



## 2013 Highly Commended Case Study

# AUT University Carbon Reduction

## Three pronged approach to reducing CO<sub>2</sub> emissions

### Section 1: About the project

#### Summary

AUT's three pronged holistic approach to reducing CO<sub>2</sub> emissions includes:

- Implementation of sustainable transport initiatives to encourage use of more sustainable transport modes - bus, train, and cycling
- Installation of significant energy efficiency measures across the building portfolio that saved AUT approximately 1,000,000kWh
- Progressive implementation of paper, cardboard, plastics, cans and glass recycling across the campuses

#### Project partners

The development and implementation of the Universities Travel Plan involved liaison with legacy local government organisations and now Auckland Transport. AUT's Estates Group successfully applied for and received grants and loans from the Government's Energy Efficiency and Conservation Authority (EECA). Ecosystems and Superior Air Solutions were involved with the installation of the lighting technologies and UVC units. Reclaim, Transpacific and Northland Waste collect waste and recycling from AUT's campuses.

### Section 2: The results

#### The problem

Like other tertiary education organisations, AUT is operating with constrained budgets, increasing costs, but a desire to provide more for staff and students and reduce university associated CO<sub>2</sub> emissions.

#### The approach

The approach was three pronged focusing on reducing waste to landfill (and thus increasing recycling rates), promoting the use of more sustainable transport options by staff and students and implementing energy efficiency projects. These three areas all contribute to reducing CO<sub>2</sub> emissions.

#### Our goals

Our goals all relate to reducing CO<sub>2</sub> emissions and these are:

- Reduce energy consumption through energy efficiency projects; and
- Increase the use of more sustainable transport modes by staff and students; and
- Reduce waste to landfill by increasing recycling rates.



#### Institutional Profile

- 26,787 full and part time students
- 2,100 FTE staff
- 4 urban campuses
- GFA 191,244m<sup>2</sup> (2012)



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## Obstacles and solutions

Obstacles	Solutions
Specific lighting needs in wine tasting room, but no standards	Communication with relevant staff about their needs. Used experience and knowledge to identify appropriate lux level. Follow up with staff after installation.
Cost of energy efficiency projects	Applied for and received EECA grants and loans to implement projects.
Lack of space to recycle	Installation of underground bins providing significant capacity for recyclables.

## Performance and results

- Transport – the Alternative Transport Programme (ATP) was implemented to incentivise staff to relinquish AUT parking and take sustainable transport to work instead. 63 bicycle and 80 motorcycle parking spaces were installed across the campuses. There was a 17% increase in students using public transport, including the AUT shuttle bus to access the North Shore Campus between 2008 and 2010. The percentage of staff driving to work alone at the City Campus decreased by 20% between 2006 and 2012.
- Energy – three whole of building lighting upgrades (including luminaires, daylight and occupancy sensors and dimming controls), UVC treatment lamps for improving efficiency of air conditioning and other projects saved AUT approximately 1,000,000 kWh between 2011 and 2013. This is a CO<sub>2</sub> saving of 140 tonnes in New Zealand or 913 tonnes in Queensland. New Zealand's CO<sub>2</sub> factor for electricity is comparatively low.
- Waste - reduction in tonnes of waste to landfill by 20% between 2009 and 2012. Paper, cardboard and comingled recycling collectively has increased by 40% between 2009 and 2012.

## Section 3: The future

### Lessons learned

The ATP is essentially a behaviour change tool that encourages staff to use sustainable transport to access work instead of driving alone. The main lesson learned is that staff cannot be coerced to sign up to the ATP. Instead, Estates provides a high level of service to secure the credibility of the scheme and as a result staff signed up through word of mouth. Every staff member signed up to the ATP has continued to re-register.

### Sharing your project

Projects were communicated internally through all of staff emails, the intranet and targeted communication. Energy efficiency projects involved targeted communication so there was one point of contact (the School Manager). This avoided misinformation and ensured Estates only dealt with relevant issues. AUT worked with the Energy Management Association of New Zealand to develop a case study about the energy efficiency work. The projects were also described during various external sustainability focused meetings, which led to discussion and further sharing of ideas and information. AUT's highly commended Green Gown award was communicated to staff internally, thus improving staff knowledge and support for carbon reduction initiatives.

### What has it meant to your institution to be highly commended at the Green Gown Awards Australasia?

Estates Group received independent recognition for the work that has been achieved by many staff to reduce energy, waste and transport. The award motivates AUT to strive forward with further sustainability initiatives.

### Further information

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Here is a link to the EMANZ case study [http://www.emanz.org.nz/system/files/pictures/EMANZ\\_CS2\\_AUT.pdf](http://www.emanz.org.nz/system/files/pictures/EMANZ_CS2_AUT.pdf)