

Council	All	Horsham	Hindmarsh	Yarriambiack	Northern Grampians	Ararat	Bendigo	Mount Alexander
Energy Effici	iency and KMs	of Road	<u>'</u>	1				<u> </u>
Total KMs of Category P roads	2,261	152	70	79	118	67	770	52
Baseline energy consumption per KM of road per year (MJ)	14,682	13,594	12,650	13,881	11,299	22,544	13,410	24,996
Baseline energy consumption per KM of road per day (MJ)	40.22	37.24	34.66	38.03	30.96	61.76	36.74	68.48
Future energy consumption per KM of road per year (MJ)	3,436	3,126	2,891	3,188	2,600	5,217	3,258	5,920
Future energy consumption per KM of road per day (MJ)	9	9	8	9	7	14	9	16

Central Goldfields	Hepburn	Loddon	Pyrenees	Swan Hill	Mildura	Buloke	Gannawarra	West Wimmera
93	91	48	35	103	350	100	88	46
14,214	12,792	16,491	15,692	21,233	17,173	9,935	13,145	11,328
38.94	35.05	45.18	42.99	58.17	47.05	27.22	36.01	31.04
3,392	2,953	3,754	3,731	4,795	3,924	2,278	2,973	2,583
9	8	10	10	13	11	6	8	7

Attachment A

Whole of project savings

		•						
Council	All	Horsham	Hindmarsh	Yarriambiack	Northern Grampians	Ararat	Bendigo	Mount Alexander
2016 \$ saving	gs	'	'					
Electricity	\$921,442	\$57,629	\$24,760	\$30,617	\$37,176	\$42,028	\$283,292	\$35,953
OMR	\$485,299	\$29,905	\$12,770	\$15,825	\$19,209	\$21,892	\$152,604	\$19,061
Projected \$ r	net savings (to	20 years)						
Cost of Activity	\$11,176,684	\$688,688	\$291,522	\$362,607	\$438,576	\$500,171	\$3,591,932	\$443,107
Cumulative savings over 20 years	\$22,169,219	\$1,390,253	\$600,356	\$740,316	\$900,074	\$1,016,782	\$6,689,939	\$858,929
Estimated Savings per Year	\$1,108,461	\$69,513	\$30,018	\$37,016	\$45,004	\$50,839	\$334,497	\$42,946
GHG savings								
2016 savings (tonnes)	8,898	556	239	296	359	406	2,736	347
Cumulative savings over 20 years (tonnes)	172,626	10,796	4,639	5,736	6,965	7,874	53,073	6,735

VicRoads share of whole of project savings

2016 \$ savings:							
Electricity	\$53,991						
OMR	\$28,672						
Projected \$ net savings (to 20 years):							
Cost of Activity	\$630,703						
Cumulative savings over 20 years	\$1,179,846						
Estimated Savings per year	\$58,992						
GHG savings:							
2016 savings (tonnes)	512						
Cumulative savings over 20 years (tonnes)	10,895						

Central Goldfields	Hepburn	Loddon	Pyrenees	Swan Hill	Mildura	Buloke	Gannawarra	West Wimmera
\$36,485	\$32,363	\$21,976	\$15,329	\$60,991	\$168,072	\$27,754	\$32,341	\$14,677
\$20,794	\$16,895	\$11,336	\$8,268	\$31,574	\$86,482	\$14,362	\$16,764	\$7,557
\$454,667	\$385,993	\$257,156	\$189,441	\$713,461	\$1,982,755	\$327,987	\$376,352	\$172,271
\$906,566	\$783,629	\$535,036	\$369,350	\$1,490,327	\$4,065,802	\$672,568	\$793,026	\$356,264
\$45,328	\$39,181	\$26,752	\$18,468	\$74,516	\$203,290	\$33,628	\$39,651	\$17,813
352	313	212	148	589	1,623	268	312	142
6,835	6,063	4,117	2,872	11,426	31,487	5,200	6,059	2,750

Communications

1 Overview

The communication strategy involved an integrated campaign working with local Council project partners to facilitate community engagement, mainstream television and press advertising, mobile billboard and vehicle signage, brochures, information kits, branded promotional items, displays, editorial and media coverage, community and celebration events, social media and an interactive website.

The communications campaign strategy was delivered as part of a multi-stage process aligned to the roll out schedule of street light changeovers across the sixteen Council regions in the project. The roll out commenced in the Hepburn Shire and finished at Kaniva in West Wimmera. The project was accelerated due to a higher street light changeover rate and consequently the project finished well ahead of schedule.

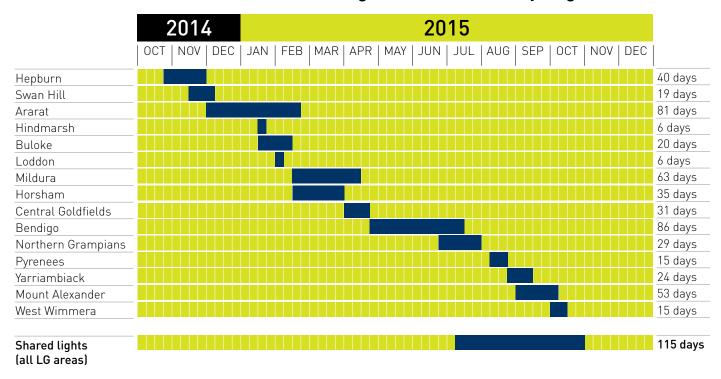
The Lighting the Regions project brand was applied consistently throughout the campaign with media kits distributed to all project partners pre-commencement of installation roll out to ensure Council local area marketing was aligned with the integrated campaign. The positioning statement of Better, Brighter, Greener communicated the main campaign messaging of significant Council cost savings through new LED lighting technologies, improved residential street lighting and large reductions in greenhouse gas emissions the project will deliver.

A key communications challenge was raising project community engagement for those smaller Councils during a period of very short street light changeovers. (Refer to roll out graph). As an example the Shires of Loddon (520 lights) and West Wimmera (348 lights) had a short changeover period compared to Bendigo (7,302) lights. Stakeholder newsletters were developed to assist in the communication of roll out schedules to project partners, and regular communications on project activities were achieved through website updates.



Lighting the Regions pull up banner at the Goldfields cinema night celebration event.

Rollout of street light installations by region



As part of the communications strategy, Lighting the Regions participated at a number of regional and rural community events which ranged from Field Days, Community Markets and local Agricultural Shows. The project also engaged with regional communities through a number of cinema celebration events partnering with local community and environmental groups. Information kits on project outcomes for each individual Council region were distributed at the events detailing number of lights changed, estimated local Council savings and regional greenhouse gas emission reductions.

Throughout the communications strategy the Lighting the Regions website was the key project call to action for residents to find out more about the project and to also gain additional information via downloadable PDFs about energy efficiency.

This was very successful with 15,985 visitors to the website over the period of the project representing an estimated 7.5% of the adult population base in the project region. The visitors had 24,020 page views indicating people browsed across multiple pages.

As part of the communications strategy Council project partners were active in promoting the project through local press releases, publications, media columns and interviews, social media platforms and regional networks.



2 Branding

Brand Rationale

The Lighting the Regions brand demanded a clear image of what the project is about - changing street lights.

As "Lighting the Regions" does not clearly explain the project, it was important to include an image of a street light and to also include a visual link to community in the brand.

Logo design

A glowing street light shines down on a family silhouette.

A deep blue was selected as the main colour contrasted with a vibrant lime green to connect with the positioning statement.



Logo design and colour palette.

Family imagery

Market research indicated there was a strong family and community association with the project brand imagery. The project brand logo was brought to life through animation in the project DVD.



Family and street light silhouettes.



Positioning statement

A positioning statement was developed to support the project brand logo;

Changing street lights Better, Brighter, Greener.

The statement clearly articulated the three core benefits of the project and was applied across all communication pieces throughout the project. The positioning statement had strong recall amongst surveyed research respondents.

Better

 The financial benefits, significantly reduced energy and maintenance costs.

Brighter

The physical benefits, brighter, more direct lighting.

Greener

The environmental benefits, reduced greenhouse emissions.

Branding

Brochures

Lighting the Regions brochures were produced for project partners and for use by Councils in local area marketing and events. The brochures were consistently branded using the project brand logo and positioning statement.

The initial project brochure was designed to outline key project facts and information. This included the regions involved, the future economic and environmental outcomes of the project, and the significance of the project.

As the project evolved, updated project brochures were created to include the progress of the street light changeovers.



Initial project overview brochure.



Updated project rollout brochures.



Lighting the Regions Newsletter Issue 1 – Autumn 2015.

Stakeholder Newsletters

Stakeholders were issued newsletters to ensure they were kept updated on the progress of the project.

Newsletters included the project percentage completion, a progress map which showed where each region was scheduled in the installation rollout, as well as information on completed and upcoming community events.



Lighting the Regions Newsletter Issue 2 – Winter 2015.



Branding

Project media kit

Project partners were issued a disc containing the Lighting the Regions media kit. This included project flyers, a media release template, project photography, logo files and the official Lighting the Regions promotional video.



Lighting the Regions Media Kit:

- Media release template
- Frequently Asked Questions flyer
- Project Overview flyer
- Home efficiency flyer
- Project photography
- Logo files
- Promotional video

The media kit was made available to stakeholders in order to ensure all marketing materials were consistent with the Lighting the Regions brand. As a result, whenever media releases or local community newsletters relating to the project were published by individual councils, the project brand was consistent in market.



Public foyer displays

Lighting the Regions displays were set up in the foyer of various council offices for members of the community to view.

Bendigo Display

The City of Greater Bendigo set up a Lighting the Regions display in the main Council offices. The display featured old and new street light fittings, project information, LED home lighting changeover brochures, small and medium-sized enterprises brochure, and examples of recycled lights used as pot plant holders.



Lighting the Regions foyer display at Horsham Rural City Council.





Branding

Marketing collateral

Information kits

Information kits were handed out at community and celebration events and contained a region-specific project information brochure, home efficiency flyer, and a promotional Lighting the Regions branded LED light with a call to action for the website.

Information on small to medium sized business light changeovers were also available as part of the kits.

Lighting the Regions Information Kit:

- Project Overview brochure
- Home efficiency flyer
- Business efficiency flyer
- Promotional LED light (Magnet torches, book lights, or LED keyrings).



Project Overview brochure.





Branding

Signage

Outdoor signage for the project was an important advertising element of the campaign and also used at a number of project events.

Signage was predominately mobile due to the scale of the project which spanned across the Central and North Western regions of Victoria.



Lighting the Regions billboard trailer in front of the Theatre Royal in Castlemaine.



Lighting the Regions vehicle.

Vehicle

A Lighting the Regions car wrap was designed and installed on the highly efficient SkyActiv Mazda CX5. This included the branding across both side doors, as well as the website address covering the back window.

This was another way to gain exposure for the project, as this car would be travelling to each of the project regions.





Billboard signage

An advertising trailer measuring 2.6m x 3.8m was incorporated into the Lighting the Regions branding strategy.

One side of the trailer highlighted the number of street lights installed, along with a map of the project coverage and the better, brighter, greener positioning statement.

The other side of the trailer focused on the Lighting the Regions brand, as well as icons of the future outcomes of the project.

The back of the trailer highlighted the project partners including Councils and sustainability groups.



Lighting the Regions billboard trailer in front of the Rex Theatre in Daylesford.



Billboard placement

The Lighting the Regions billboard trailer was positioned along busy intersections and busy highway locations in Northern, Central and Western Victoria.

Each position was strategically chosen to gain maximum exposure for local passing traffic, as well as pedestrians.

Lighting the Regions billboard trailer in front of the Star Cinema in Eaglehawk.



Commemorative plaques

Display signs were produced for the first and last street light changeovers of the project to be attached to the light pole.

Branding

Promotional Video

An animated video was produced to explain the Lighting the Regions project in a concise and engaging way.

The video was a fast paced infographic style animation, which explained the project, the region it covered, the key benefits, timing and listed the project partners.

The video featured prominently on the Lighting the Regions website.





Television commercial

The Lighting the Regions video was edited to a 30 second TV commercial highlighting the project deliverables and benefits.

The commercial was aired throughout the project region through Lighting the Regions media partner the WIN Network.

Video script

How many lightbulbs does it take to change a region? 500? 1000? 10,000? 23,000!

23,000 lightbulbs! We're Lighting the Regions!

Over the next 18 months, 16 councils throughout North Central, West and North West Victoria in partnership with the Australian Government will

be changing over 23,000 street lights.

From Robinvale.... to Rupanyup.... to Rainbow.

The Lighting the Regions project will be one of the biggest energy and cost efficiency programs ever undertaken in the world.

Old power hungry lights currently installed will be replaced with all new, energy efficient street lights.

So what does this mean for you? Better and Brighter lighting. And savings. Big savings.

Over the next 20 years the region will save over 57 million dollars in power bills and maintenance costs.

What else does it mean?

Being clean. The new LED lights are super energy efficient. This also means being green.

Over the same 20 year period the new lighting will reduce greenhouse gas emissions by over 180,000 tonnes.

Changing 23,000 street lights across this vast region of Victoria will take a while.

We think about 18 months.

So look out in a town near you, you'll be seeing teams of workers in trucks, on cherry pickers, changing street lights for the good of our region.

Lighting the Regions is an important project which will have a positive impact on over 300,000 residents throughout 16 council regions.

Call to Action:

You can find out more by going here...

lightingtheregions.com.au

Lighting the Regions. Changing street lights.

Better. Brighter. Greener.

















Lighting the Regions video frames.

3 Photography

The project undertook photography in selected regions to demonstrate before and after lighting changes. The after photos demonstrate a better concentration of directional light onto roads and footpaths as a result of the LED lighting. The light direction in the photography reinforced the project brand logo imagery.









Documentation Photography

These photographs were taken to demonstrate the significant change in direct/focussed lighting in streets throughout the project regions.





4 Media

The Lighting the Regions project was promoted across local press, WIN news, magazine editorials, local Council media columns, newsletters and community publications.

Lighting the Regions gained valuable exposure across a range of publications, from small community papers such as the Talbot newspaper to larger publications like the Greater Bendigo magazine distributed to every household in the Bendigo region.



Lighting the Regions advertisement in the Bendigo Weekly.





2-page Lighting the Regions spread in the Weekly Times.



Along with the major newspapers, Lighting the Regions utilised local newspapers from each region to inform the community about the project.







Media



The Bendigo Advertiser.



WIN media interview with City of Greater Bendigo CEO Craig Niemann.



Talbot – Today and Tomorrow.



Castlemaine Mail.

Newspaper advertising was an important part of the project's communication mix. The Weekly Times was used as a masthead to reach rural and smaller regional communities, and selected local newspapers were used to update installation roll outs and events in each of the individual Council areas. Market research showed that 43% of respondents attributed project awareness to local newspapers.







2014/2015.





December 2015.

5 Website

Website overview

An advanced website was created for the project which included embedded media, interactive regional maps, downloadable brochures, community event information and articles. The website URL was consistently promoted across all communications as the call to action for residents seeking further information on the project and energy efficiency initiatives.

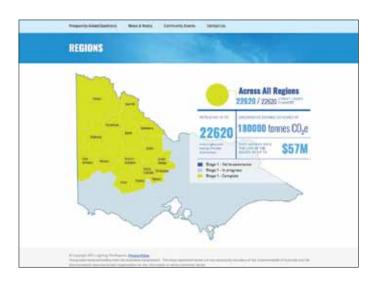
An info graphics design style displayed key information about improved lighting benefits, council cost savings and green house emission savings. The website achieved excellent visitation with 15,985 visitors accessing the website over the period of the project.











Interactive maps

An interactive map was incorporated into the website, which was a useful tool enabling visitors to keep track of light installation progress of the project.

The map displayed region installation status (yet to commence, in progress, or completed), and statistics regarding savings and number of lights changed and percentage completion of total project light changeovers.





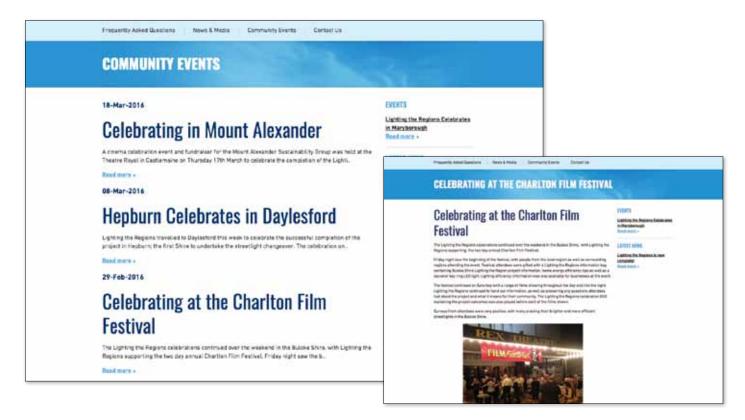
15,985 website visitors

Website

News and Media

As the rollout of the project continued, visitors to the website were able to keep up to date with the latest project news and media, as well as community and celebration events throughout the regions.





Useful downloads

As part of the overall efficiency focus of the website PDF brochures for further energy efficiency tips in either the home or business were also readily available for visitors to download and print.





Frequently Asked Questions News & Hodie FAQ EVENTS **Frequently Asked Questions** Lighting the Regions Celebrates n Maryborswath When will the works be taking place? From October 2014 to November 2019. LATEST NEWS When will the works be occurring in my area? For a project of this size, specific works schedules and developed on a week-by-week size is. Weather and other contributing factors can result in delays. This website will be updated with light installation. schedules, as they are confirmed. How will the works affect my street on the day? crewmembers. It takes less than 5 minutes to replace a street light, so any disruptions to traffic flow in your street should not latel large in most cases, residents will be able to leave their car partied on the street - however it residents are required to move their cars during installation, the installars will leave a card on the windocreen advising them of this. I live in one of the targeted areas. How can I find out more about the changes in my To find out what's boso happening near you, rist your municipality on the Lighting the Regiene page -here you can find out the status of works in your area, receive location specific news as well as learn more up about upcoming events in your neighbourhood. Who is installing the new lights and removing the old ones? Powercor contractors will install and remove the lights. They will be liesing with Council throughout the project. Why did Council choose these particular lights?

FAQs

The website included a frequently asked questions page whereby visitors could easily access project information based on common enquiries.

Website

Statistics

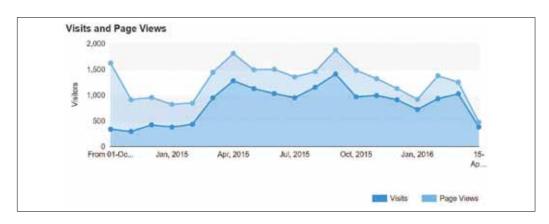
Over the duration of the Lighting the Regions project, the website had an impressive 24,020 page views, with a large number of people browsing across multiple pages.

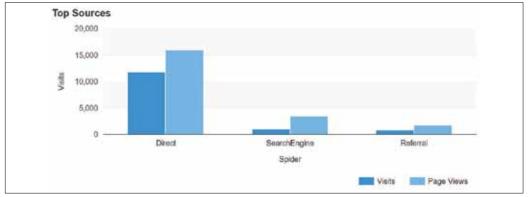
The vast majority of these visitors were harnessed via direct marketing with a staggering 15,985 of those visitors typing the URL (lightingtheregions.com.au) directly into the browser. This result was achieved through the campaign's integrated marketing strategy.

The call to action "Visit the website for further information" was applied to material throughout the project to encourage online visitation.

This indicates the strength of the events, brochures, press and television advertising to encourage people to visit the website for further information.

The remainder of the visits were comprised of referrals from Facebook posts, links on participating council websites as well as search engine results.







Lighting the Regions Facebook page.



An example of a post on the Lighting the Regions Facebook page.

Social Media

A Facebook page was created for the Lighting the Regions project in order to keep stakeholders and the general public informed on the progress of the project. The page provided a further point of contact for the project, as visitors to the page could quickly access contact information for additional information/queries.

The social media platform for the project was also a great way to interact with the community, as well as the various groups involved.

For example, when an event was happening, those involved would create or 'share' posts relating to the event, which in turn would add exposure for the project.

The Lighting the Regions Facebook page enhanced the connection between the project and the councils and sustainability alliances, as information and updates were shared between project partners.

7 Community and Celebration Events

Overview

An important aspect of the Lighting the Regions project was engaging the Community about the awareness and benefits of the project. In conjunction with project partners a local Council engagement strategy assisted in delivering a total of 22 community and celebration events across the project region.

The events provided an opportunity to engage people face to face, promote awareness and benefits of the project, and to distribute information about LED street lighting and energy efficiency practices. The events also allowed resident feedback and research to be undertaken.

Overall the events were successful part of the communications strategy and encouraged people to visit the website for project updates and further information on energy efficiency.

At each of the community events that Lighting the Regions attended, an information marquee was set up. This would be accessible for those attending the event to speak with a representative of the project, which added a strong personal presence for the project.

Event attendees could physically compare the old mercury vapour street lights and the new LED street lights on display, as well as take a Lighting the Regions information kit containing project information, energy efficiency information, as well as a branded LED torch light.



Lighting the Regions community event at Warracknabeal Show.



Lighting the Regions celebration event in Swan Hill.



Lighting the Regions community stall at Talbot Market.



Crowd at Talbot Market.



Lighting the Regions at the Tour De Depot community event in Mildura.



Crowd at Tour De Depot in Mildura.



Hopetoun Women on Farms community stand with Lighting the Regions Chairperson Ray Kingston.



Community event booklets.

Community and Celebration Events

Community Events

- 1. Wimmera Machinery Field Days 3rd–5th March, 2015
- 2. Natimuk Show 28th March, 2015
- 3. Tour de Depot Mildura 19th April 2015
- 4. Bendigo Marketplace September 2015

- 5. Warracknabeal Show 8th October, 2015
- 6. Castlemaine Show 31st October, 2015
- 7. Talbot Market 21st June, 2015

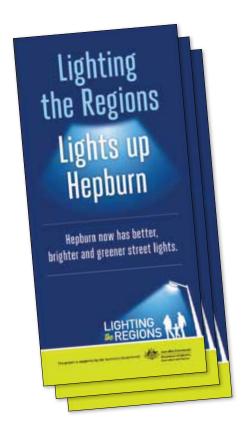
Celebration Events

- Horsham 8th March 2015
 Partner(s): Horsham Performing Arts Group
- Bendigo 21st January 2016
 Partner(s): Bendigo Sustainability Group
- Maryborough (Central Goldfields) 27th January 2016
 Partner(s): Goldfields Sustainability Group,
 Maryborough Street harvest
- 4. Kerang (Gannawarra) 30th January 2016 Partner(s): Kerang Lions Club
- Swan Hill 1st February 2016
 Partner(s): Swan Hill Hospice
- 6. Mildura 3rd February 2016
 Partner(s): Sunassist Mildura
- 7. Kaniva (West Wimmera) 5th February 2016
 Partner(s): Kaniva Lions Club
- 8. St Arnaud (Northern Grampians) 19th February 2016 Partner(s): St Arnaud Community Cinema

- Nhill (Hindmarsh) 23rd February 2016
 Partner(s): Nhill Lions Club
- Charlton (Buloke) 26/27th February 2016
 Partner(s): The Rex Theatre Charlton, Charlton Arts Inc.
- **11. Avoca (Pyrenees)** 28th February 2016 Community Market
- Daylesford (Hepburn) 7th March 2016
 Partner(s): Trentham Sustainability Group, Daylesford
 Neighbourhood Centre, Hepburn Sustainability Group
- 13. Bridgewater (Loddon) 12th March 2016 Community Market
- 14. Castlemaine (Mount Alexander) 17th March 2016 Partner(s): Mount Alexander Sustainability Group
- **15. Hopetoun (Yarriambiack)** 19th March 2016 Women on Farms gathering

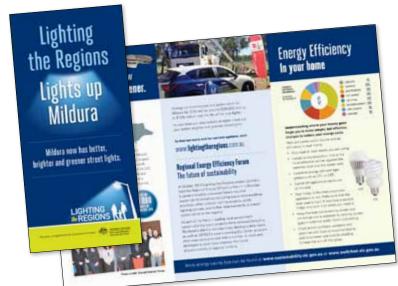
Region specific brochures

Informative brochures were developed to be distributed to communities and presented at the celebration events. The brochures included local project photography and outlined specific project outcomes for each region.





Bendigo region specific brochure.



Mildura region specific brochure.

Event promotion

Each of the celebration events were promoted with region specific poster artwork and press advertising.



Examples of the event promotion artwork for the Lighting the Regions celebration events.

Celebrating Lighting the Regions

Events

As part of the project's community engagement strategy, regional celebration events were organised to recognise the significant economic, lighting infrastructure and environmental benefits the project will deliver. The celebration events mostly consisted of cinema events partnering with local not-for-profit groups, particularly those involved in sustainability and environmental initiatives. The events allowed local Council representatives the opportunity to speak on behalf of the project and not for profit groups to use the event as a fundraiser to promote and support local projects.

The strategic decision to hold the celebration events as mainly cinema events centred on three factors. Firstly, Lighting the Regions was able to support grass roots organisations active in sustainability and environmental initiatives. Secondly the event allowed the Lighting the Regions celebration DVD to be shown to the cinema audience and a project information stand set up in cinema foyers. Thirdly, the evening scheduling of the events gave greater emphasis to the street light changeover effects, as the audience were asked to observe the new LED street lights when they exited the event.

Challenges included one region not having a cinema, but partnering with the West Wimmera Council, an outdoor Cinema event was held at the local recreation reserve, attracting a large family turn out and supported by the Kaniva Lions Club, scouts and the Kaniva football and nethall club.



Katie Perry and Ben Bowman from Mount Alexander Shire Council at the Castlemaine Lighting the Regions celebration event.

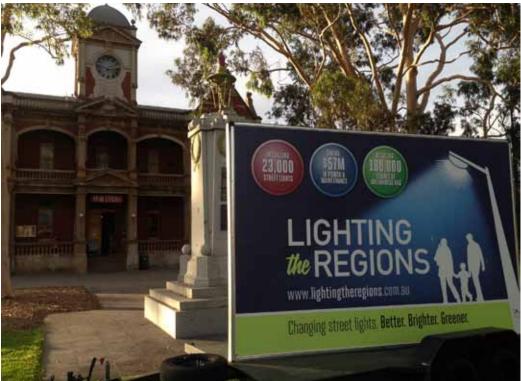


Lighting the Regions celebration event in Mildura.

A Lighting the Regions marquee was set up at the event to distribute information kits and discuss energy efficiency for households and small business.

The celebration events provided an opportunity to raise awareness of the Lighting the Regions project through word of mouth amongst community groups, as well as support the valuable work those groups do within the community.





Lighting the Regions set up at the Star Cinema for Bendigo Celebration event.

Lighting the Regions billboard trailer in front of the Star Cinema in Eaglehawk for the Bendigo Celebration Event.

Bendigo cinema fundraiser

The Lighting the Regions project partnered up with the Bendigo Sustainability Group to celebrate the successful completion of the project in Bendigo, and inform the local community on their better, brighter and greener street lights.

The night included a cinema fundraiser at the Star Cinema in Eaglehawk, which helped raise funds for the Bendigo Sustainability Group in their effort to help the community build a sustainable future. Over 80 people attended the event, as well as Bendigo's Chief Executive Officer (CEO) Craig Niemann.

Celebrating Lighting the Regions

Charlton Film Festival

Lighting the Regions travelled to the Buloke Shire in February, supporting the two day annual Charlton Film Festival. People from the local region as well as surrounding regions attended the event in strong numbers.

Festival attendees were gifted with a Lighting the Regions information kit containing Buloke Shire Lighting the Region project information, home energy efficiency tips as well as a souvenir key ring LED light. The Lighting the Regions celebration DVD explaining the project outcomes was also played before each of the films screened.



Crowd at the Charlton Film Festival on the Saturday night.



Lighting the Regions set up at the Rex Theatre in Charlton for the Buloke Celebration event.

the Regions Celebration event in Charlton.

Kaniva outdoor movie night

The West Wimmera was also visited by Lighting the Regions in February. An outdoor movie night was attended in conjunction with the local council at the Kaniva Recreation Reserve. Lighting the Regions had a marquee at the event, handing out information kits explaining benefits of the project in the West Wimmera, as well as a key ring light souvenir. The event was supported by local community groups.



Lighting the Regions set up at the Kaniva outdoor movie night.





Attendees getting an early position at the Kaniva outdoor movie night.



Celebrating Lighting the Regions

Daylesford cinema fundraiser

The Hepburn celebration event took place at the Daylesford Cinema in March, with local sustainability groups supporting the event.

The night involved a cinema fundraiser for the local Daylesford Neighbourhood Centre and the Hepburn Sustainability Group. Hepburn Council sustainability officer John Van Rooden attended the evening, informing the community on the role of the Hepburn council in the Lighting the Regions project, as well as additional upcoming sustainable projects within the region.

Laurel Freeland from the Hepburn Sustainability Group also spoke on their role in Lighting the Regions project and the wonderful collaboration between sixteen councils and the Federal Government in getting the project funded.

The Trentham Sustainability Group were also present on the night to discuss projects and initiatives they are working on within the local community.



Ian and Glenda from Trentham Sustainability Group.



Lighting the Regions vehicle and billboard trailer in front of the Rex Shopping Arcade in Daylesford.



Lighting the Regions and Hepburn Council set up for the celebration event in Daylesford.

8 Energy Efficiency Forum

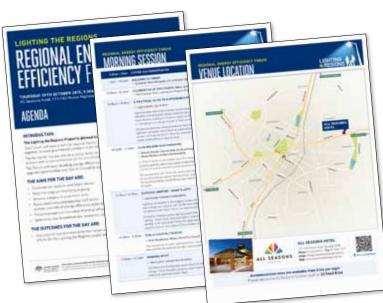
Event overview

In October of 2015, the Lighting the Regions project partners hosted a Regional Energy Efficiency Forum in Bendigo. A range of attendees and sustainability experts came together to discuss local government energy efficiency topics including further outdoor lighting opportunities, sustainable buildings practices and public lighting policies.

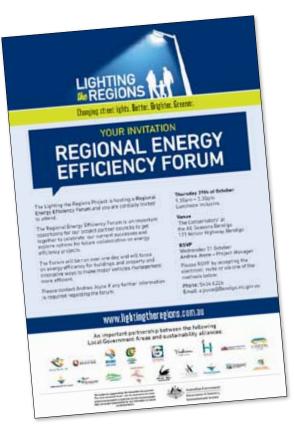
A panel discussed leading local government sustainable transport projects including Moreland's electric vehicles hubs, Bendigo's bike fleets, as well as South East Councils Climate Change Alliance award-winning Eco Driver program. The close of the forum involved the formation of groups to further brainstorm future sustainability projects in Regional Victoria.



Attendees at the Lighting the Regions Regional Energy Efficiency Forum



Energy Efficiency Forum agenda.



Energy Efficiency Forum invitation.



Lighting the Regions Project Steering Group (left to right): Robyn Major, Andy Van, Deidre Andrews, Andrea Joyce (Project Manager), Mark Woodhouse and Ray Kingston (Chair).



The City of Greater Bendigo's Bike Fleet was one of the sustainable projects on display at the Lighting the Regions forum.

COMMUNICATION EVALUATION REPORT

RESEARCH **METHODOLOGY**

The communication evaluation research for the project targeted 400 completed resident surveys as a required statistical sample representation of the project's population base.

A total of 486 completed surveys were achieved.

The research methodology approach used a balanced representation of face to face Lighting the Regions event survey interviews combined with a large on-line database survey. This approach allowed different types of respondent engagement including on-line testing of media responses. The methodology resulted in collective research findings from both small regional and rural project partners, and the largest project partner with city based residents. A total of six community and celebration events were surveyed over February and March 2016 in conjunction with a large on-line database survey undertaken in early April 2016.

Taking into consideration that the project consisted of sixteen Councils, the timeframe of the project, budgetary constraints and privacy issues accessing some of the Council databases, we chose to database research the largest participating council the City of Greater Bendigo. The City of Greater Bendigo also represents approximately half of the total number of residents in the total project area. Respondents were recruited via the City of Greater Bendigo community database and a 17-question (10-minute) survey was emailed to 4,058 individuals. The database survey resulted in 244 completed surveys.



Event survey interviews were completed in Daylesford (Hepburn Shire), Charlton (Buloke Shire), Bridgewater (Loddon), Nhill (Hindmarsh Shire), St Arnaud (Northern Grampians) and Avoca (Pyrenees). In addition some attendee insights have been included from the Kaniva celebration event and the Hopetoun event in Yarriambiack. The face to face event survey interviews resulted in 242 completed surveys.

By using both the database survey and face to face survey interviews, the research gained both qualitative insights and quantitative statistics to be produced for the report. The methodology also provided direct feedback from residents in smaller rural and regional Councils as well as the largest Council project partner through the database survey. The face to face interviews at Community and Celebration events also allowed mini insights into regional attitudes towards local Councils and the Lighting the Regions project.

The research survey was developed to assess overall community awareness of the project, energy efficiency, cost savings, improved lighting benefits to the community, and attitudinal responses regarding improved energy efficiency outcomes in the home. Project brand recall, communication channels, media and key project messaging were tested. The benefits of a collaborative regional approach to energy efficiency was researched and also the propensity for surveyed residents to engage with further energy saving initiatives.

The surveys were input into the ResearchBods data analysis system and key findings were produced utilising the advanced Decipher survey software. The software allowed the database survey respondents to undertake advanced interest testing of video and identified visual heat spots in press advertising. The software also allowed to split the database by household type and to analyse important target markets such as family groups in isolation.

The methodology also reviewed the different types of project marketing collateral, brand messaging and website statistics for the project.

KEY MARKET RESEARCH FINDINGS

Market research for the Lighting the Regions project was conducted on awareness, attributions and attitudes.

Respondents were surveyed to test awareness of the project, how they attributed the projects communications, and the resulting attitudes and insights. The research was undertaken by an equal mix of face to face resident survey interviews and an on-line resident database survey. The face to face interviews were conducted at a total of six regional events in late February and March 2016. The on-line survey was issued to a database of 4,058 Greater City of Bendigo residents in early April 2016. The resident database survey resulted in 244 completed surveys, and the face to face event interviews resulted in 242 completed surveys.

AWARENESS

The survey results indicated there was a very high awareness of council initiatives in general, with over three-quarters of respondents 77% claiming to be aware of any council project.

Awareness of the Lighting the Regions project was 42% of respondents. Overall this was considered a good level of awareness given the length of the project and the timeframes of some of the installations over the length of the project. The Lighting the Regions project had better recall with face to face surveys at events with a 54% awareness of the project. The awareness was lower on the City of Greater Bendigo database survey, where around a third of the sample 30% was aware of the project. This percentage is similar when families 31% were surveyed.



The same respondents who spontaneously named Lighting the Regions as a council initiative also had good recall of the 3-word message (Better Brighter Greener). Almost all of those who were aware could adequately describe the intentions of the project.

The lower awareness of the project in the database survey can be attributed to both the light changeover time period pre surveying, and to a bigger influence being the large number of competing Council projects in the City of Greater Bendigo region. Projects such as the multi-million dollar Ulumbarra Theatre, Bendigo Stadium development, Bus routes redevelopment in the town's centre, Green waste and Organics bins, Bendigo Airport redevelopment, Canterbury Park redevelopment, O'Keefe Rail Trail and Tourism initiatives including the Marilyn Monroe exhibition were identified and competed with the Lighting the Regions project awareness. Also the more controversial projects such as the Kangaroo Flat leisure centre / pool and Mosque were also mentioned.

The face to face surveys in the other regional areas had less competing Council projects with awareness of roadworks and community assets such as the Avoca Chinese Gardens, Hepburn pedestrian bridge, the Creswick Hub and the Buloke Streetscape redevelopments. Sporting facility upgrades also had high recall in regional areas with the Wycheproof tennis club and other netball club upgrades mentioned. Wind farms in the Pyrenees shire were recalled with energy efficiency awareness projects, although with a mix of positive and negative associations.

Significantly one of the biggest findings was the overwhelming approval of the project with 85% of surveyed respondents agreeing that changing street lights to brighter, more energy efficient and cost effective LED lighting has been a positive Council initiative.

43% of respondents aware of the Lighting the Regions project were aware it was a partnership project between regional councils and the Federal Government when asked. However, this proportion rose to over half 52% of families surveyed in the database survey. The research indicates that the collaborative aspect of the project was acknowledged, but was deemed secondary messaging when compared with the project's overall savings to Councils, greenhouse benefits and better lighting.

KEY MARKET RESEARCH FINDINGS

COMMUNICATIONS ATTRIBUTION

Overall 85% of people surveyed thought that changing street lights to brighter, more energy efficient and cost effective LED lighting had been a positive Council initiative.

The respondents who were aware of the project were surveyed as to what types of communications attributed to their awareness of Lighting the Regions. Respondents could choose multiple communication options when surveyed, of which over a third of people surveyed chose more than one type of attribution.

Traditional mediums of newspapers and television accounted for 71% of all attributed communications which is line with advertising industry benchmarks, with two-thirds of those who mentioned television as their source of awareness claimed to have seen advertising on the WIN Network. The Weekly Times newspaper was also used to target people in rural and regional areas including those involved in farming in the more remote areas Western of Victoria.

The internet and local Council communications, both traditional and on-line, accounted for 30% of the attribution, whilst events, information kits and other media accounted for 21% of the survey.

Attribution	All
TV	28%
Newspaper	43%
Events, Information kits, and other media	21%
Word of Mouth	15%
Internet, Local Council Communications	30%

A 15% word of mouth attribution also indicates the project had some good interest within regional communities and in particular amongst those surveyed respondents involved with environmental and sustainability groups.

Given the length of the project rollout period and the in market media activity across multiple regions, the media attribution levels are considered satisfactory.

COMMUNITY ATTITUDES

An important aspect of the marketing research was to understand the attitudes of respondents towards local Council project partners, energy saving, and the Lighting the Regions project.

Overall 85% of people surveyed thought that changing street lights to brighter, more energy efficient and cost effective LED lighting had been a positive Council initiative. Even in remote areas where people living on farms did not receive direct residential lighting benefits, there was positive feedback on the large monetary savings the project has delivered for local Councils. Positive attitudes towards the recycling aspect of the project and environmentally-lead initiatives were also strong.

Surprisingly only 42% of respondents noticed the difference in street lighting, this response may also be influenced by the rollout of installations during the project and the survey period. Also the fact that many high profile decorative and larger highway lights were not changed as they were outside the scope of the project.

There was a positive response towards energy efficiency practices with 86% of respondents in favour of Councils implementing cost effective energy saving initiatives. Over half of respondents thought the information provided through events, brochures and the website made them more aware of energy efficiency in the home, however the face to face surveys indicated people would still want to evaluate the total up front cost of installing LED lighting in households against long term benefits.

The general attitude was that the Lighting the Regions initiative was certainly seen as a worthwhile project with the vast majority of respondents claiming it is money well spent.

KEY MARKET RESEARCH FINDINGS

KEY COMMUNITY ATTITUDE RESULTS

Statement	Agree
It is important for my Council to look for opportunities to work in partnership with other Councils to obtain Government funding for regional infrastructure projects.	92%
My local council should undertake more environmentally-lead initiatives in my region.	80%
Changing street lights to brighter, more energy efficient and cost effective LED lighting has been a positive Council initiative.	85%
The "Lighting the Regions' council initiative is money well spent.	84%
I have noticed the difference in street lighting around me already.	42%
It is important that the old street lights can be recycled.	78%
The "Lighting the Regions' council initiative was well communicated to the local community.	58%
Since the 'Lighting the Regions' council initiative, I am more aware of energy efficiency than before.	56%

KEY HOUSEHOLD ATTITUDE RESULTS

Statement	Agree
Councils should be implementing cost effective energy saving initiatives and encouraging residents to change to efficient lighting in their households.	86%
I should be doing more personally to save energy in my household.	56%
I would like to know more about other household energy saving / environmental initiatives.	57%
We are already a "very green household"	68%

Respondents were of the firm belief that Councils should be doing more to foster energy-saving behaviour within households, and that attitude was stronger amongst surveyed families with a 71% agreed response result.

MEDIA, DVD & **HEAT MAP RESULTS**

Media

The Win Television Network and The Weekly Times were used as masthead media as part of the communications strategy. 71% of respondents who were aware of the project indicated they attributed awareness through television 28% and/or newspapers 43%.

62% of surveyed respondents identified the WIN network with the Lighting the Regions Project.

Newspapers also include a range of local regional papers such as the Bendigo Weekly to smaller publications such as the Buloke Times. WIN Television also supported the project with regional news stories with the Network having a regional reach of 1,157,000 people.

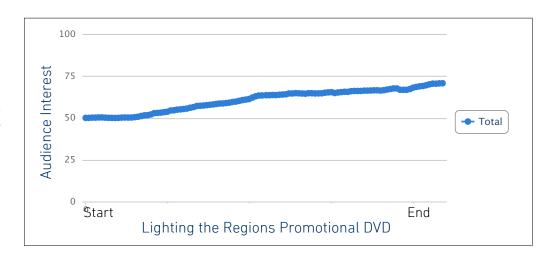


WIN media interview with City of Greater Bendigo CEO Craig Niemann.



DVD

The database survey also researched the Lighting the Regions DVD with respondents viewing the DVD and a graph plotted of viewer sustained interest. The results indicate the audience was very engaged in the DVD with the level of interest increasing until the end of the viewing.





Heat Mapping

Heat mapping of a Lighting the Regions double page spread in the Weekly Times was included in the database survey. Respondents mapped on screen which areas of the communication piece got their most attention. The results were then compiled into coloured areas, red indicating where the most selections were made. The red areas were in the articles on lighting efficiency in your home, and percentage completion of the project.

The mapping reinforced the survey response of 57% of people would like to know more about household energy savings. This indicates that the message of in home energy efficiency was very important to respondents whilst the 16 council logos were barely scanned, blue at the bottom of page.

WEBSITE STATISTICS

Over the duration of the Lighting the Regions project the website had an impressive 24,020 page views and 15,985 visitors to the website with a large number of people browsing across multiple pages.

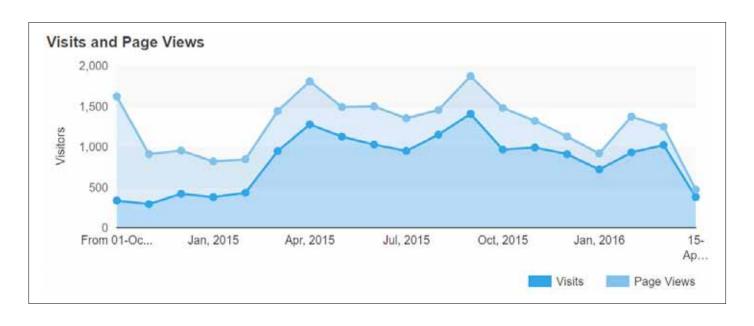


Call to Action

A significant number of the visitors connected directly to the website with approximately 75% of visitors typing the URL (lightingtheregions.com.au) directly into the browser.

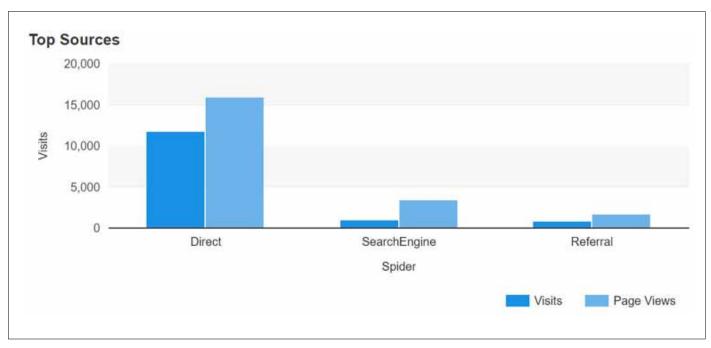
This shows the strength of the project's communications strategy call to action to visit the website for further information through the marketing collateral, events and information kits, brochures, press advertising and television advertising.

The rest of these visits were comprised of referrals from Facebook posts, links on participating council websites as well as search engine results.





Lighting the Regions website homepage



Top sources

INSIGHTS AND RECOMMENDATIONS

This section of the research report includes qualitative insights on the Lighting the Regions project and recommendations for future lighting and energy efficiency initiatives.

Feedback on the Lighting the Regions brand identity was the project brand had an aspirational association connected to community and family wellbeing. The brand imagery conveyed a sense of safety associated with better street lighting and the project positioning statement (Better, Brighter, Greener) encapsulated the key benefits of the project. The surveys indicated a raised awareness by families as a key target market for future energy saving initiatives and projects.

The mobile billboard worked well as a communication asset in high profile locations in small townships such as Edenhope and Kaniva. The billboard prompted word of mouth discussions in the local community and also achieved good visibility when placed on highway locations such as on the Murray Valley Highway at Kerang.

The Lighting the Regions events allowed qualitative feedback on the project particularly in smaller rural locations such as Hopetoun, Charlton and Bridgewater.

In many of these towns the actual number of lights changed over were only a very small percentage of the total project, but feedback from residents voiced that it was important for them not to be forgotten or excluded in large State infrastructure projects. This was supported by many adverse comments at the Hopetoun event towards the NBN information marquee from residents that couldn't get high speed internet connectivity or they were not a roll out priority because of low rural population numbers.



The Lighting the Regions project had the opposite effect, with street lighting changeover occurring in very small rural locations reinforcing a perceived Government commitment to all regions covered in the partnership project. An elderly woman in her nineties at the community event in Bridgewater commented that as a small child she helped light the wood powered lights in the streets near the flour mill. During her time lights have changed so much with technology, but it was good that small places like Bridgewater were part of the project getting new street lighting.

The events also allowed a grass roots connectivity with local groups championing energy efficiency and environmental projects. Groups such as the Hepburn, Goldfields, Trentham and Mount Alexander Sustainability groups are all active in their areas and were able to cross promote local initiatives such as sustainable living workshops with the Lighting the Regions project. It is recommended that future lighting or energy efficiency initiatives include a grass roots engagement strategy with such groups.

Raised awareness of energy efficiency practices was far higher at surveyed events, as time could be spent with people showing them where to find information on lighting and energy efficiency practices in the Lighting the Regions brochures. It should be reinforced that although people gained an increased awareness from the printed marketing collateral and website visitation, the decision to actually implement household energy changes is still based on individual value propositions of which initial LED lightbulb costs was a key factor. It is recommended in future projects some historical pricing information on household LED light bulb costs be included in the brochures to demonstrate the increased affordability of household LED changeovers compared to the high costs of previous years.

INSIGHTS AND RECOMMENDATIONS

CONTINUED

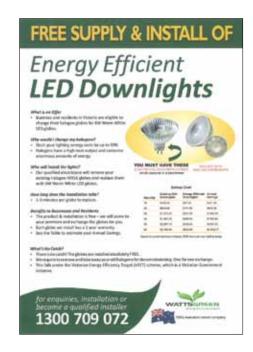
The single largest communication issue with the project was the association of the Lighting the Regions project with commercial organisations such as Wattsgreen offering 'free' replacement LED lighting for households. Energy Makeovers was one such organisation that undertook large scale television advertising utilising an infographics commercial with a female voiceover very similar to the style of Lighting the Regions. The basis of their LED household light changeover taken from their FAQs on their website is as follows;

The Victorian Government's Energy Saver Incentive scheme (also known as the Victorian Energy Efficiency Target) encourages households and businesses to use energy more efficiently, save money on their bills and reduce greenhouse gas emissions. Energy Makeovers can create Victorian Energy Efficiency Certificates ('VEECs') when we replace your power hungry halogen downlights with approved energy saving LED products. We then sell these Energy Efficiency Certificates to energy retailers, which pays for your LED downlight upgrade - so that YOU don't have to!* All that's required is for you to sign our VEEC assignment form at the end of the installation to allow us to create the VEECs.

We recommend that in the future any State or Federal LED lighting incentive schemes be directly included with the communications collateral of Street Light changeover projects to avoid confusion for residents.

The project communications was successful in conveying the large number of street lights being changed across the project (23,000), but did not convey well that not all street lights would be included as part of the changeover project. This tended to be the case in larger populated cities such as Mildura and Bendigo where high profile main street lights and decorative lights close to the city centre did not undergo any change during installations. It is recommended that a greater focus on the residential streets / category P light classification be communicated as part of future street light changing projects.

Finally with 92% of respondents agreeing that it was important for their Council to look for opportunities to work in partnership with other Councils to obtain Government funding for regional infrastructure projects, it is also recommended that some of the ideas generated as part of the project's Energy Efficiency Forum around sustainable building and other outdoor lighting be considered for future partnership projects.



EVENT VERBATIMS

The following are some resident event comments providing relevant insights into the Lighting the Regions project.

"I don't mind Council spending our rates on projects that are going to save us a lot of money in the future".

- Buloke Shire Resident

"These types of events are really important to Kaniva. To have around a 120 people here in a town with a population of 800 is great. We have the local scouts selling popcorn and the footy club selling drinks."

- Sporting club representative at Kaniva outdoor cinema celebration event

"The Charlton film Festival has been going a number of years and we get people coming from all over the place. It has been good to have Lighting the Regions involved and audiences have enjoyed seeing the celebration DVD."

- Committee member Rex Community Theatre

"Lighting the Regions doesn't make much difference to me as far as lights are concerned as I live on a wheat farm. But it's good that the Council is saving money, maybe they can spend a bit extra on the roads."

- Farmer outside of Charlton

"This is what Councils should be doing, getting together with the Government and making things better in regional areas. Why wasn't the Golden Plains Shire involved in the project?"

- Attendee Hopetoun event

"The lights are definitely brighter in my street which makes it a bit safer for walking in the evenings."

- Elderly Bendigo resident

"Recycling light globes and old fittings lines up with Lighting the Regions mission to create a greener future and less waste for the environment."

- Eaglehawk recycle centre comment

"I haven't really noticed the change in lights in the streets, but if they are cheaper to run and last longer then I think it's a pretty good idea that they have been changed."

- St. Arnaud resident celebration event

"The Lighting the Regions project is a great example of what can be achieved when Councils get together and present a good business case for Federal Government funding."

- Local sustainability speaker Hepburn celebration event



An important partnership between the following Local Government Areas and sustainability alliances:





































