

SUSTAINABILITY SCORECARD 2014



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Division of Facilities Management
Charles Sturt University**

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Vice-Chancellor Andy Vann with Judy Doulman
and the Interpretive Bathurst Signage.

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Professor Andrew Vann
Vice-Chancellor and President

It has been a challenging time for all institutions in the tertiary education sector over the last 12 months.

In 2014, we recognised that the external situation was becoming very unpredictable with the political impasse over the Federal Government's higher education reforms.

We also recognised that competition in the higher education sector has increased dramatically and that we still had a sense that we were trying to do too much.

For these reasons it was essential that Charles Sturt University (CSU) revisit its University Strategy.

The result was the consolidation of the University's strategic priorities from eight down to four. Sustainability was one of the four priorities that had its objectives redistributed across those that remained.

It is important that people do not perceive this as CSU relaxing its commitment to sustainability. It is my expectation that improving our University's sustainability performance remains an organisation-wide priority, and this will be driven by a number of specific objectives that exist across our planning framework.

In July 2014, the Australian Government abolished the carbon tax. This action represents a bitter-sweet scenario for an organisation like CSU, where we have been working aggressively to reduce our carbon footprint. On the positive side, CSU will enjoy a short term reduction in its energy costs.

On the negative side, this action has significantly undermined the business case for several renewable energy and energy efficiency projects in which CSU had invested time and resources.

These projects would have made a measurable difference to CSU's greenhouse gas emissions, and reduced exposure to future changes in the cost of energy.

The impact of the carbon tax's abolishment has unfortunately been felt across the broader energy generation and renewable energy sector in Australia with reputable sources stating that the emissions intensity of Australia's National Electricity Market in the year to January 2015 was 3.3% higher than in the year to June 2014, reflecting a shift back towards coal-based electricity generation over lower emission options such as wind, hydro and gas.

Of course, the concept of sustainability extends well beyond carbon reduction and climate change. It is through the establishment of a set of core Graduate Learning Outcomes (GLOs) that CSU can achieve what is arguably its greatest impact.

The GLOs initiative proposes to instil CSU graduates with the skills and expertise to be not only successful professionals but also responsible global citizens.

Sustainability has been established as one of the key GLO dimensions, and while articulating exactly what this means across the breadth of professions linked to CSU's course profile is daunting, the institution is determined to succeed with this task. There is no doubting that education is the glue that will hold the pieces to the sustainability puzzle together.

There were a number of notable achievements in 2014 that warrant a mention.

The commissioning of the Bathurst Campus cogeneration facility was celebrated with a public launch involving a number of significant guests, including that of the Honourable Paul Toole, State Member for Bathurst and Councillor Gary Rush, Mayor of Bathurst.

Another significant achievement was the awarding of \$93,000 funding from the NSW EPA for the "Hey Tosser!" Bathurst project – a partnership between Bathurst Regional Council and CSU that aims to reduce litter across the Bathurst community.

CSU also launched an education program that will assist staff and students to understand the impacts of vehicle use decisions, by establishing a simple-to-read rating scheme for all vehicles in the CSU Fleet.

Improved scrutiny of investment decisions is another significant area where CSU has made progress to ensure strong environmental and social governance is applied.

CSU acknowledges that this is a complex challenge and, while there will always be more work to be done, we decided to be proactive through adopting a set of responsible investment guidelines. These are used to shape investment decisions and provide guidance to fund managers in considering how the University's funds are placed.

We received positive media attention through being the only university in Australia to complete the survey for the Asset Owners Disclosure Project and our approach formed part of this.

In its 2014 Aichi-Nagoya Declaration on Education for Sustainable Development, the United Nations Educational, Scientific and Cultural Organisation (UNESCO) emphasised the potential of Education for Sustainable Development to "empower learners to transform themselves and the society they live in by developing knowledge, skills, attitudes, competencies and values required for addressing global citizenship and local contextual challenges of the present and the future, such as critical and systemic thinking, analytical problem-solving, creativity, working collaboratively and making decisions in the face of uncertainty, and understanding the interconnectedness of global challenges and responsibilities emanating from such awareness".

It is my hope that staff and students of the CSU community will rise to this challenge and help our University to be a serious contributor to the cause in whatever capacity they can. We all are empowered to make a difference.

Professor Andrew Vann
Vice-Chancellor and President

"It is essential that CSU lead by example and continue to address sustainability."



Ed Maher
Manager, CSU Green

Welcome to the 2014 edition of CSU's Sustainability Scorecard. Keen readers will note the change in title from Environmental Scorecard, a conscious decision that has been made to recognise that sustainability is a much broader concept than just the environment.

The CSU Green team hopes that you will enjoy this report, which has once again been refreshed to be more engaging for readers – particularly when viewed online, where a range of additional content can be accessed via the On the Web icons.

As covered in the Vice-Chancellor's foreword, in many ways 2014 has been a challenging year for both CSU and the broader tertiary education sector.

Uncertainty around the future of Australian Government funding, a downturn in the growth of student numbers that has been enjoyed year on year by many institutions, and increased competition for domestic and full-fee paying international students are factors that have created new financial pressure.

This new financial pressure has a flow-on affect to proposed sustainability projects and staff attitudes, This has driven the need for adjustments in approach of some of CSU's initiatives and for new, creative thinking but by no means has brought progress to a halt.

There were a significant number of rewarding moments for the CSU Green team throughout 2014. Examples include the commissioning and public launch of the Bathurst Campus cogeneration facility, high participation rates and positive feedback from the inaugural Cross Campus Environmental Committee forum, the awarding of CSU's Energy Performance Contract to be implemented at CSU in Bathurst and Wagga Wagga, the evolution of the design for the new Port Macquarie Campus and a highly competitive field for the 2014 Vice-Chancellor's Award for Excellence in Sustainability.

Perhaps most enjoyable however, are the simple conversations that members of the CSU Green team continue to have with an ever-expanding pool of CSU staff and community members, who are aware of opportunities to improve CSU's sustainability credentials and are seeking our support to make this happen.

The roll-out of the Learning in Future Environments index, an internationally recognised and structured framework to measure performance against an established maturity model adopted by CSU, was stepped up in 2014.

Consultation to aid in the establishment of initial baseline ratings and improvement action plans commenced but was unfortunately hampered by modest participation rates. The program will benefit from further conversations, which CSU Green shall facilitate throughout 2015.

LiFE has demonstrated its value in providing a well-developed and credible process that will guide conversations relating to current sustainability across the full breadth of the University's activities and operations.

It is recognised that the LiFE project is a challenging task but is one worth investing in to support CSU in meeting its potential for the holistic integration of sustainability into everyday business. I personally received an invigorating reminder during the year that the work we undertake at CSU does not occur in isolation and has implications that extend beyond our University's boundaries.

It occurred during a workshop run by a colleague with a focus on CSU's experiences in progressing our Carbon Neutrality target, which was delivered at the annual Australasian Campuses Towards Sustainability conference.

The feedback from our peers, who represented a significant number of Australian and New Zealand tertiary institutions, highlighted that CSU is setting the pace when it comes to carbon reduction targets, and our ability to succeed with this target has the capacity to shift opinions about what may be possible and expected for other institutions to follow.

You can explore a range of stories and case studies throughout this Scorecard that both showcase best practice and share experiences from initiatives that have been less than smooth sailing.

We hope that you find it a relatable and engaging publication that provides you with an informative update on the status of CSU's various sustainability commitments.

Ed Maher
Manager, CSU Green

“LiFE has demonstrated its value in providing a well-developed and credible process that will guide conversations relating to current sustainability across the full breadth of the University's activities and operations.”

THERE WERE **8** APPLICATIONS

FOR THE ANNUAL CSU SUSTAINABILITY GRANT PROGRAM IN 2014

- 5** FOR THE GENERAL STREAM
- 2** FOR THE LARGE GRANT STREAM
- 1** FOR THE RESEARCH STREAM

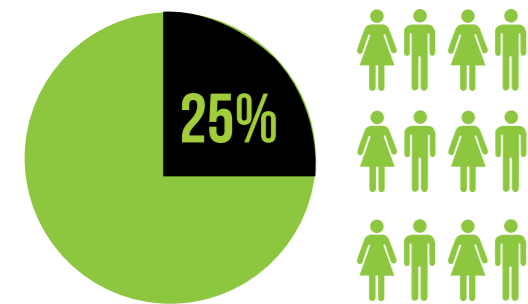
OF THE **8** SUBMISSIONS

3 WERE AWARDED FROM THE GENERAL STREAM

1 RECEIVED LARGE GRANT FUNDING

THERE WERE **9** APPLICATIONS FOR THE INAUGURAL GRASS ROOTS GRANT PROGRAM

OF THE 9 APPLICATIONS, 5 RECEIVED FUNDING AND COMPLETED PROJECTS IN 2014



OF STUDENTS WHO UNDERTOOK THE GREEN STEPS @ CSU PROGRAM IN 2013 COMPLETED THEIR CSU INTERNSHIPS IN 2014

APPROXIMATELY **2882** NATIVE

GROUNDCOVERS, SHRUBS AND TREES WERE PLANTED AT CSU BY STUDENTS, STAFF AND COMMUNITY VOLUNTEERS IN 2014

3.4 ★★★★★ THE AVERAGE GREEN VEHICLE GUIDE RATING OF CSU'S FLEET OF **271** PASSENGER VEHICLES (5 STARS REPRESENTS BEST PRACTICE)

13TH OUT OF **278** WORLD RANKING THAT CSU RECEIVED AMONG UNIVERSITIES

▶ THAT REPORTED UNDER THE ASSET OWNERS DISCLOSURE PROJECT

▶▶▶ AN INITIATIVE WHICH EVALUATES THE EXPOSURE OF AN INSTITUTION'S INVESTMENTS TO THE RISKS POSED BY CLIMATE CHANGE

521 THE NUMBER OF SMART METERS THAT CSU NOW HAS CONNECTED TO ITS EXTENSIVE ENERGY MANAGEMENT SYSTEM

156 kW THE RATED OUTPUT OF THE SOLAR PV SYSTEM THAT WILL BE INSTALLED AT CSU'S NEW PORT MACQUARIE CAMPUS

675 MWh THE AMOUNT OF ELECTRICITY GENERATED BY THE BATHURST CAMPUS COGENERATION SYSTEM IN 2014 FOLLOWING ITS COMMISSIONING IN OCTOBER

16 THE NUMBER OF FRAMEWORKS COVERED UNDER THE LEARNING IN FUTURE ENVIRONMENTS INDEX ADOPTED BY CSU

\$93,000 THE AMOUNT OF FUNDING AWARDED TO THE HEY TOSSER! BATHURST PROJECT BY NSW EPA A PARTNERSHIP BETWEEN CSU AND BATHURST REGIONAL COUNCIL TO REDUCE LITTER ACROSS THE BATHURST REGION

204 TJ OF ENERGY CONSUMED IN 2014. EQUIVALENT TO RUNNING APPROXIMATELY **5,000** AVERAGE HOUSEHOLDS IN NSW FOR A

176,822 DISPOSABLE COFFEE CUPS SOLD AT CSU'S CATERING OUTLETS IN 2014



547,150 kL OF WATER CONSUMED IN 2014 - ENOUGH TO FILL **218** OLYMPIC-SIZED SWIMMING POOLS. AN OVERALL INCREASE IN CONSUMPTION OF **3%** COMPARED TO 2013

WHOLE YEAR. **ONLY A 0.5% INCREASE** ENERGY CONSUMPTION COMPARED TO 2013.

11,706,417 KM TRAVELLED IN 2014 VIA AIR AND **4,705,847 KM** TRAVELLED BY CSU VEHICLES

AND **DOWN 27%** FROM 2013 **DOWN 6%** FROM 2013

1,110 TONNES OF WASTE GENERATED BY CSU IN 2014 WITH **780** TONNES OF WASTE SENT TO LANDFILL **336** TONNES OF WASTE DIVERTED TO RECYCLING FACILITIES **70%** **30%**

▶ What is CSU trying to achieve in sustainability?

The Charles Sturt University (CSU) Sustainability Scorecard is an annual document providing an overview of the sustainability achievements and challenges of the University in 2014.

The document is for University students, staff and the wider community, to involve and inform them on the sustainability projects, initiatives and events occurring annually.



WEB ICON

Click in the box that displays this icon for additional content online

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If you have any comments or feedback regarding this document, or any of the CSU Green projects, please do not hesitate to contact CSU Green via:

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The Sustainability Scorecard serves as a reporting document against the progression of sustainability targets outlined in the Sustainability Sub-plan 2013–2015, which was current and true for 2014.

The Sustainability Sub-plan targets are on the page opposite with more detailed targets identified in the Sustainability Enabling Plan 2011–2015, which are available on the CSU Green website.

During 2014 the University Strategy was reviewed. As a result, from early 2015 Sustainability is no longer designated as its own stand-alone key priority area in the University Strategy, but instead sustainability objectives have been redistributed and embedded within the remaining key priority areas of the new Strategy (e.g. Infrastructure Plan, and Learning, Teaching and Curriculum Plan).

The format of the 2014 Sustainability Scorecard reflects the key priority areas of the Sustainability Sub-plan. Against each of these CSU Green has:

- reported on progress towards achieving the targets
- outlined some of the works or projects occurring on campus that have made a major contribution towards achieving the targets.

Sustainability Sub-plan 2013–2015 Targets

Charles Sturt University has committed to reaching a number of objectives that are outlined in the Sustainability Sub-plan 2013–2015.

The University commits to ensure the responsible stewardship of physical, human and financial resources and to develop plans and procedures to implement environmental sustainability practice.

The objectives include:

- move to carbon neutrality by 2015;
- continue to aggressively pursue energy efficiency
- implement a recognised framework to manage, measure, improve and promote our sustainability performance
- celebrate our leadership in sustainability as an example to others
- encourage and assist organisations in our regional communities to achieve their sustainability goals.

Key performance indicators assist CSU Green in meeting the objectives in four priority areas.

The priority areas and associated key performance indicators are described in the table on page 11.

In Leadership and Governance

Establish a suitable governance structure to maintain prudent oversight of the implementation of the Sustainability Sub-plan

Integrate the delivery of the Learning in Future Environments (LiFE) Index into relevant, existing University structures and committees via:

- completion of framework baseline establishment workshops
- development of framework action plans
- framework follow-up evaluations demonstrating improvements across all frameworks.

In Learning, Teaching and Research

Support the implementation of the Curriculum, Learning & Teaching Plan to establish literacy and awareness of sustainability among all CSU graduates via relevant Graduate Learning Outcomes

Establish appropriate professional development mechanisms for general and academic staff that will instil competence in the delivery of sustainability in curriculum and other areas relevant to their role

In Partnership and Engagement

Implement a multi-faceted sustainability engagement strategy for students and staff, led by the CSU Green office

Actively support the UN University-designated Regional Centre of Expertise in Education for Sustainable Development (Murray-Darling) to maximise its success, reach and impact.

In Facilities and Operations

Implement a multi-faceted strategy to improve energy efficiency and reduce energy-related carbon intensity, including:

- commissioning of a cogeneration facility at Bathurst Campus
- implement a large-scale Energy Performance Contract
- establishment of large-scale on campus renewable energy generation

Integrate sustainability as a key guiding principle in the establishment of the Port Macquarie Campus

Underpin investment in energy efficiency improvements via the continuation of the rolling Energy Saving Initiative

Implement a carbon reduction program for the University fleet, including improving the average Green Vehicle Guide rating of vehicles

Develop and implement an organisational carbon offset procurement strategy

Direct 70 per cent of solid waste from landfill

Allocation of an equivalent to 20 per cent of University campus land to biodiversity conservation and improvement.



Targets

Support the implementation of the Curriculum, Learning and Teaching Plan to establish literacy and awareness of sustainability amongst all CSU graduates via relevant Graduate Learning Outcomes

Establish appropriate professional development mechanisms for general and academic staff that will instil competencies in the delivery of sustainability in curriculum and other areas relevant to their role

▶ Graduate Learning Outcomes

CSU aims to provide its students with the best possible education, and see them graduate with the skills and expertise to be global leaders and responsible global citizens.

The Graduate Learning Outcomes (GLOs) establish standards that are to be used by teaching staff to design curriculum, learning experiences and assessment tasks that will ensure CSU graduates are unique, through the attainment of capabilities that exemplify CSU's values. The GLOs are under review.

The current proposal is that the GLOs will encompass nine dimensions:

There are nine points below

- academic literacy and numeracy
- digital literacy
- ethics
- global citizenship
- indigenous cultural competency
- information and research literacies
- lifelong learning
- professional practice
- sustainability

In 2014, eight early adopting courses were tasked with delivering an updated course curriculum that met the GLO expectations. Feedback from these early adopters has been gathered and the Implementation Steering Committee, which has been tasked with overseeing the implementation of the GLOs across all of CSU's undergraduate courses (and to postgraduate courses where applicable), has developed a list of recommendations to inform implementation by other courses.

Challenges experienced with implementation were primarily linked to the sheer number of attributes that were being integrated into the courses – 85 in all across the then seven GLO dimensions! An additional barrier has been the extent of familiarity and confidence among academic staff to both develop content and lead class discussions around the topic of sustainability, particularly among disciplines that are not traditionally or overtly aligned with the concept.

A review of the GLOs is being undertaken in 2015 to simplify the implementation process for course teams. The proposal is that for each of the GLO dimensions there will be one graduate learning outcome attribute across each of the three fields of: knowledge, skills, and application of knowledge and skills.

The updated matrix of GLOs will be evaluated in the Wave 2 Smart Learning teams and will be put to Senate for final approval by the end of 2015.

A sustainability working party has been assembled to lead the identification of priority attributes and to make recommendations to the Implementation Steering Committee in early 2015.

An internal community of practice set up specifically to develop and share common learning resources focussing on sustainability across the disciplines was intended to progress in 2014 but failed to gain any significant momentum due to human resourcing challenges.

Commitment remains to progress this project and it is intended that dedicated resources will be appointed in early 2015.

► School of Agricultural and Wine Sciences

CSU's School of Agricultural and Wine Sciences broke new ground in 2014, delivering its first combined cultural, ethical and sustainability based subject.

The inaugural year of AGR202 Food, Environment and Culture was delivered to 91 second-year students at CSU in Orange and Wagga Wagga.

Coursework focused on ethical frameworks, environmental and social sustainability with links to economics, challenges facing agricultural production such as food security and climate change, and Indigenous Australian cultures, values and land management.

Incorporating contemporary sustainable practices, with a focus on inter-relationships with cultures, the environment, society and economics were key components of the subject.

The subject was also developed to directly address CSU's ethical, sustainability and Indigenous culture graduate learning outcomes (GLO's).

Students were exposed to content and delivery methods that were unconventional to most, says subject coordinator Caroline Love.

"It is an ambitious subject covering a number of potentially challenging topics for these second-year students. It is quite different in content and delivery to their more traditional science-based subjects," Ms Love says.

Guest speakers were invited to offer first-hand experiences and accounts on some of the content matter.

"Guests were invited for the Indigenous aspects, covering topics such as cultural heritage, including a group activity on the history of land management, bush foods, cultural burning and Indigenous science," Ms Love says.

Student feedback on the first year of the course content was generally positive, however, some students found it challenging to both their current thinking and practices, says Ms Love.



Left: Geoff Simpson Senior Scientist Community Aboriginal Engagement, NSW Office of Environment and Heritage and School of Agricultural and Wine Sciences (SAWS) lecturer Caroline Love. Geoff was a guest speaker to students studying the new SAWS offering, AGR202 Food, Environment and Culture, in 2014.

+ Sustainability in Research

A comprehensive picture of research output that is leading to improved sustainability outcomes beyond CSU's doorstep – that is the objective CSU has set for itself and some modest inroads were made on the task throughout 2014.

A basic interrogation of CSU's Research Output database using a narrow range of keyword search terms has offered some insightful results that will be built on throughout 2015 via a more structured and comprehensive review.

Results already illustrate the breadth of the research that CSU is undertaking in the sustainability space, with an assessment of the features associated with rural wind farms that are important to local residents, a study into the consideration of ecosystem services in the decision making process of policy makers, and an evaluation of the role of community-based social marketing to assist in natural resource management being just a few examples returned from the current, cursory review.

With further work it is anticipated that this research summary will assist CSU to build a stronger profile and increased recognition for the collective research output that offers the potential of improved sustainability outcomes.

This will be used to assist CSU to forge improved research networks and demonstrate credibility when applying for research grants and fee-for-service consulting assignments.

“With further work it is anticipated that this research summary will assist CSU to build a stronger profile.”



Above left: Children of Pak Peung village planting trees. **Above Right:** Retrieving a larval fish trap from the Edward River (Picture J. Abell). **Bottom:** Approximately 200,000 pairs of Adelie Penguins breed annually at Cape Crozier, making it one of the largest colony in the world. (Picture M. Massaro)
Source: *Institute for Land, Water and Society Connections newsletters.*

+ Sustainability Literacy at CSU

Sustainability knowledge and ways to further develop sustainability at CSU were the focus of a 2013 CSU Sustainability Research Grant project.

The, identifying, communicating and improving sustainability literacy: Finding the baseline at CSU to understand and enhance community vitality and cultural change project, was led by Dr Andrea Crampton and Dr Angela Ragusa.

The project aimed at identifying levels of environmental sustainability literacy amongst CSU staff and students and examines engagement with purposefully designed awareness campaigns.

Data was gathered via an online survey and focus groups in Albury-Wodonga, Bathurst, Orange and Wagga Wagga. Prominent concerns arising from the groups were the individual and community reliance on car-based transport, plastic packaging by supermarkets and the sustainability of common food choices.

The project used this information to develop two short awareness campaign based around inter-and intra-campus carpooling, the other on food choice and sustainability.

As a direct result of the first campaign, a carpooling register was created and advertised. Considering carpooling? Get involved by visiting the website.

The online survey was open for five weeks, and attracted 410 responses – 122 from CSU students. The survey included measures of awareness of a range of local and national environmental campaigns, and CSU Green campaigns.

Results were used to determine the level of sustainability knowledge across CSU's staff and student bodies, forming indicators of sustainability literacy. The survey found that there was limited awareness of many national environmental campaigns.

At CSU, Ride2Work Day was the most well-known CSU Green campaign, followed by the water refill stations, which were the most highly participated in or used campaigns (51%).

The survey also questioned participants' awareness and action on a range of daily consumption choices.

The majority of participants (89%) identified correctly from a list of options that wood was a renewable resource.

Alarming, 14 per cent selected plastic and a further seven per cent selected coal or oil as renewable resources. Only 61 per cent of respondents were aware that habitat loss is the most common cause of animal extinction in Australia.

Results of the focus session and survey responses indicated that gaps existed in public awareness of sustainability issues, majority of participants considered issues of environmental sustainability when there was an economic pay-off.

Alternatively, people are engaged in environmental activities related to their personal needs or ones that require the least amount of effort.

The project report presents a portion of the findings as the data is still being analysed for subsequent publications and information dissemination.

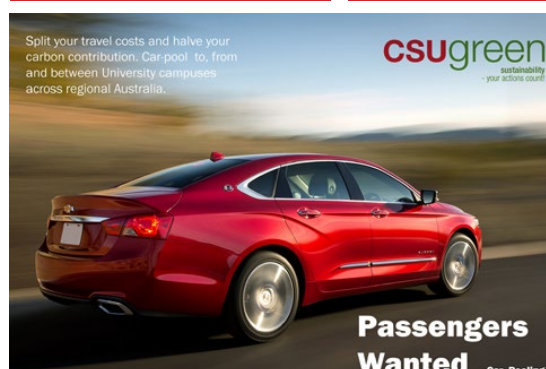
A full copy of the report, including a list of recommendations, can be viewed and downloaded

ON THE WEB

Carpooling



CSU Green grants



Left: This car-pooling image appears on the CSU Green website. Click on the image on the website to access the spreadsheet and find a car-pooling partner. This initiative is an outcome of the Sustainability Literacy project by Dr Andrea Crampton and Dr Angela Ragusa

// PARTNERSHIP AND ENGAGEMENT



Targets

Implement a multifaceted sustainability engagement strategy for students and staff, led by the CSU Green Office

Actively support the United Nations University-designated Regional Centre of Expertise in Education for Sustainable Development (Murray-Darling) to maximise its success, reach and impact.

Partnerships and Engagement, a key priority area for CSU Green, aims to address and achieve behaviour change amongst CSU students, staff and the external community.

CSU Green aims to meet its commitments under this priority area through hosting and providing access to a range of events and initiatives annually.

The events calendar in 2014 provided opportunities for CSU students, staff and the external community members to get involved and participate in some national and local events and initiatives.

Highlights of activities and initiatives in the Partnerships and Engagement priority area in 2014 are outlined below.

▶ Campus Environmental Committees (CECs)

CECs are based at Albury-Wodonga, Bathurst, Dubbo, Orange and Wagga Wagga. The CECs are campus-based groups of staff, students and external community members who work with CSU Green and assist in implementing CSU's Sustainability targets through seeking funding for projects, initiating and undertaking projects, and contributing to educational programs.

In 2014 the inaugural cross-campus CEC session was organised by CSU Green.

The aim of the cross-campus CEC session was to initiate cross-campus networking and sharing of ideas.

It was a successful meeting and resulted in positive feedback including a common CEC forum (currently a group format in Yammer is being used) and interest in holding the cross-campus sessions biannually. The next cross-campus CEC meeting will be organised for early 2015.

For more information on the achievements of CECs through 2014 see page 28.

▶ CSU Green Grants

In 2014 the annual CSU Sustainability Grant Program offered one large grant of \$50,000, a pool for general sustainability grants of \$45,000 and a pool for sustainability research grants of \$40,000.

The program was not as well subscribed as in previous years, attracting minimal interest in the research pool, two grant submissions for the large grant and a mere five grants for the general pool.

The large grant of \$50,000 was awarded to Dr Cesidio Parissi, Dr Andrew Rawson and Dr Peter Anderson for the development of an Aboriginal Nature and Bioscience Park at CSU in Orange. No funding was awarded from the research pool and three of the five general grants were awarded. During the year there were a number of 2013 Sustainability Grant projects that were completed and have been outlined in more detail in Breakout Boxes on page 20 and 22.

 ON THE WEB

CSU Green grants



An exciting new grant program was initiated in 2014 called the Grass Roots Grants Program. CSU Green redistributed \$15,000 from the annual grant program to the new small grant program. The 'grass roots' scheme is aimed at students and staff who wish to implement a small, engaging campus or workplace sustainability initiative that works towards meeting CSU's sustainability targets.

Nine applications were received for the new grant program and include projects submitted by the Bathurst CEC (see page 28), students' active at the Kerr Sustainability Centre (see page 30), a Green Steps @ CSU student's CSU internship (see page 29) and the Murray Children's Centre at CSU in Albury-Wodonga.

Of the nine applications, seven were successful and five were completed in 2014.

For various reasons two of the projects were not implemented and the funding was returned to CSU Green.

► Biodiversity Improvement

There were tree planting events hosted at CSU in Albury-Wodonga, Bathurst, Dubbo, and two planting events throughout the year at CSU in Orange and Wagga Wagga.

One event at Wagga Wagga coincided with National Tree Day. For more information on tree planting days at each campus see Breakout Box on page 47.

► Green Steps @ CSU

After three years of CSU hosting the Green Steps @ Uni program, CSU Green made the decision to discontinue the program. Unfortunately, the three previous years yielded few completed projects and program completion by students. CSU Green worked tirelessly with staff from the Monash Sustainability Institute to determine the challenges of running the program at CSU, whether these challenges could be overcome and if alternative modes of delivery could succeed without detriment to the course.

The multi-campus nature of CSU and the proportion of distance education students participating in the program contributed to high program costs which could not be justified given modest completion rates for on campus internships. Saba Nabi completed her 2013 Green Steps @ CSU project in late 2014 (see page 29) as did two other students from a class of 12.



Above and right: Scarecrow in vegetable garden and sustainable living posters at CSU's Early Learning and Nurture Centre. Both projects were part of Saba Nabi's 2014 Green Steps @ CSU project.



► Vice-Chancellor's Award

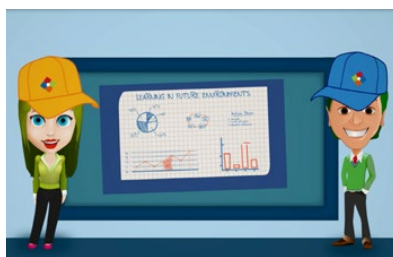
The 2014 Vice-Chancellor's Award for Excellence in Sustainability was awarded to Ms Judy Doulman, Business Programs Coordinator at CSUAdvance (see page 25) out of three very worthy staff member nominees. Ms Hedy Bryant (Acting Manager Diversity & Equity, Division of Human Resources) was nominated for her extensive work for sustainability at CSU, her participation in a number of CSU and external groups, and her extensive contribution to CSU via the Bathurst Campus Environmental Committee.

Ms Caroline Love (Lecturer, School of Agriculture and Wine Sciences) was nominated for her commitment to active transport, her research that will contribute to a better understanding of the attitudes and practices of Australian farmers towards key sustainability issues such as water policy and soil carbon, and is a trained Ally through CSU's LGBTIQ Ally program.

► Learning in Future Environments Animation

CSU Green approached CSU lecturer in animation, Mr Andrew Hagan, for assistance in developing an animation to engage CSU students on the Learning in Future Environments (LiFE) program. Andrew provided the CSU Green project as an option for the third-year animation final assessment. CSU student, Mr Sean Butler, chose the CSU Green LiFE project for the final third year assessment task late in 2014.

Sean was asked to create an engaging animation explaining the CSU LiFE program to students. The animation Sean developed is professional, engaging and met the scope that CSU Green provided. It will be launched in 2015 to students when the LiFE program is in the stages of engaging students.



Above: CSU Learning in Future Environments (LiFE) animation to engage students

► Partnerships

CSU Green is maintaining its partnership with the US Embassy in Canberra. The US Embassy asked CSU Green to advertise an internship opportunity for CSU students in the area of sustainability to support the US Embassy in the Canberra Greening Initiative. Mr Lewis Tinley was awarded the Australian student three-week internship at the US Embassy from three applicants. Lewis is a student at CSU in Albury-Wodonga undertaking an Environmental Science degree. Read more about Lewis' experience at the US Embassy on page 32.

Rehabilitating a heavily degraded section of one of Bathurst's urban creek beds to prevent erosion was the focus of a joint venture between CSU and Bathurst Regional Council (BRC) in 2013.

The shared section of Hawthornden Creek, which is on the southern boundary of CSU and Mount Panorama, underwent extensive rehabilitation works. Some 45 metres of rock capping was constructed, three Schauburger sills (large rock structures in the creek bed to reduce water flow) were installed and three 'rock chutes' built to take stormwater run-off from the CSU campus.

Works are designed to slow the speed of water flowing in the creek during storms and will minimise erosion of the channel bed and creek bank.

The project forms a component of BRC's broader rehabilitation strategy for its urban creek system. About \$250,000 has been spent on the CSU section of works, which has been funded by the University, BRC and contributions from a Natural Environment Trust Grant.

Plantings along the creek bed were undertaken in 2014. The rehabilitation works complement CSU's target to allocate 20 per cent of University land to biodiversity improvement by 2015. For more information on CSU Green's biodiversity target, see page 48.



Above: Hawthornden Creek Partnerships

► Active transport

CSU Green engaged staff from the Division of Facilities Management to determine a clear direction for active transport provisions at CSU.

Feedback compiled from various surveys and a research project by Dr Shelby Gull-Laird and Dr Rosemary Black was used to determine the initial actions required for increasing active transport use at CSU.

The majority of feedback focussed on improved signage of existing facilities (bike parking and shower / change) and increasing the secure, undercover bike parking infrastructure on campus.

To initiate improved signage and direction, CSU Green began development of Transport Access Guides for Albury-Wodonga, Bathurst, Dubbo, Orange and Wagga Wagga to be distributed to students in O Week 2015.

National and local bike events were hosted at CSU in Albury-Wodonga, Bathurst, Dubbo, Orange and Wagga Wagga in 2014 to promote commuting to and around campus by bicycle. NSW Bike Week ran between Saturday 13 to Sunday 21 September 2014 and included a number of events at CSU such as bike maintenance workshops, social group rides to campus followed by a catered breakfast, ride the new roads on Wagga Wagga Campus followed by refreshments at the CSU Cellar Door, and screening a collection of short bike films for the week at the main campus cafeterias.

National Ride2Work Day was celebrated again with a social ride to campus followed by a catered breakfast. The majority of participants at both ride events were staff. CSU Green continues to organise a monthly social ride to campus, meeting in town for a coffee and riding to campus as a group. The bicycle user group at CSU in Wagga Wagga has grown to more than 80 members.

In late 2014 staff members at CSU in Albury-Wodonga also started a bicycle user group.

► CSU Green Graphic Design



Above: CSU Green Graphic Designer Kerri-Anne Chin

In 2014, CSU Green sought a new graphic design intern from the School of Communications and Creative Industries. Miss Kerri-Anne Chin was the successful candidate and brings to CSU Green a wealth of working experience from the graphic design industry.

Kerri-Anne worked on a number of initiatives in 2014 and completed training in the CSU content management system, enabling her to make changes to the CSU Green website.

Promotion of the Learning in Future Environments program, electronic Christmas cards, posters for the CSU Managers Conference, 2013 Environmental Scorecard, redesigning factsheets, redesign of the free water decal and the cogeneration plant promotion are some of the initiatives where Kerri-Anne has taken the lead on design.



Above: Cyclist participating in Ride to Work

“National and local bike events were hosted at CSU in Albury-Wodonga, Bathurst, Dubbo, Orange and Wagga Wagga in 2014 to promote commuting to and around campus by bicycle.”

+ Eco-Living

Students living in on campus residences produce significant waste, consume large amounts of energy, contaminate recycling and contribute to CSU's Carbon footprint.

Residence Life developed the Eco-Living project as an opportunity to support the development of normative behaviour by advocating increased awareness of choices made in relation to waste and power usage within the residential student body. This project is supported by a CSU Green Sustainability Grant.

As part of Residence Life accommodation offered at the commencement of 2014, Albury-Wodonga, Bathurst, Orange, and Wagga Wagga campuses each identified an eight-bedroom cottage as an 'Eco-Cottage'. While success was varied, the Eco-Cottages provided opportunities to pilot programs for composting, student gardens, recycling and low energy lifestyle and entertainment choices.

A competition between Bathurst and Wagga Wagga Eco-Cottages used social media to promote resident activities, and saw a range of garden activities evolve throughout the year. Overall, the project aimed to increase awareness and visibility of sustainability principles and practices across all campuses, with the opportunity to expand, scale up or generalise in future years.

Albury-Wodonga harnessed significant student interest and commitment, and will continue to offer an Eco-Cottage in 2015.

Eco-Living also included the development of student-centred engagement activities linked to sustainable living. These focused on waste and energy. Eco-Living modules target all residential precincts to promote sustainable living across the student resident community, delivered in line with Residential Support Scheme principles and with the support of Residence Life staff.

ResCycle, a successful Albury-Wodonga initiative initially developed by Kurt Neville, focussed on recycling knowledge and awareness. ResCycle was expanded and implemented at Albury-Wodonga, Dubbo and Orange campuses in 2014.

'Winter Warmers' activities saw awareness of dressing for the climate at Dubbo, Orange, Albury and Bathurst. Residents held Winter-Warm-Up events, focusing on the importance of clothing choices to reduce power and heater usage.

At Bathurst, the Diggings event included a collection for non-perishable food items and clothing for donation to local charity, Veritas House.

Waste is a significant issue at the end of the student year. A 'Move-Out' campaign aimed to address waste generated at the conclusion of the residency period.

This focused on donations of non-perishable food items, clothing and small appliances, aiming to reduce landfill waste and recycling contamination. A clothes swap at Bathurst Campus on 7 October began the drive at Bathurst, collecting donations of unwanted clothing for Veritas House.

As students packed up and moved out, donations were sought and centrally collected. At Wagga Wagga, Charles Sturt Campus Services collected items for local Wagga Wagga charities.



Above: Residence Life developed the Eco-Living project as an opportunity to support the development of normative behaviour by advocating increased awareness of choices made in relation to waste and power usage within the residential student body.

+ Transportation decisions of the CSU community, Albury-Wodonga

If given the chance, almost half of the staff and students at Charles Sturt University's (CSU) Albury-Wodonga Campus would prefer to cycle to work or lectures than take their car, bus or any other mode of transport.

Some 40 per cent of participants surveyed in the 2013, Transportation decisions and behaviours of students and staff at the Albury-Wodonga Campus' survey indicated they would prefer to commute to campus by bicycle if internal and external improvements were made. Interestingly, 50 per cent of these participants also did not own a bike.

Additional findings from the survey also helped with the creation of an online page promoting the location of showers, change rooms and bike parking facilities on campus, available at csu.edu.au/csugreen/cycling-at-csu/albury-wodonga CSU academics Associate Professor Rosemary Black and Dr Shelby Gull-Laird conducted the survey, funded by a 2012 CSU Green Sustainability Grant.

Co-author Associate Professor Black said overall the survey results were encouraging, considering some of the challenges regional campuses can present.

"Regional university campuses offer unique challenges when considering sustainable transport choices, including limited access to public transport and longer commuting distances," she said.

"The reason people use their car is because they have activities on the way to and from work and during the day, and for convenience."

Recommendations put forward from the survey findings suggested ways to help get people on their bikes and make a more sustainable transport choice.

"CSU could offer a bus service to Lavington Shopping Centre at lunch times or bicycles on loan for lunch hour," Associate Professor Black said.

Results from the survey suggested a number of ways to help make the bus service and bike loan options successful, including working with bus companies to help improve bus stop locations and timetables and improved on campus bicycle storage and shower facilities.

There was also strong support from participants for a regular bus service between campuses at Albury-Wodonga, Bathurst and Wagga Wagga. Additionally, local and inter-campus carpooling were highlighted as preferred travel options for colleagues and students.

For a detailed look at the final report visit the CSU Green Sustainability Grant webpage.

Since this report, an online carpooling system was created and made available to staff and students in 2014 as the result of another sustainability grant research project by Dr Andrea Crampton and Dr Angela Ragusa (see page 15).

PEOPLE WHO COMPLETED THE SURVEY

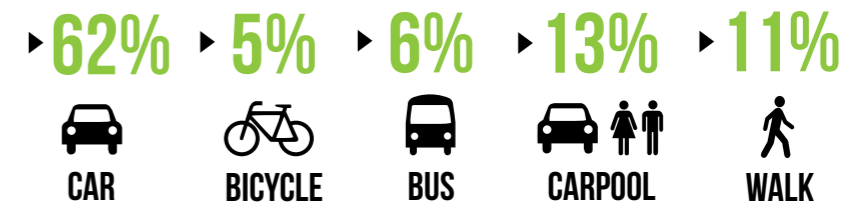


TOWN OR SUBURB WHERE PARTICIPANT RESIDES

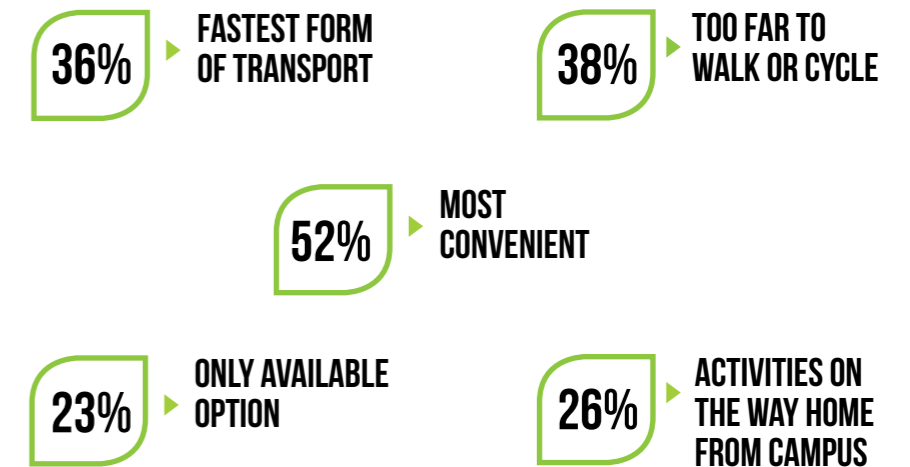


MAIN MODES OF TRANSPORT

STAFF AND STUDENTS USE CAR AS MAIN MODE OF TRANSPORT



WHY?



ONE OTHER FORM OF TRANSPORT MORE PREFERRED FOR TRAVEL:



During 2014, CSU Green acted on some of the recommendations that resulted from the transportation behaviour survey.

CSU Green has been working on promoting existing bike parking and shower / change facilities, which was a key recommendation from the report.

These locations, and other necessary information for active transport users travelling to and from CSU campuses, are listed on the CSU Green website via the Cycling @ CSU tab.

CSU Green has been working with the Division of Facilities Management to include bike parking locations in the wayfinding (mapping) software.

In early 2015, Transport Access Guides (TAGs) were developed for each campus, which were made available in printed form for new students during Orientation Week and are available now in electronic format on the CSU Green website.



Above Left: Bus Shelter installed at CSU in Albury-Wodonga to increase visibility in an effort to increase public transport use. Above Right: Increases in bike parking on campus was feedback provided by participants in Dr Black's and Dr Laird's research project.

ON THE WEB

CSU Green grants

Cycling at Albury-Wodonga

ON THE WEB

FM Central

Carpooling



► TAG Member Award CSR Initiatives

Residence Life won the 2014 Tertiary Access Group (TAG) Member Award - Corporate Social Responsibility Initiatives (CSR) receiving a prize of \$2,500.

Tertiary Access Group (TAG) is a not-for-profit organisation representing university and TAFE associations across Australia. Its members service in excess of 1,000,000 students and faculty nationally. TAG represents 66 Members on more than 120 campuses nationally. The TAG CSR Member Awards recognise the good progress being made in creating a more sustainable campus environment.

The CSR Awards recognise initiatives aimed at improving sustainability outcomes, raising awareness and changing the behaviour of student groups, staff or campus communities.

Applications need to reflect collaboration, with students and staff working together to achieve these goals using “top-down method” and “grass roots method”, highlighting maximum communication, understanding and engagement throughout the initiative.

Joanne McRae (Manager, Student Initiatives) explained “While our students arrive at university from various backgrounds, most have engaged in recycling and waste reduction sustainability initiatives throughout primary school, and many have had standard practices for recycling in high school.

“Once they arrive at university and live on campus, some of their skills seem to get lost as they immerse into a new social and living environment with many distractions and a new peer group.”

The ResCycle approach, focused on behaviour change rather than infrastructure, provides a model of sustainability education that ties in to Residence Life’s Eco-Living sustainability project.

Initially, the project targeted a specific sustainability challenge reduction of the contamination of recycling - however, it has demonstrated the power of engagement through peer education and the potential for establishing social norms through engaging education on sustainability.

 ON THE WEB

Tertiary Access Group



Above: The TAG Award presented to Residence Life representatives for the waste education program, ResCycle.

Left: On your bike...students at various events on campus and their sustainable resources - Waste recycling bins, Bike Week drink bottles, CSU Enviro bags and CSU Green recycled note pads.

“Tertiary Access Group (TAG) is a not-for-profit organisation representing University and TAFE associations across Australia. Its members service in excess of 1,000,000 students and faculty nationally.”

+ Vice Chancellor's Award for Excellence in Sustainability

Each year the Vice-Chancellor awards a deserving staff member for their work in the sustainability space at CSU.

The recipient of the 2014 Vice-Chancellor's Award for Excellence in Sustainability was Ms Judy Doulman, a program coordinator and professional trainer employed by CSUAdvance.

Judy Doulman is a self-confessed born-again sustainability advocate. In the space of a few short years, Judy has transformed from being mildly aware of global sustainability issues such as global warming to become an active change agent who is leading debate on such issues and engaging with people to help them understand what role they can play to make a positive difference.

Highlights of this fast-paced and impressive journey include:

- successfully winning a scholarship to complete a Graduate Certificate in Education for Sustainability
- developing an effective Introduction to Sustainability in the Workplace short-course to meet the specific needs and requirements of staff working at CSU
- winning funding through a competitive grants program to deliver the training to 100 of her peers

- Delivering the very successful training package, involving more than 240 participants and approximately 30 completed group projects delivering real benefits
- Actively seeking opportunities to source additional funding that will allow the Introduction to Sustainability in the Workplace Program to continue to be offered both to CSU staff and other organisations operating throughout regional Australia

The Introduction to Sustainability in the Workplace training has been very well received across CSU. This is deemed largely to be a testament to Judy's method of delivery.

A significant focus of the training is to assist participants to recognise the values they personally place on the natural environment and the role they can play by drawing on their own unique skills and spheres of influence to make a meaningful and positive impact.

In the time that the Introduction to Sustainability in the Workplace training has been available, the following has been achieved:

- 90 CSU staff have completed the training
- approximately 30 on campus projects completed (mostly completed as group projects)

“The Introduction to Sustainability in the Workplace training has been very well received across CSU. This is deemed largely to be a testament to Judy's method of delivery.”

- 124 additional course graduates have completed training through newly-established elective module available to staff completing certificates in Asset Maintenance and Business
- 30 external students from a local regional council have completed the training.

A list of engaging workplace projects that have been undertaken by staff participating in the Introduction to Sustainability in the Workplace training is available on the CSU Green website.

“I was so excited to be nominated for this award. When I was informed I had won I was truly overwhelmed. CSU Green is innovative and proactive. I am really pleased to have the opportunity to work with some of these people. Significant advancements can be made if every person made an incremental change in their actions.” Judy said.

“A list of engaging workplace projects that have been undertaken by staff participating in the Introduction to Sustainability in the Workplace training is available on the CSU Green website.”



Above: Vice-Chancellor, Andrew Vann, presenting Judy Doulman, Program Coordinator CSUAdvance, with the 2014 Vice-Chancellor's Award for Excellence in Sustainability.

[▶ ON THE WEB](#)

[Grant Projects](#)



► Campus Environment Committee

Bathurst Campus

The Bathurst Campus Environment Committee laid the foundations for an educational, environmental walk in 2014.

The leisurely three-kilometre eco-walk will trace the campus perimeter and feature interpretative signs along the way explaining a variety of historical, cultural and flora and fauna campus facts, such as the campus-established indigenous garden.

The signs will also highlight recent and future rehabilitation works on water courses, such as the Hawthornden Creek project, the establishment of native grasses, trees, shrubs and other environmental initiatives.

As well as being informative, the designated walk also promotes healthy lifestyles for staff and students.

Three of the proposed nine signs have already been installed along Boundary Road on campus.

These signs were funded through a 2014 CSU Green Grass Roots Grant. The initial three signs are the first stage of the project, which is expected to be complete by the end of 2015.



The garden started to take shape in late 2014 after the committee held a tree-planting day. The initial plants chosen for planting were considered in consultation with the Dubbo City Council's Japanese Garden project.

In 2015 the Committee hopes to build community interest and partnerships for the project, namely from culturally diverse groups in the Central West. Grant funding for the installation of signs in the garden will also be applied for.

Dubbo Campus

A new Dubbo Campus Environmental Committee was formed in 2014 after a brief period of inactivity.

The Committee gained five new members in 2014, including additional CSU Green representation, a new Charles Sturt University student and Dubbo City Council and Department of Education representatives.

One of the main achievements for the group in 2014 was the establishment of a Reconciliation and Cultural Diversity Garden.

The garden helps to connect the CSU community with the broader Dubbo community by mixing Australian natives with exotic plants from cultures represented in the Dubbo region.



Left and Top: Interpretive signage highlights environmental projects and explains campus fauna and flora facts along the new eco-walk at CSU in Bathurst, and eco-walk map aerial view. **Right:** Dubbo CEC members rolled up their sleeves and helped out with the planting of the new campus Reconciliation and Cultural Diversity Garden.

Orange Campus

Nature, culture and education will combine at CSU in Orange with the creation of a bioscience and Aboriginal nature park.

The Orange Campus Environment Committee (CEC) was successful in receiving a \$50,000 sustainability grant from CSU Green for the development of the park in 2014.

Garden beds in the park will feature native plant species local to the Central Tablelands and culturally significant to the regions' Aboriginal people, while emphasising the preservation of endangered species.

The project is an independent part of a multi-faceted approach to increase educational, cultural and community engagement on the Orange Campus.

In addition, Orange CEC members, with the help of the Division of Facilities Management staff, initiated the planting of more than 350 new trees and shrubs on campus in 2014 through two tree-planting days. Staff were involved in planting trees near a main campus dam, while students helped to improve an area near a campus carpark.

Other successes for the Orange CEC included putting forward recommendations to the University's Senior Executive Committee for a nominated biodiversity zone on campus, propagating and growing native plants in the University horticultural sheds, holding a successful ride to campus event and monitoring the peregrine falcon nest-cam project.

This project tracks the progress of two falcons nesting on a campus water tower with data collected to possibly form a scientific article.

In 2015 the CEC is committed to developing nominated biodiversity zones and the creation of wildlife corridors on campus, moving the bioscience park forward and supporting organic waste collection, along with participation in broader CEC and environmental events.

 ON THE WEB

[Watch Falcon Cam](#)



[CSU Green Grants](#)



Left and Above: CSU students help to plant 150 new native shrubs and trees near a University car park on Orange Campus.

► The Kerr Sustainability Centre - a recipe for success

The Kerr Sustainability Centre at Charles Sturt University (CSU) in Albury-Wodonga has found a recipe for success.

A CSU Green Grassroots Grant helped the Centre bring together great company, delicious food, environmental benefits and community engagement.

The Kerr Sustainability Centre is a community garden open to all to share skills and knowledge on environmental and economic sustainability.

Part of the Grassroots Grant money went towards the construction of a pizza oven, which is now one of the communal focal points of the Centre's garden. Some additional grant money was spent on purchasing sustainably sourced timber from a nearby town for the creation of enduring garden beds.

Centre member Heather Chapman said both projects had highs and lows.

"The pizza oven design was not set in stone when we received the grant; we also discovered that we would not be able to use only cheap, recycled kiln bricks like we had hoped, especially for the cooking surface.

"We needed to purchase more concrete and sand than estimated, and smooth pavers. However, donations of a flue and the creativity of the gardeners enabled us to go ahead" Heather said.

Despite the challenges, the Centre completed the oven, named the Jack Fry Cobb Oven – after a founding Centre member and former CSU student, at the end of 2014.

Members are looking forward to making many tasty, home-made pizzas using produce grown in the gardens, or sourced locally.

The new recycled timber garden beds were constructed and laid during a working bee in the spring of 2014, revitalising the space and opening up new plots.

Some of these gardens are now cared for by Bhutanese and Nepalese refugees from the neighbouring National Environmental Centre.

The Kerr Sustainability Centre pizza oven and gardens are a meeting place for all Centre and community members to enjoy, share recipes and initiate conversations.

"Bringing more people to the gardens means nutritious food is grown locally on a small scale, with less food miles and lower energy costs in the form of fuel, fertilisers and pesticides," Heather says.



Above: A wood-fire pizza oven is the newest inclusion to the Kerr Sustainability Centre. The oven, which was part-funded through a CSU Green Grassroots Grant, is a meeting place for Centre and community members to share recipes and initiate conversations. The centre also laid new garden beds, made from recycled timber. These gardens help to revitalise the space and open up new plots.

▶ ON THE WEB

Email



Website



► Stepping in the right direction

A veggie garden, water droplet mascots, a scarecrow, recycled arts and crafts and a visit from a pet pig - these are some of initiatives Saba Nabi introduced as a Green Steps intern in 2014. Most importantly, this eclectic mix of experiences not only benefitted Saba, but extended to the wider community.

Saba, a PhD student with the School of Biomedical Sciences at Charles Sturt University (CSU) in Wagga Wagga, volunteered for three weeks to help spread a sustainable living message at the CSU Early Learning and Nurture Centre. The children and staff at the long-stay preschool, located on the Wagga Wagga Campus, were involved in an array of lessons from waste management, recycling and water and food management. Saba says sustainability education can start at any age.

“You are never too young to learn about sustainability. Children can develop positive attitudes and values by engaging in learning experiences and joining in discussions. By promoting an understanding of our responsibility as humans to care for the environment, on a day-to-day basis and for the long-term, we can all make a difference” she said.

The lessons also extended beyond a sustainability message.



Above: Saba Nabi

“The project helped to connect the children to the natural world, by digging in gardens and planting trees, they also learnt about healthy development and most importantly, the lessons provoked curiosity, creativity and critical thinking skills.”

As a direct result of Saba’s Green Steps program, the preschool created its own vegetable patch, complete with scarecrow, installed a worm farm for composting, improved water and energy practices and set up an ideas log for staff and parents to share sustainable living ideas.

Saba’s project was assisted by a CSU Green Grassroots Grant which helped cover the cost of project materials.

Why get involved in Green Steps?

Saba shares some of her thoughts on the Green Steps program and tells us why you should get involved.

“The Green Steps program made me realise that sustainable practices are things we can do to help our communities, suburbs, towns, cities and parks. It’s a well-defined, structured program which engages students with facilitators in an interesting way.

Green Steps helps interns in understanding the best practices within a workplace, community and at home.

It made me realise the dangerous impact of global warming and importance of carbon footprinting – a concept which was new to me.

I feel confident after completing the Green Steps training, because now I am much more aware of sustainability and my roles and responsibilities in contributing towards a better future.”



Above: Posters about sustainable living and lessons about waste and water saving are some of the things Saba Nabi spent organising and creating as the 2014 Green Steps Intern. Saba completed her internship at the CSU Early Learning and Nurture Centre.

► CSU student leaves mark on nation's capital

The opportunity to be an intern at the US Embassy in Canberra was too good to pass up for CSU environmental sciences student Lewis Tinley.

Lewis successfully applied for the Summer Foreign National Student Internship Program and spent three weeks in December 2014 networking, helping to effect change and expanding his knowledge base.

The main component of the internship was to help set up the Canberra Greening Initiative for 2015 and review sustainability practices at the Embassy.

"I began by researching and summarising practical approaches to personal, social and structural changes in the workplace," Lewis said.

► CSU student Lewis Tinley shares his Students of Sustainability experience.

Student's of Sustainability (SOS) 2014 was an awesome trip (as it has been every year before). It took place in Canberra and was full of workshops, music, fun and friends. Participants chose to attend workshops that interested them and reported back on what they learned at the end of the day.

I personally took an interest in the food sovereignty movement, the art of community engagement, climate change / policy debates, activist workshops and many more.

What always stands out to me at SOS is that every person you speak to has something interesting to say and time to listen.

"I initiated a green poster awareness campaign designed to advertise the use of appropriate bins, water usage, and paper. As part of this all printers were changed to duplex (double-sided) to save paper, which was inspired by CSU's own sustainability efforts."

Lewis also had a hand in compiling and distributing community newsletters displaying household sustainability facts and organised an energy audit and gas-usage report for the Embassy's warehouse storage facilities.

Lewis said the experience was a great learning curve that helped him make connections and gain some invaluable skills.

"The program was an excellent way to make connections, make a difference and learn from others. Whilst I learnt a lot from this trip, it is apparent I have a lot to learn as well."

The experience "exceeded" any expectation Lewis had prior to the internship and he strongly recommends the program to other CSU students.

"It sure looks good on the CV and would help with any future jobs. If you can organise this internship you should definitely go for it."



Main photo: Lewis Tinley (second from right) with fellow students at the 2014 SOS conference in Canberra.

+ Banner Document Management System Deployment Project

The 2013 CSU Sustainability Grant allowed the deployment of the Banner Document Management System (BDMS) across Charles Sturt University. BDMS created paper savings of almost 50 per cent, an increase in office space and reallocation of staff for improved divisional efficiencies.

Savings since the BDMS system was rolled out include:

- paper, photocopier and consumable usage through a 45 per cent reduction in printing of student documentation
- an 80 per cent reduction in the physical handling and storage of student documentation
- an increase in 65sm of office floor space – previously used for physical file storage in Albury-Wodonga, Bathurst, Orange and Wagga Wagga campuses

- The ability to reallocate duties for two full-time staffing positions for physical filing to performing other services within the Division.

Staff have also greatly benefited from BDMS. The system enables well-informed, consistent and timely student advice and decision making, and allows CSU staff to effortlessly access, read and save information to the student file. Previously, some of these tasks were unattainable to many.

The 2013 CSU Sustainability Grant from CSU Green enabled BDMS to be the single electronic student file used to share and compile student information within 23 Charles Sturt University schools, four faculties and multiple Divisions, offices and associated partners.

They too have seen similar benefits thanks to the CSU Green Grant.



80%
REDUCTION IN THE PHYSICAL HANDLING AND STORAGE OF STUDENT DOCUMENTATION

BDMS

BANNER DOCUMENT MANAGEMENT SYSTEM

CSU

45%
REDUCTION IN PRINTING OF STUDENT DOCUMENTATION

BDMS CREATED PAPER SAVINGS OF ALMOST

50%

// FACILITIES AND OPERATIONS



Target

Be greenhouse neutral by 2015

Charles Sturt University (CSU) continued its positive downward trend in greenhouse gas emissions in 2014. CSU calculated a reduction of 1,556 tonnes of CO₂-eq compared to the 2014 calendar year.

• Transport:

There were significant reductions in transport emissions, due in part to improvements in airline travel and CSU fleet (vehicle) utilisation. Total emissions reductions associated with these improvements equal 1,362 t CO₂eq.

For more information on these savings, see page 50.

▶ Carbon neutrality

• Waste:

Waste contributed to the largest portion of emission reduction in 2014. These savings are due to changes instigated by CSU in the way that the University's waste contractors collect and present waste data. Find out more about this project on page 44.

This data provides a more accurate picture of the amount of waste that the organisation generates, how much is disposed of as landfill and how much is recycled. A direct result of this improved data quality is that the total quantity of greenhouse gas emissions associated with CSU's waste output has decreased substantially; by 3,610 t CO₂-eq. While not strictly a saving, this improvement in data quality has presented a more realistic overview of how waste bound for landfill impacts on CSU's total carbon footprint.

In 2013 CSU reported the following activities needed to be undertaken for CSU to achieve its carbon neutrality target by 2015:

- continuation of an aggressive energy efficiency program incorporating the establishment of cogeneration at CSU in Bathurst, and implementation of an Energy Performance Contract across CSU in Bathurst and Wagga Wagga
- investment in onsite renewable energy generation
- engage a carbon offset provider to provide CSU with accredited carbon offsets. While a number of energy and waste reduction projects are currently being implemented (see pages 40 and 44) there will still be

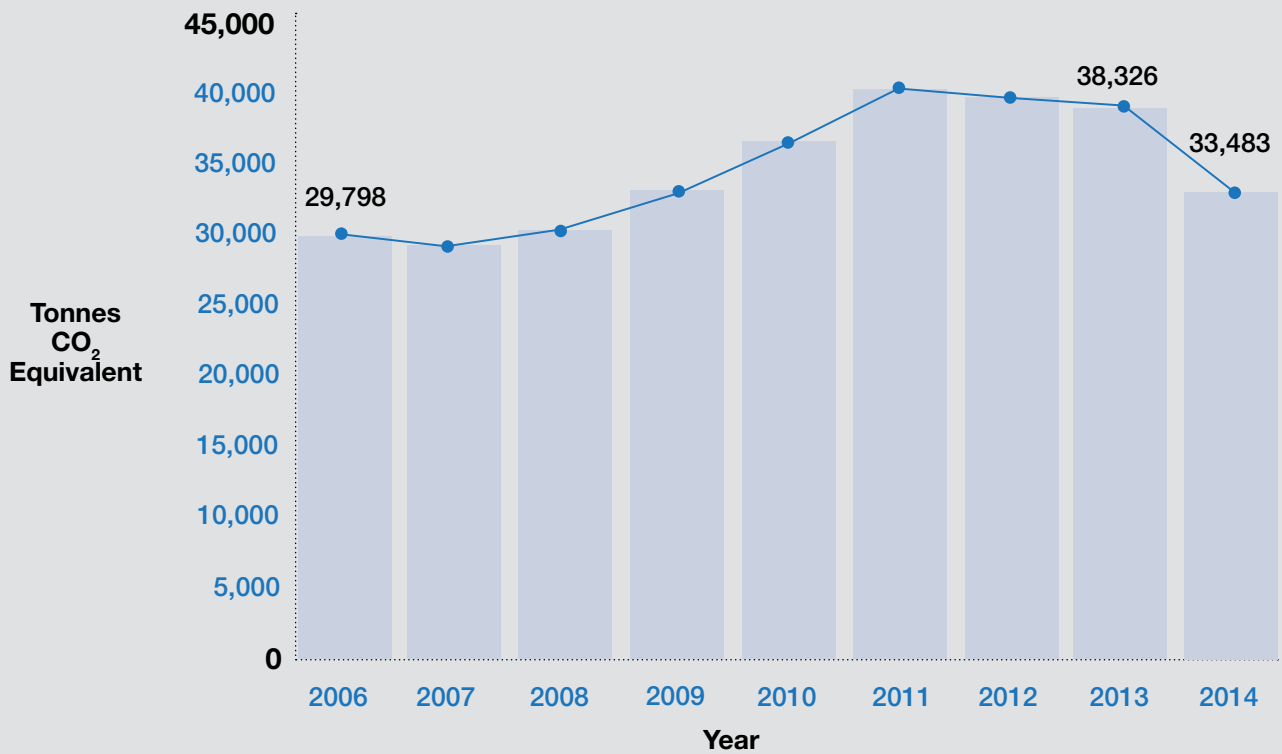
a significant emissions 'gap' which will need to be 'offset' on an annual basis if CSU is to achieve the accredited 'carbon neutrality' status under the National Carbon Offset Standard (NCOS).

- finalise the boundaries of CSU's 'carbon footprint' to include all relevant activities identified under the NCOS. For example, CSU may need to quantify and account for greenhouse gas emissions associated with staff and student commuting to and from campus. This is something that CSU does not currently account for.

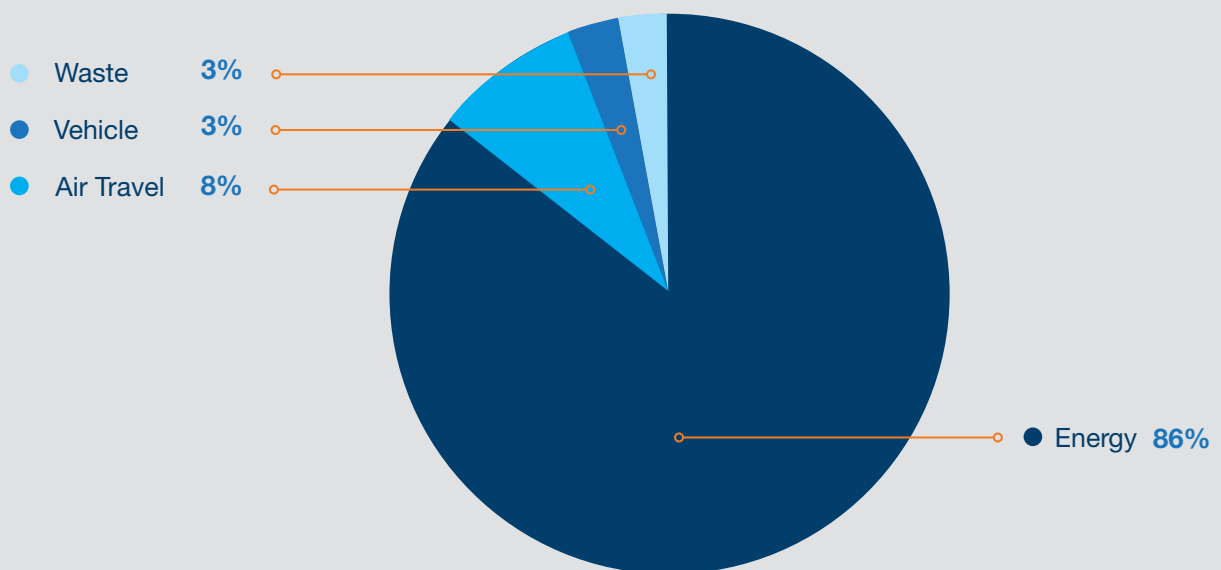
In 2014, CSU made some impressive gains in its energy efficiency program through the implementation of a cogeneration project at CSU in Bathurst and through the further development of its Energy Performance Contract (EPC) project on Bathurst and Wagga Wagga Campuses (see break-out boxes in this section for more details regarding these projects).

However, a number of external factors made investments in energy efficiency and renewable energy projects challenging to pursue from a finance perspective. The abolition of the carbon tax and uncertainty surrounding the Federal Government's Renewable Energy Target (which has reduced CSU's electricity costs in the short-term) made many of these projects marginal investments for the University. CSU is still exploring alternative funding models for both energy efficiency and renewable energy projects which may allow CSU to continue to invest in these types of projects, despite challenging external circumstances.

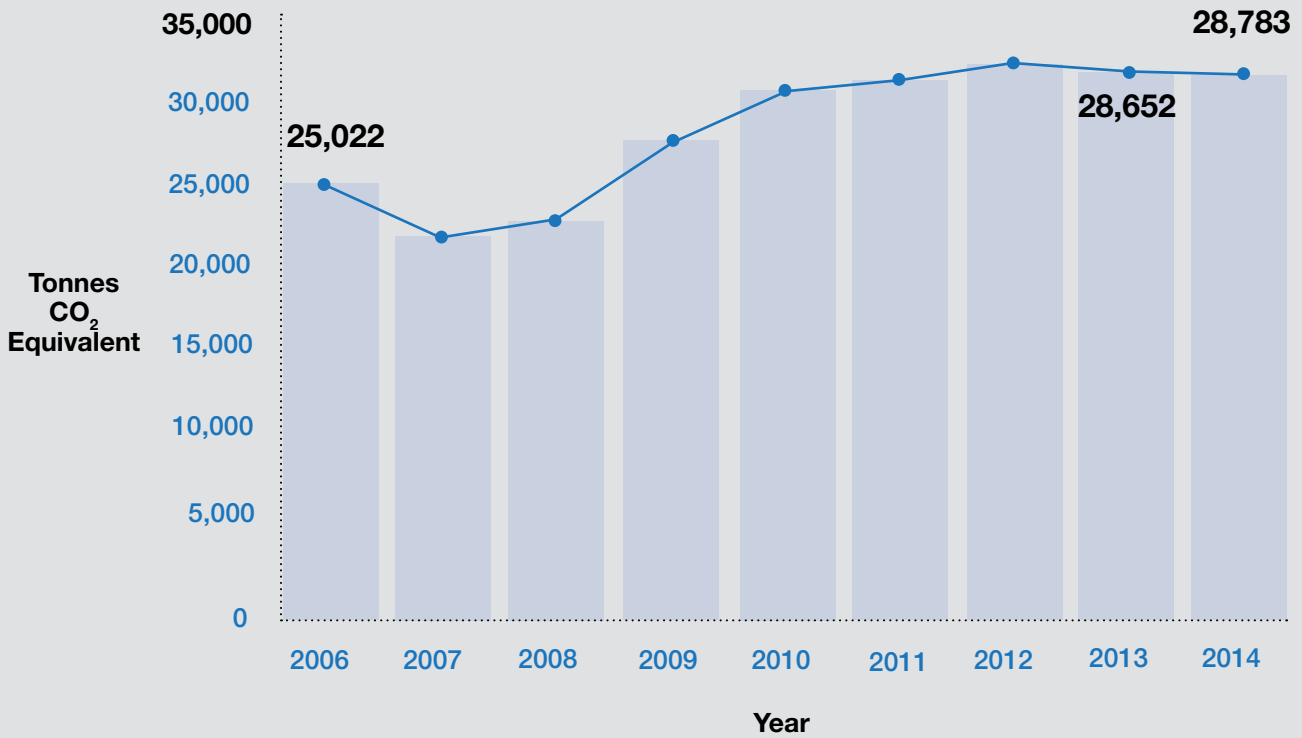
CSU's Total Greenhouse Gas (GHG) Emissions



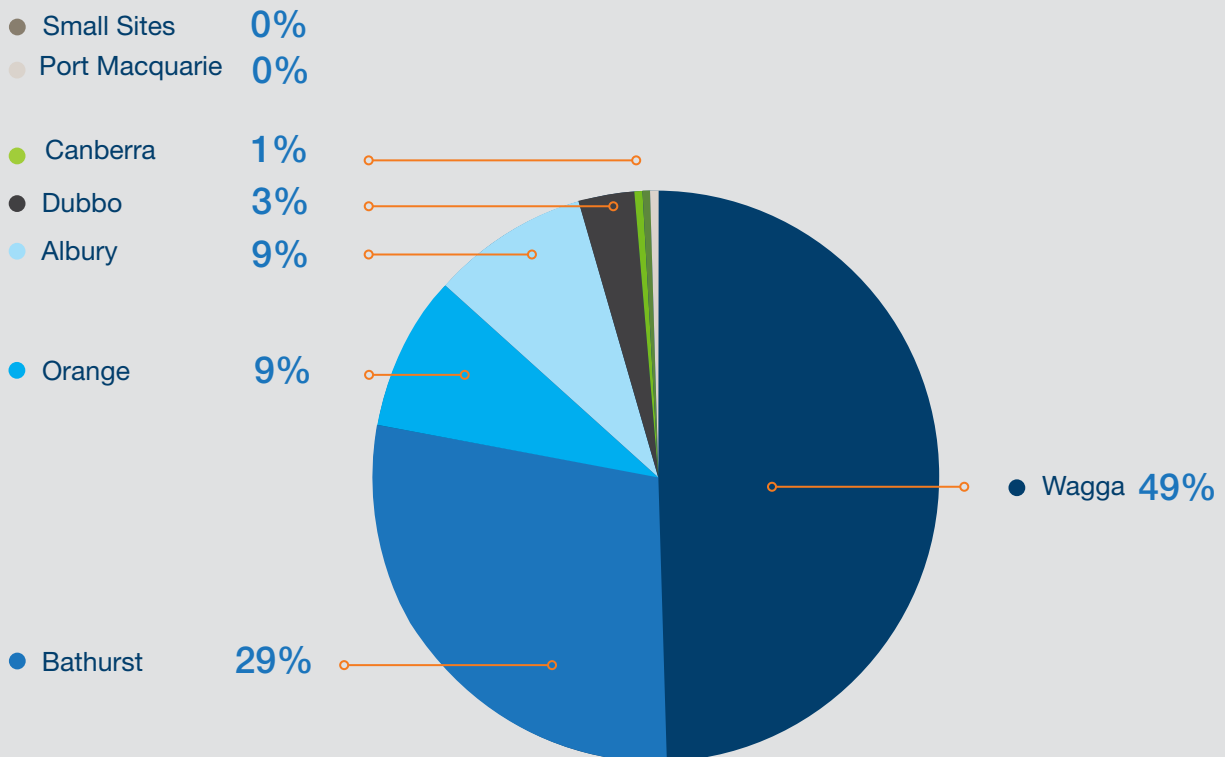
CSU's Total Greenhouse Gas (GHG) Emissions By Emissions Source



CSU's Total Energy-Related Greenhouse Gas (GHG) Emissions



CSU's Energy-Related Greenhouse Gas (GHG) Emissions By Campus



+ Energy reduction

Energy Performance Contracting (EPC) is an approved agreement for the implementation of energy and water initiatives that deliver guaranteed savings. The contractor must annually demonstrate to CSU that these savings have been achieved, or the cost of these 'lost' savings must be repaid to CSU.

In addition, all savings initiatives are reviewed by the client, CSU, to ensure that they will not compromise user comfort or amenity.

In 2013 CSU Green worked on an overview of the planned EPC on CSU's Bathurst and Wagga Wagga Campuses.

In 2014, CSU Green formally engaged an Energy Savings Conservation Organisation (ESCO) to undertake a Detailed Facility Study (DFS) of cost-effective energy and water savings initiatives in major buildings on these two campuses. These buildings are listed in the table below:

Bathurst Campus	Wagga Wagga Campus
Building 1410 - Philips Building (Offices)	Building 13 William Merrylees Library (Learning Commons)
Building 1411 - Mansfield Building (Offices + Teaching Space)	Building 21 School of Communication and Creative Industries (Offices + Teaching laboratories)
Building 1412 - Truskett Library (Learning Commons)	Building 28 Edwin Brooks Hall (Faculty of Business Offices)
Building 1413 - Student Amenities Centre (Offices + Bar)	Building 30 School of Dentistry and Health Science (Teaching space + Office space)
Building 1285 / 1286 - Centre For Professional Development (Student Accommodation + Convention Centre)	Building 130 - Vet Clinical Centre (Lab space + Office space + Teaching space)
Building 1292 - Lecture Theatre + Offices	Building 229 - Graham Building (Teaching space + office space)
Building 1293 - Sheila Swan Building (Offices + Teaching laboratories)	Building 230 - Atkins Hall (Convention Centre + Kitchen + Dining Space)
Building 1294 - Dobbin Building (Offices + Campus server room)	Building 290 - Veterinary Pre-Clinical (Laboratory Space)
	Building 295 - Veterinary Diagnostic Labs (Laboratory Space)

The DFS process, from data collection to extensive review, took about six months to complete – from June 2014 to December 2014. This was a longer timeframe than initially anticipated by CSU Green;

however, it has led to the development of a final scope of works which is anticipated to save about three per cent on CSU's total energy consumption - in dollar terms that's a \$165,000 reduction in annual energy costs.

The implementation of these works will be undertaken in mid-2015 following sign-off of the EPC instrument of agreement and comprehensive engagement with affected building stakeholders.

+ Bathurst Campus cogeneration facility is launched

It was all systems go for CSU's own source of cleaner electricity with the official opening of the Bathurst Campus cogeneration facility in 2014.

The facility was opened in September with the Hon. Paul Toole, MP and Minister for Local Government and Vice-Chancellor Professor Andrew Vann officiating the moment.

“(The cogeneration facility is) forecast to reduce the institutions entire carbon footprint by about 7 per cent, or 2,870 tonnes per year.”

The commissioning of the Bathurst Campus cogeneration facility represents a significant step forward for CSU's carbon reduction strategy with it forecast to reduce the institution's entire carbon footprint by about 7 per cent, or 2,870 tonnes per year.

CSU celebrated the opening of the cogeneration facility with a public event that attracted local business, local council, community interest groups and interested members of the public.

The interest generated by the launch is a testament to the importance that the Central West district of NSW places on Australia's movement towards a clean energy future.

You can find out more about the process of cogeneration, and detailed information about CSU's facility, from the CSU Green website.



Launch of cogeneration



Above: Vice-Chancellor Professor Andrew Vann, Honourable Paul Toole, State Member for Bathurst and CSU Green Manager, Ed Maher officiate the opening of the Bathurst Campus cogeneration facility. Picture Bruce Andrews.

CSU'S BATHURST COGENERATION HAS RECENTLY ACHIEVED THE MILESTONE OF GENERATING 1 GIGAWATT HOUR OF ELECTRICITY SINCE IT WAS COMMISSIONED IN OCTOBER 2014.

1 GWh EQUALS...

COMPARATOR

ANNUAL ELECTRICITY USE BY AVERAGE AUSTRALIAN HOME



EQUIVALENT TO **157 HOMES**

GHG SAVINGS

GREENHOUSE GAS EMISSIONS



EQUIVALENT TO **378 TONNES CO₂-e**

KMS TRAVELLED BY AVERAGE FAMILY CAR

190 GRAMS CO₂-e/km



EQUIVALENT TO

1,985,294 km

EQUIVALENT COST IF ELECTRICITY PURCHASED FROM GRID

\$185,000



CO₂

EMISSIONS PRODUCED BY AN AVERAGE AUSTRALIAN CAR IN A YEAR



EQUIVALENT TO **133 CARS OFF ROAD**

COgen

THE POWER OF CHANGE

PERCENTAGE OF BATHURST CAMPUS ELECTRICITY USED DURING THIS TIME

68%



EQUIVALENT TO ENERGY USED BY THE GRANGE (VICE-CHANCELLORY) OVER

7.9 YEARS

346 kWh/d

THE GRANGE



THE HEAT RECOVERED FROM COGEN WHILE GENERATING 1GWh WOULD BE ABLE TO HEAT

6,907,000 LITRES

OF WATER FOR SHOWERS AND HAND BASINS (FROM 18 TO 60 Deg°C)

► Energy reduction

Target

Compared with 2006, achieve a 25 per cent reduction in normalised energy consumption (MJ/m² of Gross floor area) by 2015



In 2014, CSU achieved a 16 percent reduction in normalised energy consumption compared with 2006. This is, to date, the lowest normalised energy consumption which has been recorded by the organisation since the establishment of this target.

This 1 per cent decrease in CSU's normalised energy consumption, compared to 2013, can be attributed to CSU's absolute energy consumption plateauing, while slightly increasing the organisation's total floor area due to:

- the construction and operation of new residential accommodation buildings on the Albury-Wodonga Campus; and
- the leasing of additional office space in Canberra.

The cogeneration unit, installed on CSU's Bathurst Campus (see page 36 for further details) is forecast to significantly reduce CSU's electricity consumption, and increase CSU's natural gas consumption.

However, this is currently not reflected in the energy figures as the plant did not become fully operational until mid-October 2014.

The impact of the co-generation plant on CSU's energy consumption will be more visible in the 2015 Sustainable Scorecard.

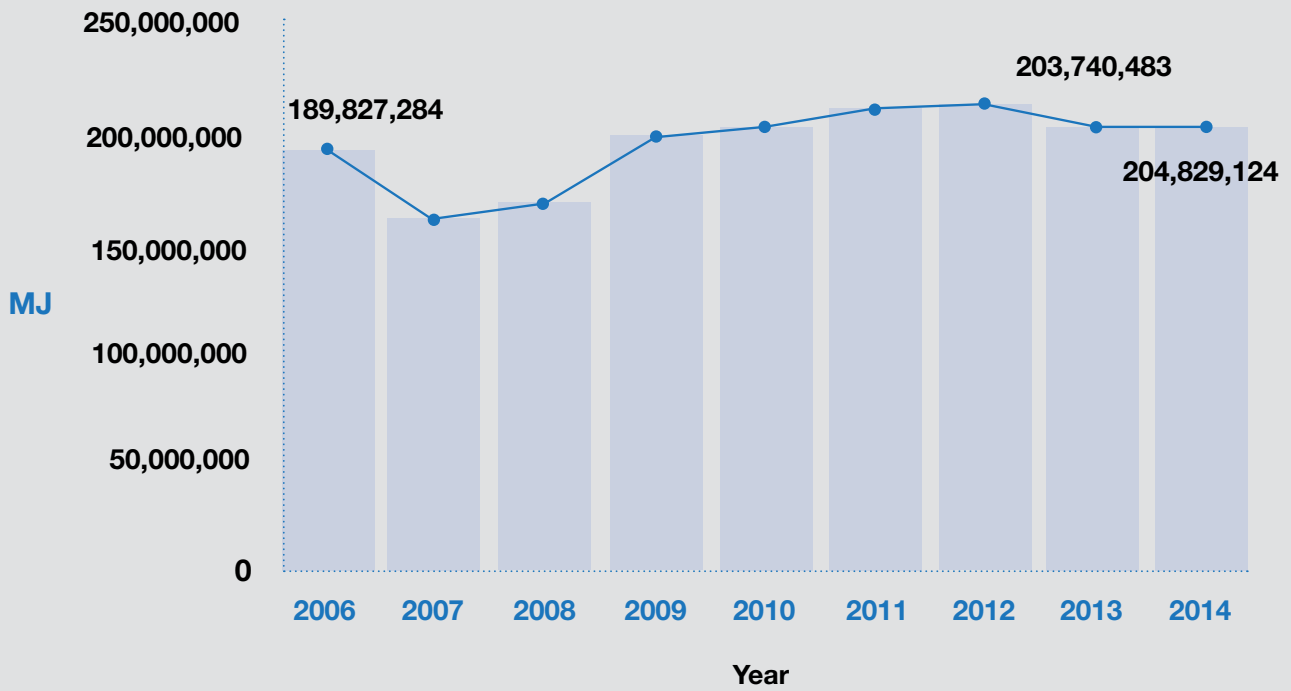
CSU has achieved an impressive result in reducing normalised energy consumption by 16 per cent between 2006 and 2014.

This has occurred in spite of a 28 per cent increase total floor area over the same period of time and can be attributed to a greater degree of consideration for energy efficiency in all new and refurbished CSU buildings. However, based on the forecast savings of those projects listed in the previous section, it is unlikely that CSU will be able to achieve the full 25 percent reduction in normalised energy consumption by the 2015 target.

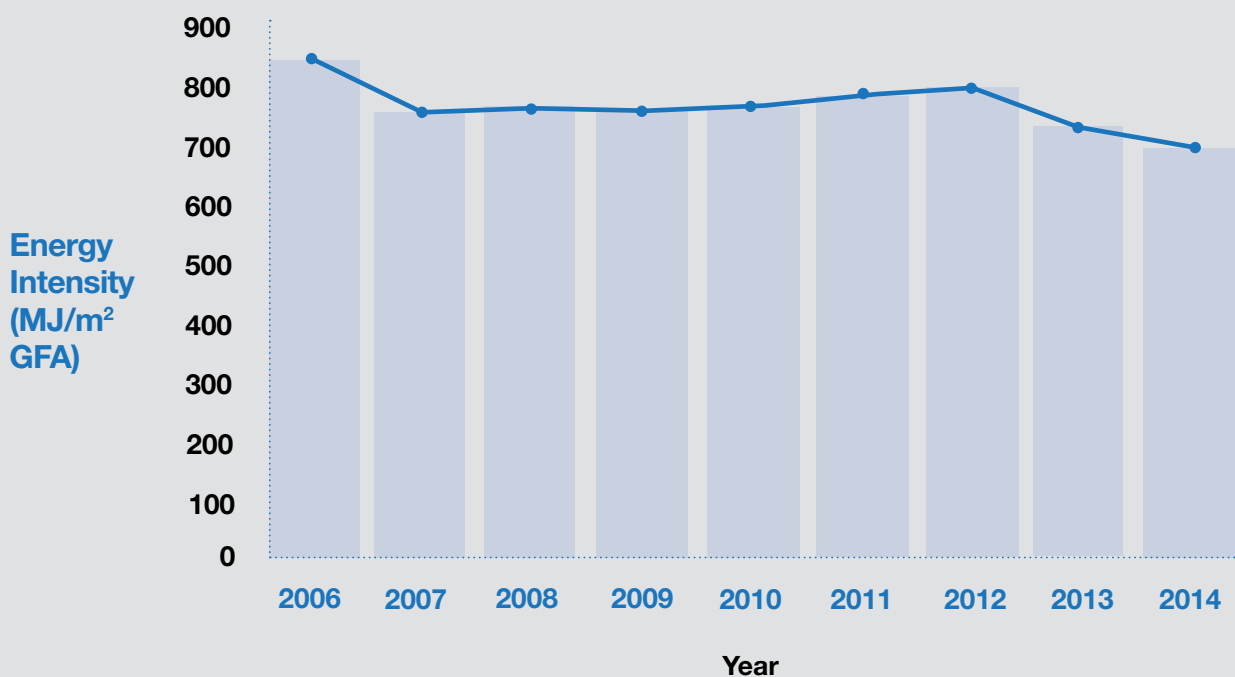
In the short to medium-term, CSU aims to significantly improve energy efficiency through the implementation of additional efficiency and renewable energy projects, as they are demonstrated to be financially viable.

“CSU has achieved an impressive result in reducing normalised energy consumption by 16 per cent between 2006 and 2014”

CSU's Total Energy Consumption (MJ)



CSU's Total Normalised Energy Consumption (MJ/m² GFA)



▶ Water reduction

Targets

Compared with 2006, reduce absolute water consumption by 25 per cent by 2011 and 40 per cent by 2015

Achieve a 2 per cent annual reduction in normalised water consumption (kL/m² Gross floor area) each year after 2015

CSU recognises the value of a sustainable water supply and has established some ambitious water reduction targets which aim to:

- reduce potable water consumption;
- reduce costs associated with potable water consumption
- demonstrate, using the campuses themselves, a number of novel ways in which water can be more efficiently utilised.

CSU has a target to reduce the amount of potable water consumed by the organisation by 40 per cent by 2015.

While CSU achieved this target in 2010, 2011 and 2012, the University unfortunately consumed 24 per cent more than the 2015 target water consumption figure in 2014; a 4 per cent increase on 2013 consumption.

The major contributors to these increases were:

- an increase in potable water consumption at CSU's Bathurst Campus associated mostly with two major leak events. However, it should be noted that with the exception of these leak events, the campus consumed less water on a month-by-month basis compared to 2013
- the repair of a broken utility meter. The main water meter for the Orange Campus has been broken for two years. This was repaired in early 2014, and as a result, there has been a significant increase in water consumption measured on the campus associated with new construction that has occurred between 2012 and 2014. These include the Community Health Building (1014) and the new student residences (1075-1079).

In order to achieve the 2015 water reduction CSU will need to continue to pursue opportunities for being smarter with the way it consumes water.

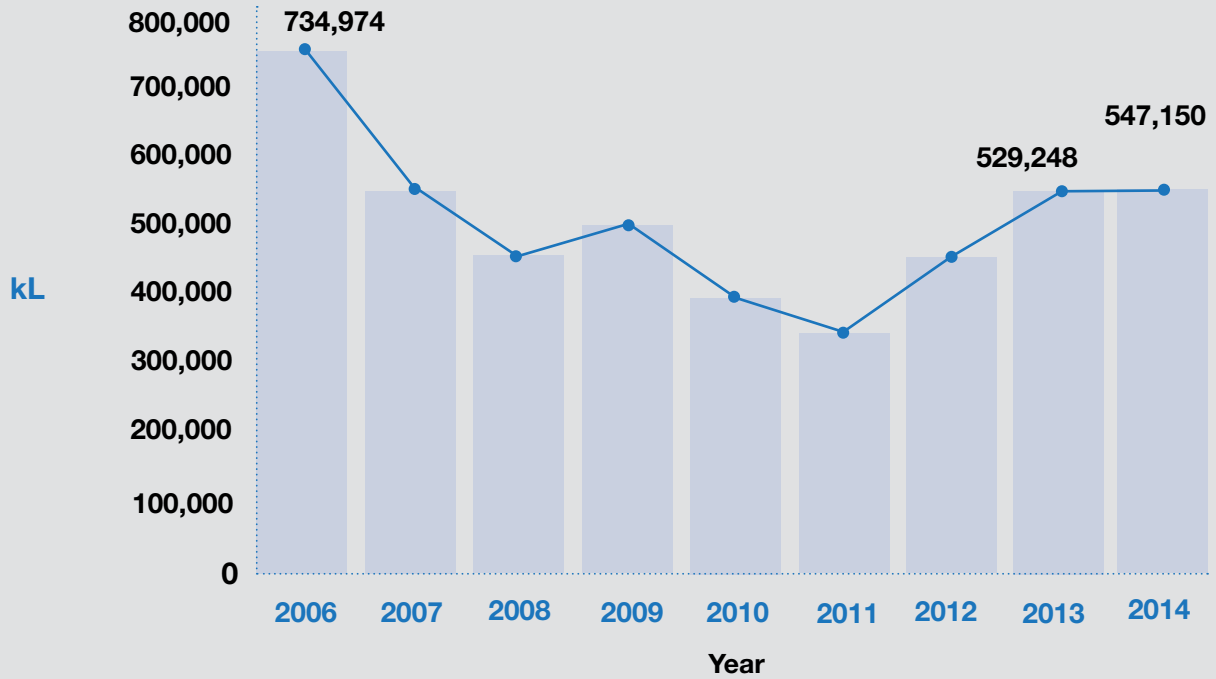
While this includes projects such as rainwater harvesting, grey water harvesting and black water harvesting, these types of projects are challenging to implement given that they are typically not cost-effective in the regional areas in which CSU operates.

As potable water prices continue to increase in all local government areas in which CSU operates, and the cost of small-scale water treatment technology continues to decrease, the business case for investing in these projects is likely to improve over the coming years.

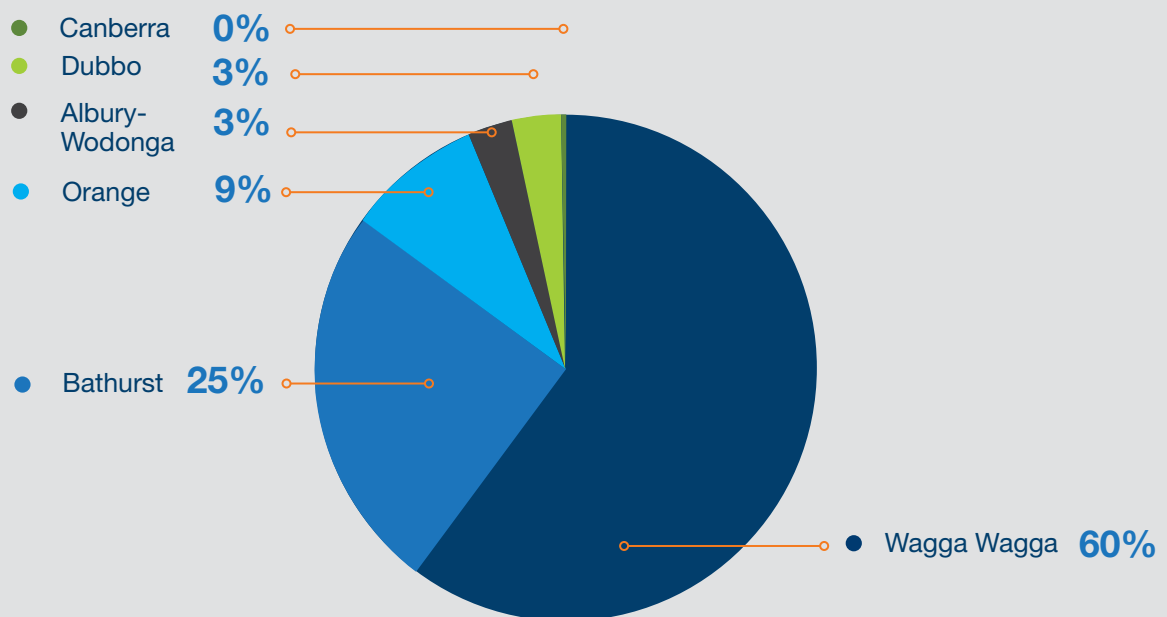
In the short-term, CSU Green will be working on a project in 2015 to significantly improve the coverage of CSU's internal water metering network (and connecting these meters to CSU's Building Management System – BMS) across all major campuses.

This will allow the Division of Facilities Management (DFM) to gain a greater understanding of how, when and where water is being consumed around the organisation and what actions can be taken to reduce this consumption without impacting on CSU's operations. In addition, this project will assist in allow DFM to more quickly identify water leaks as they occur.

CSU's Total Water Consumption (kL)



CSU's Water Consumption By Campus (kL)



► Waste reduction

Targets

Redirect 70 per cent of solid waste from landfill by 2015

Reduce total solid waste generation by two per cent each year after 2015

Responsible stewardship of potentially harmful waste materials

Waste is a significant environmental challenge for Australia and the world.

The generation of unwanted material that needs to be disposed of, often as landfill, creates a number of legacy issues for future generations in terms of contamination of soil and groundwater.

In addition, the generation of waste represents a huge loss of valuable resources, which could be reprocessed into other useful products. In 2014, Australia generated 48 megatonnes of waste (National Waste Data Report, 2014).

CSU has committed to achieving a 70 per cent diversion rate for solid waste from landfill by 2015.

This target aligns with the NSW State Government waste recovery target of achieving a 66 per cent diversion of waste from landfill by 2014.

In 2014, CSU achieved a 30 per cent diversion of waste from landfill, which is a slight reduction compared to the 33 per cent diversion rate achieved in 2013. This is equivalent to 336 tonnes of waste material being recycled, while 782 tonnes of waste material was sent to landfill.

CSU engaged with its waste contractors to improve the quality of waste data provided to the University. Previously, the only data provided to CSU was the number of bins being collected. Based on this new information, CSU was able to apply industry-standard density factors and a 'bin fullness' factor in order to estimate the quantity of waste (as a tonnage) both being sent to local landfills and to local recycling facilities.

While this was a reasonable methodology to use, waste is by no means a homogeneous product, and given the variability in CSU's waste output over a typical year, there is always going to be a reasonable amount of 'error' in our estimates.

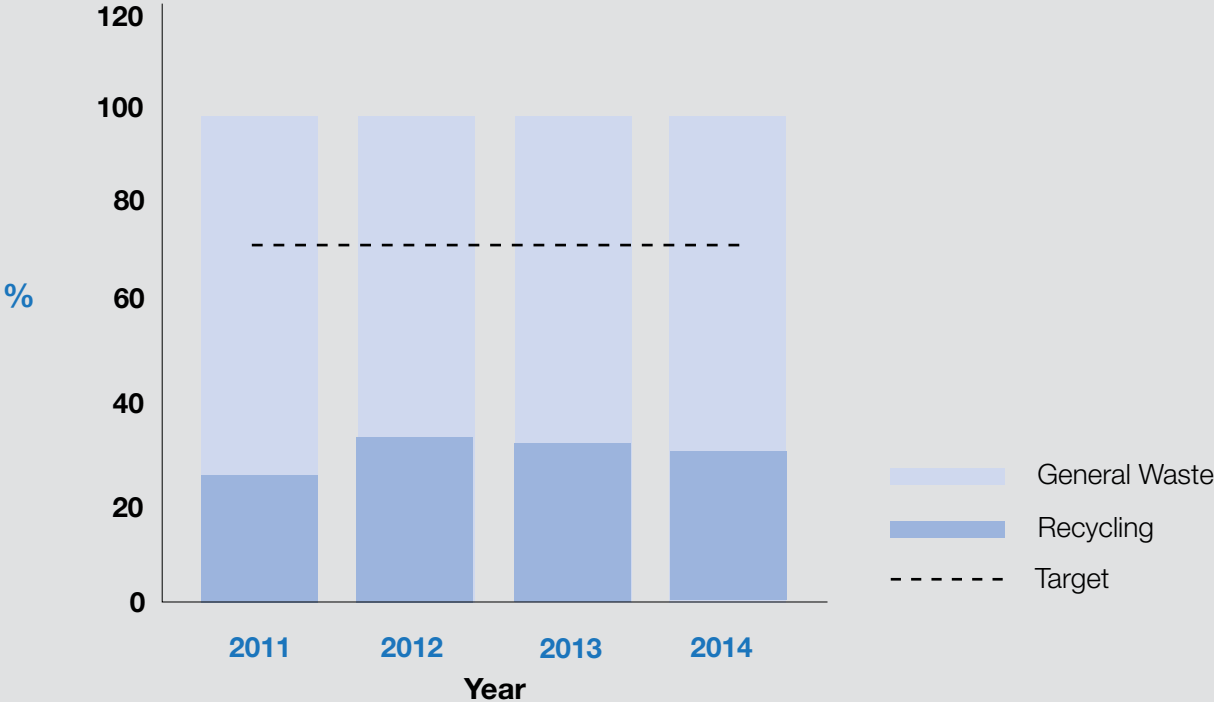
To help minimise these errors, CSU worked closely with its waste contractors in 2014 to ensure that the total tonnage of general waste and recycling being collected at each campus was monitored and reported back to CSU on a monthly basis. Being able to report the actual number of tonnes being collected from CSU's campuses has significantly improved the accuracy of CSU's waste reporting.

In addition, this more granular data will enable CSU Green to better monitor what improvements occur to CSU's diversion rates as general waste reduction projects are implemented across the University in future years.

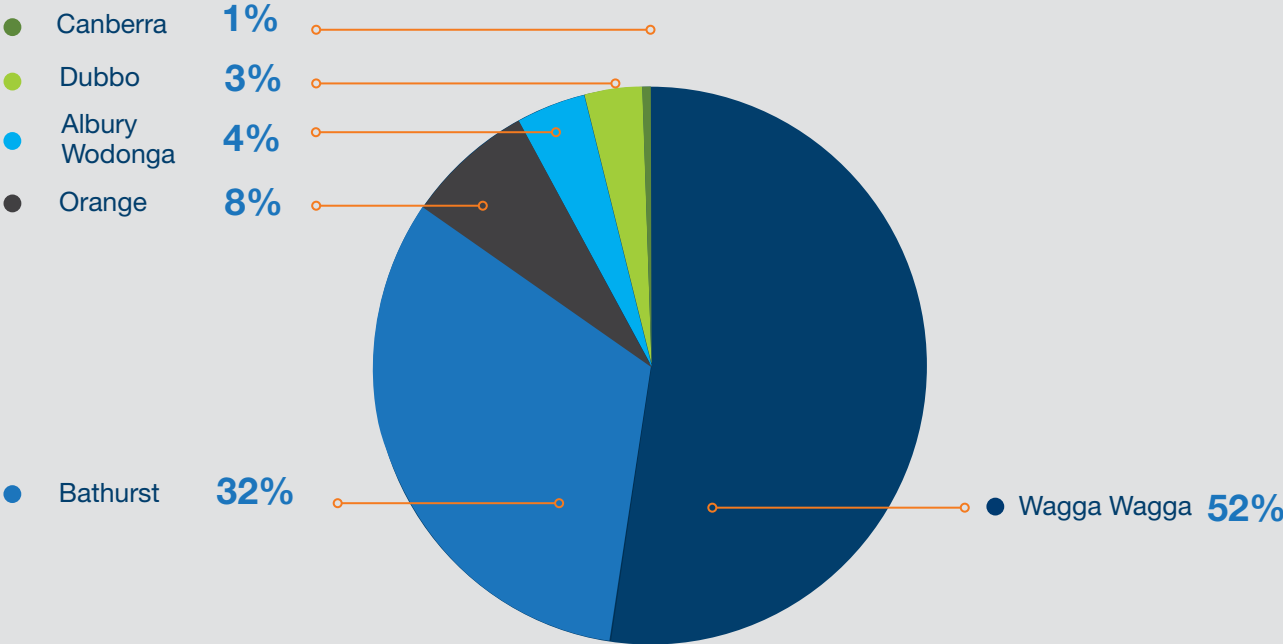
Achieving a 70 per cent diversion of waste from landfill by 2015 will be a significant challenge for CSU and will rely heavily on CSU's ability to implement on campus systems that allow organic waste (a major CSU waste stream) to be diverted from landfill.

“Being able to report on the actual number of tonnes worth of waste being collected from CSU's campuses has significantly improved the accuracy of CSU's waste reporting”

CSU's Total Waste Output (%)



CSU's Total Waste Output By Campus



+ Hey Tosser! Bathurst litter reduction campaign



Above: Alesha Elbourne, CSU Sustainability Officer, showing off some of the improved infrastructure and awareness materials that have been made possible through the Hey Tosser! Bathurst campaign. Photo courtesy of Dave Rankin, Bathurst City Life.

Charles Sturt University (CSU) has partnered with Bathurst Regional Council to tackle litter problems across the Bathurst Central Business District. The project has been made possible through a \$93,000 round two NSW Council Litter Protection grant from the Environmental Protection Authority (EPA).

The campaign targets the people of Bathurst and staff and students of CSU to educate and influence the community on the effects and ongoing costs of littering with the objective of changing this behaviour.

Specifically, the project aims to decrease the total amount of litter in the targeted areas by at least 20 per cent in the next year, improve the infrastructure appearance, usability and location, localise the litter reduction message to the Bathurst region, open a dialogue about the litter issue in Bathurst and strengthen the pride the community has for their city.

The Hey Tosser! Bathurst litter prevention project commenced in July 2014 with an official launch at CSU's Bathurst Campus.

Detailed assessments of the target sites and a comprehensive evaluation of attitudes and awareness among people in the Bathurst region via interviews and surveys were also undertaken in 2014.

The momentum will pick up in 2015 with an extensive community education campaign involving bus, cinema, print media, poster, student and staff magazine, signage, disposable coffee cup and social media campaigns.

Installation of new waste infrastructure and signage will also occur at locations within the Bathurst CBD and Bathurst Campus, which will include new bins, bin enclosures, bin hoods, seating, pavements, garden beds, hand railings, signage and noticeboards.

It is anticipated that this beautification process will build community respect for the sites and pride of place.

Conducting Litter Check audits, Community Qualitative Surveys and Behavioural Observation Surveys throughout the Hey Tosser! Bathurst project will provide effective measurement of the project including: community perception changes, litter reduction success, strengthened community awareness and communication of the litter prevention message.

"We value the opportunity to partner with the University and we value its participation in the Community", Bathurst Mayor Councillor Gary Rush said at the campaign launch.

"This partnership allows Bathurst Regional Council to maximise for the region and in this case assists us in protecting significant environmental like the Macquarie River and keeping our beautiful city litter free."



Above: Official advertising campaigns implemented for Hey Tosser! Bathurst.



Left: NSW EPA representative Sam Muller, Bathurst Regional Council representative Alison Thompson and Charles Sturt University representative Alesha Elbourne road-testing one of the newly-refurbished seats at the Bathurst CBD focus site under the Hey Tosser! Bathurst Campaign. Photo courtesy of Danielle Northey.

► Biodiversity improvement

Target

Allocate at least 20 per cent of University core campus land to increase biodiversity by 2015

Biodiversity, and well functioning ecosystems, are intertwined with the health and living standards of human society. We form part of what biodiversity encompasses and our actions are often the drivers of biodiversity loss and poor ecosystem health. Humans, as a society, need to understand and value the goods and services of our ecosystems, whether it is for clean water, healthy soil, shelter, food, flood mitigation and resources.

CSU's campus footprint covers an expansive area across multiple campuses in regional NSW. Within the University's footprint there are threatened and endangered species and ecological communities. An example of a critically endangered ecological community under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC) is the Box Gum Grassy Woodland ecological community.

Threatened fauna species within the University's footprint include the Squirrel Glider (*Petaurus norfolcensis*), Superb Parrot (*Polytelis swainsonii*) and Sloane's Froglet (*Crinia sloanei*), all of which are vulnerable, and the Swift Parrot (*Lathamus discolor*), which is endangered.

It is imperative that CSU, as an organisation, assists in biodiversity improvement where we can to protect native flora and fauna for the benefit and enjoyment of CSU's staff, students and the wider community.

A target has been set by the University for biodiversity conservation and improvement. The target is to allocate at least 20 per cent (equivalent to 87 hectares) of University land to increase and improve biodiversity by 2015. The CSU Farm land has been included at Orange and Wagga Wagga and through a working partnership with Jim Mellor, CSU Farm Manager.

In 2014, CSU worked closely with Campus Environmental Committees (CECs) at CSU in Albury-Wodonga, Bathurst, Dubbo, Orange and Wagga Wagga, and other stakeholders involved in campus management, which included CSU Farm and Division of Facilities Management.

The extensive consultation process with relevant stakeholders resulted in four out of the five campuses making recommendations that the Senior Executive Committee (SEC) endorse nominated areas for biodiversity improvement and conservation.

The memo to the SEC will be submitted in early 2015.

Recommendations for nominated biodiversity areas from the remaining campus (Albury-Wodonga) will be forwarded later in 2015 following a final review of biodiversity issues on the campus and endorsement by the local CEC.

To maintain, and ultimately enhance, the quality of each of these nominated biodiversity areas, CSU will be required to allocate resources on an annual basis to undertake maintenance activities in said areas. In 2014, the Vegetative Restoration Plan was finalised by external consultants, ngh environmental, and provides:

- a range of best practice biodiversity management activities
- the ideal timing for implementing these activities
- a suitable monitoring process to determine the success and inform necessary adjustments to management strategies
- costs associated with implementing these activities.

In 2015, CSU Green will use the Vegetative Restoration Plan to develop and implement a detailed Management, Maintenance and Monitoring Plan (MMMP) for each of the nominated biodiversity areas across CSU's major campuses.

+ Tree planting

In 2014 at CSU in Albury-Wodonga, Bathurst, Dubbo, Orange and Wagga Wagga, a total of 2,882 native groundcovers, shrubs and trees were planted by student, staff and community volunteers.

A successful tree planting day was hosted at each campus with additional tree planting activities at CSU in Orange and Wagga Wagga.

CSU partnered with Albury Environmental Lands for a tree planting day to revegetate areas along Six Mile Creek, crown land that lies to the north of the Albury-Wodonga Campus. Plantings have previously been undertaken at this site in 2013, with the 2014 plantings a continuation of this work.

The plantings are vital to increase important habitat for native plants and animals, such as the threatened squirrel gliders, Sloane's Froglet and the Regent Honeyeater. 660 plants were planted during this event and CSU's Associate Professor Dave Watson guided eco-tours.

Cliff Jackson (Division of Facilities Management Grounds Supervisor) wanted to involve residential students at CSU in Bathurst by locating the site for tree planting on the grounds of the off campus Mitchell, Truskett and Gordon House student residential precinct.

Cliff engaged the students living in these buildings and planted 102 plants, mostly ground covers, to reduce watering needs of the lawn, improve aesthetics and bring wildlife to the area.

In Dubbo, the tree planting day was used to plant 190 groundcovers, shrubs and trees in the Reconciliation and Cultural Diversity Garden, a garden that was developed as part of a 2012 Sustainability Grant.

Two tree planting events occurred at CSU in Orange.

At the first event a mixture of trees and shrubs, grown from seed on campus, were planted in a fenced off area around a dam on the CSU Farm in May. The other tree planting event took place in September where 130 shrubs and trees were planted in the woodlot near Car Park 1. This planting site was a continuation of the plantings that occurred in 2013.

At CSU in Wagga Wagga, two tree planting events were hosted, with one site on the CSU Farm, and the other in campus paddocks close to the core campus.

The first event was held to replace unsuccessful plantings at a site on the corner of Old Narrandera and The Gap Roads with volunteers from School of Humanities and Social Science.



Left: Dubbo Tree Planting Day

The Social Work group, which had obtained a 2012 CSU Sustainability Grant for offsetting carbon emissions associated with airline travel undertaken by their School, had excess funds to spend and supplied the 400 plants and materials for this event.

The second event coincided with National Tree Planting Day through a partnership with Wagga Wagga City Council (WWCC). WWCC has a vision of connective corridors for bird flight paths to the Murrumbidgee River.

The tree planting corridors were planted running down the hill from the Aboriginal Reserve Yindymarra to Pine Gully Road. A corridor of plantings along Pine Gully Road (in front of Murrumbidgee Village and the adjacent paddock) increases the connection with other corridors towards the river. A total of 1,400 native Murrumbidgee region mixed species were planted by students, staff and community members.



Right: Wagga Wagga Tree Planting Day

► Sustainable transport

Targets

Achieve a 4.5 star or better Green Vehicle Guide rating among 50 percent of the University vehicle fleet by 2015

Improve the fuel efficiency of the CSU vehicle fleet by 5 per cent year-on-year

Promote car-pooling for inter-campus travel by CSU staff and students

In Australia, the transport sector (road, rail and aviation) is responsible for approximately 14 per cent of the nation's total greenhouse gas emissions (Australian National Greenhouse Accounts, March 2014). In 2014, activities associated with transport represented 11 per cent of CSU's total carbon footprint – a proportion which closely aligns with the transport component of the national carbon footprint.

In 2014, CSU made significant progress towards its sustainable transport targets. Some highlights of the achievements made include:

- a significant reduction in the number kilometres travelled for both 'domestic' and 'international' flights.

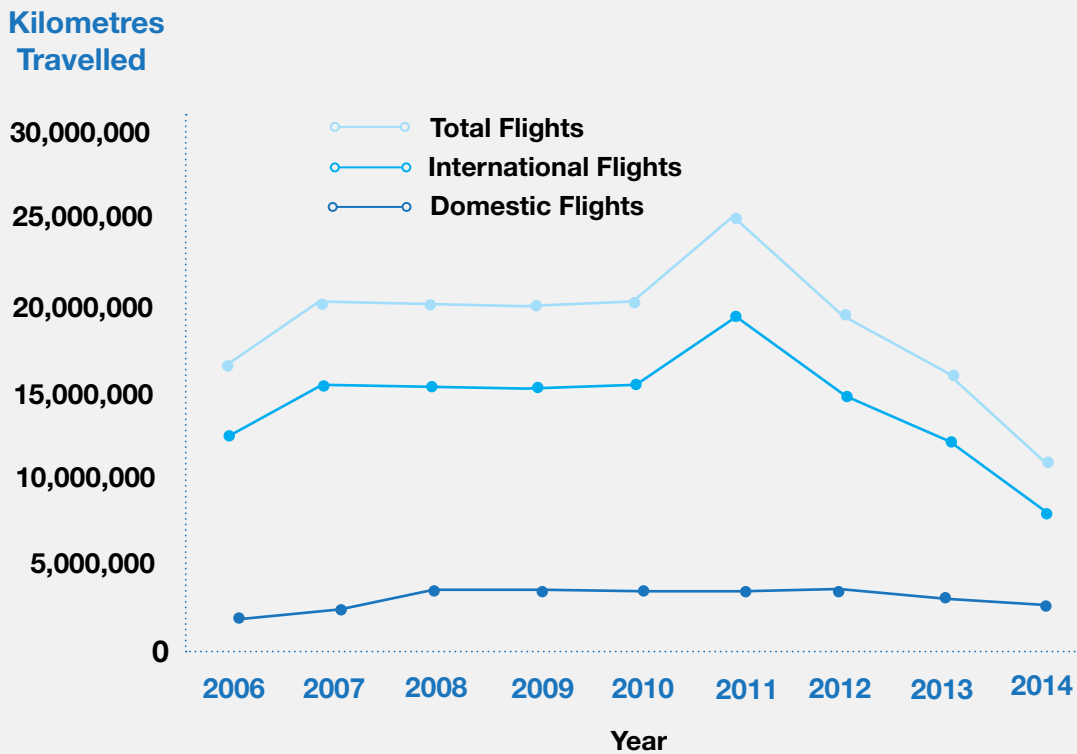
The total number of kilometres travelled on international and domestic flights decreased by around 4,200,000km in total to 11,706,417km. This is actually 15 per cent less than the number of 'air kilometres' travelled by CSU staff in the Scorecard baseline year, 2006.

- major improvements in the fuel efficiency of the CSU fleet. CSU's average fleet fuel efficiency rating reduced from 10.7L/100km to 8.4L/100km.

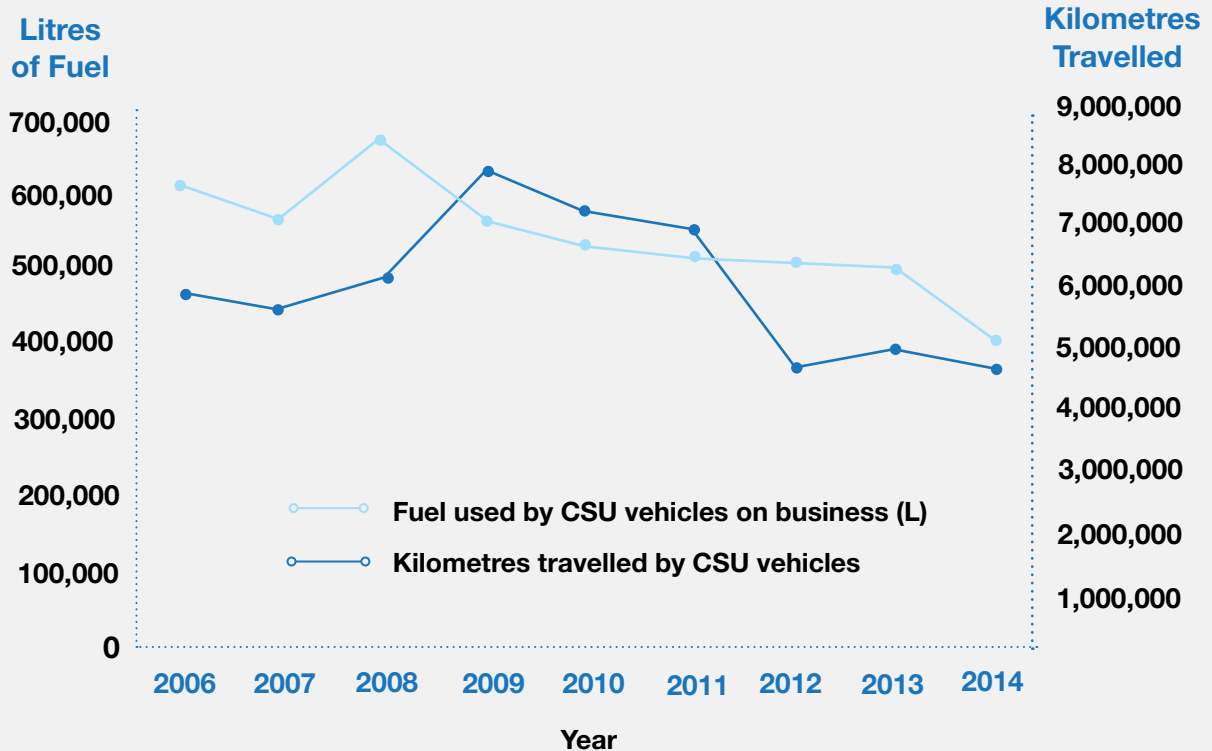


Above: Vice-Chancellor Professor Andrew Vann, CSU Green Manager Ed Maher and Fleet Services Manager David Kendall, at the official launch of the Greenhouse star rating stickers for the CSU Fleet.

Kilometres Travelled By CSU Staff – Flights



Kilometres Travelled By CSU Staff – Vehicles



+ CSU Greenhouse Star rating stickers

A new education initiative was launched in 2014 by Charles Sturt University (CSU) to drive home the University's commitment to sustainability and carbon emissions reduction.

CSU Fleet Services, in partnership with CSU Green, developed stickers to display a vehicle's fuel efficiency and greenhouse gas emissions rating.

Similar to energy rating stickers on household appliances, the CSU Greenhouse Star Rating stickers show a rating from one to five (five being the most environmentally friendly).

The ratings are calculated using the Australian Government's Green Vehicle Guide.

The stickers are displayed on the rear window of each CSU vehicle. At the end of 2014 more than 50 per cent of CSU's 271 passenger and commercial vehicles had a 3.5 star rating or higher.

CSU Vice-Chancellor Professor Andrew Vann launched the stickers in August 2014, saying CSU was committed to improving its vehicle fleet.

"The University has made significant improvements to move towards a greener fleet of vehicles. The number of five-star rated vehicles has almost doubled in two years," Professor Vann said.

"At the same time we are working to reduce the number of vehicles in our fleet, and to replace older vehicles with vehicles with ratings of 3.5 or higher."

The initiative is a major step towards achieving fleet carbon emissions reduction, increasing fuel efficiency, and promoting inter-campus carpooling for staff and students.

CSU Fleet and Services Manager Mr Davin Kendall said, "The new fleet stickers not only educate the CSU community, but also the wider community, which can only benefit the environment.

"As many staff and students are required to travel to our regional campuses and locations and various other destinations across NSW and Victoria, the provision of cost-effective and eco-friendly vehicles is paramount."



Left: The 5 star sticker design that is currently placed on CSU fleet vehicles.

"The University has made significant improvements to move towards a greener fleet of vehicles"

+ Insights from CSU's Fleet Manager

Conscientious purchasing decisions and education of vehicle users are two areas where CSU Fleet has made significant improvements over the last few years. This still does not make the achievement of CSU's target of having a Green Vehicle Guide (GVG) rating of 4.5 or above for at least 50 per cent of its fleet a sure thing. Manager, Fleet and Services, Davin Kendall shares his perspectives with us.

"In 2014 the University sold 87 passenger and commercial vehicles with an average star rating of 3.12 compared to 77 new vehicle purchases with an average GVG rating of 3.42" says Davin. "Of the new purchases, 22 vehicles had a GVG rating of 4.5 or above."

Being a regionally-based and geographically spread organisation does present some challenges. "Opportunities to procure alternate powered vehicles are limited due to the distance travelled between campuses and refuelling outlets" Davin said.

"The whole-of life cost for a vehicle is another major consideration for us in addition to the GVG rating.

"Recent experiences with hybrid vehicles at the University have shown us that relatively high servicing costs and low resale values currently make these vehicles more expensive to have in the fleet compared to fuel efficient conventional vehicles.

"Commercial vehicles have in the fleet are required to support trade staff as well as staff and students undertaking research work involving the transport of bulky goods or travel into remote locations are problematic.

"The major manufacturers of commercial vehicles are primarily focused on functionality, purpose and less on environmental issues; however some are addressing this issue with refinements in later models".

"Our ability to achieve the target of a GVG rating of 4.5 or above for at least 50 per cent of the CSU Fleet will be dependent upon University finances, vehicle manufacturers and suitable models, developments in alternate fuels together with associated infrastructure provided by or with government support."

Nevertheless, CSU Fleet believes the environment is important and as such will continue to make improvements to reduce the overall environmental footprint of the fleet through initiatives such as the vehicle sticker education initiative and the procurement of new fleet management software.

"It is envisaged that the new software will streamline our processes and clearly identify vehicles that are under-performing in fuel efficiency, carbon emissions and utilisation. Reporting of carbon emissions, fleet composition and GVG ratings should be simpler and we also intend to use the system to better support carpooling practices for intercampus travel" said Davin.



Above: CSU Fleet and Services Manager Davin Kendall with one of the CSU Greenhouse Star Rating Stickers on a university fleet vehicle.

"Opportunities to procure alternate powered vehicles are limited due to the distant travelled between campuses and refuelling outlets."

► Sustainable procurement

Every day, many staff across the University make decisions on the purchase of goods and services that are likely to be informed by a range of competing priorities. Procurement and purchasing activities are typically made on the basis of achieving value for money.

The NSW Procurement Policy Framework defines value for money as ‘the benefits, compared to whole-of-life costs’. Other factors that are likely to be considered when purchasing goods include:

- fitness for purpose
- a potential supplier’s experience and performance history
- flexibility (including innovation and adaptability over the lifecycle of the procurement)
- environmental and social sustainability (such as energy efficiency, environmental impact and ethics of supplier)

“Procurement and purchasing activities are typically made on the basis of achieving value for money”

CSU’s challenge in balancing sustainability considerations with all other factors is not unique and is faced by all other organisations. Access to concise and accurate information that will inform the purchaser on each of the aspects listed above is arguably the greatest barrier.

CSU aims to better utilise the Procurement and Supplier Engagement framework of the Learning in Future Environments (LiFE) Index in 2015 to improve its systems and processes to support sustainable procurement.



Above: Stores of the True Blue True Green chemical range used for cleaning across CSU campuses. **Far Right:** CSCS Alicia McCaig operating a True Green chemical dispenser and CSCS Service Coordinator Graham Biddle demonstrating the effectiveness of the True Green all purpose cleaner.

+ Green cleaning at CSU

Charles Sturt Campus Services (CSCS) is a controlled entity of CSU that specialises in providing a range of services to the University community. These include; cleaning of residential, administrative and teaching facilities, a laundry service, courier and residential maintenance services.

CSCS is committed to providing a consistent high level of service to its clients through proactive implementation of effective and sustainable cleaning practices. CSCS has operated for many years using an Australian-manufactured range of conventional, tried and tested cleaning chemicals. In 2014, the decision was made to trial a cleaner range of cleaning chemicals recently brought to the market by their preferred supplier, True Blue Chemicals.

The True Green range of chemicals has received accreditation from the Environmental Credentials Scheme from Accord - the national industry association for the Australasian hygiene, cosmetic and specialty products industry. Products that are accredited under the scheme are required to demonstrate that they contain ingredients which are:

- concentrated
- have low toxicity to aquatic organisms, or to rapidly biodegrade
- are not bioaccumulative.

The products must also meet specific requirements for:

- dyes and colourants
- volatile organic compounds
- packaging

Extensive trialling was undertaken in selected residential, facilities and catering areas on the Wagga Wagga Campus, with building occupants advised of the trial and encouraged to provide feedback on the outcomes.

Prior to commencement of this trial, there were widespread perceptions that the use of a 'greener' range of products would have both environmental and Work Health and Safety (WHS) benefits, but possible cleaning quality and financial implications. "No cleaning quality issues were detected during the trial with the True Green products meeting or exceeding the performance of the conventional chemicals that they substituted" says CSCS Service Coordinator, Chris Faucett.

"There has also been a pleasant surprise in terms of costs, with forecast savings in excess of \$5,000 per annum expected due to the superior dilution rates that can be achieved with the True Green products – that is, the same volume of chemical can be mixed at much lower concentrations and go a lot further."

CSCS will undertake a complete change over to True Green products at all campuses in 2015 via a staged roll-out which will allow them to exhaust existing stocks of conventional cleaning chemicals – a further measure that will reduce waste and unnecessary costs associated with the conversion.

CSCS has been proactive in trialling a range of other products and technologies that have shown to have benefits both in terms of the environment and costs. These include the use of chemical-free floor cleaners – which instead operate via electrolysis of clean water - and phasing out plastic bin liners for fully biodegradable equivalents.



+ Sustainable design of Port Macquarie Campus

The excitement of CSU unveiling its newest full-service campus draws nearer with construction at the site of the Port Macquarie campus commencing in late 2014. Stage 1 of the future campus is on track to open in February 2016. By the completion of all proposed stages of development in 2030, the campus will host a comprehensive course profile for up to 5,000 students.

Sustainability remains a key objective for the campus development. The influence that this position will have on the final product is starting to take shape and is illustrated via an animated fly through of the building that has been developed by the architect, which can be accessed by clicking on the icon on this page.

Stand-out features that the keen eye will observe include:

- Minimal use of additional materials for internal finishes through the use of polished concrete and feature paving rather than other floor coverings, and reduced use of plasterboard through exposed concrete ceilings and building services
- A building façade and floor plan that encourages natural light to penetrate throughout the facility, reducing reliance on artificial light and improving outlook for occupants
- Significant use of sustainably-sourced timbers – a carbon low carbon building material
- Sensitive positioning of the facility to reduce the impact of the development on surrounding vegetation that is designated to be potential koala habitat and which forms part of the continuous stretch of vegetation that extends from the campus to the Port Macquarie CBD.

CSU has put aside 3.2ha of land for natural bush regeneration inclusive of koala tree planting.

- Low energy cooling and heating systems, which are intended to take advantage of Port Macquarie's mild climate as much as possible via employing natural ventilation and ceiling fans prior to activating mechanical systems
- A substantial roof-mounted solar renewable energy system with a rated output of 156 kilowatts and consisting of 600 individual panels.

 ON THE WEB

Port Macquarie
Campus



Right: Artists impression of the new CSU Port Macquarie campus. Stage one of the campus will be open in early 2016.



// Glossary

BMS	Building Management System
CBD	Central Business District
CEO	Chief Executive Officer
CO₂-eq	Carbon Dioxide Equivalent Emissions
DFM	Division of Facilities Management
EPC	Energy Performance Contract
EPEAT	Electronic Product Environmental Assessment
ESCO	Energy Savings Conservation Organisation
GHG	Greenhouse Gas
GJ	Gigajoules
GLO	Graduate Learning Outcomes
kL	Kilolitres
kL/m² GFA	Kilolitres of water consumed per square metre of gross floor area
km	Kilometres
LiFE	Learning in Future Environments
MJ/m² GFA	Megajoules of energy consumed per square metre of gross floor area
MJ	Megajoules
MWh	Megawatt Hours
NCOS	National Carbon Offset Standard
TJ	Terrajoules
UNSW	University of New South Wales

HYDRATION STATION

1 litre
of purchased
water can be
more expensive
than a litre
of petrol

60%
of PET bottles
purchased in
Australia end up
in landfill or
as rubbish in the
environment

It can take up
to 3 litres
of tap water to
make **1 litre**
of bottled water



Australia's
annual
use of bottled
water generates
more than
60,000 tonnes
of Greenhouse Gas
emissions...

The same
amount that
13,000 cars
generate over
the course
of the year

csugreen

