



## Energy Savings Action Plan Annual Progress Report 2008





4 August 2009

Water and Energy Programs  
 Dept of Environment, Climate Change and Water  
 PO Box A290  
 Sydney South NSW 1232

Attention: Ms Kalaremas,

**Re: The University of Wollongong Energy Savings Action Plan – Annual Report 2008**

Please find attached the completed reporting template for the University's Energy Savings Action Plan (ESAP) covering the calendar year of 2008.

Following is a summary of the changes and progress shown in the template.

**1. Changes to Baseline Data**

A change was made to the baseline building area in the 2007 annual report, which increased the base year KPI for building area to 695MJ/m<sup>2</sup>.

No additional changes were made within the 2008 annual report.

**2. Annual Report on Energy Use**

Energy consumption for 2008 was 11.1% below that of the baseline year (103,818 GJ compared to the baseline of 116,771 GJ). During the same period the University's building total Gross Floor Area increased by 8.9% to 182,898 m<sup>2</sup> and the Equivalent Full Time Student (EFTS) numbers increased by 7.0%. These combinations resulted in a KPI improvement of 18.4% against building area and 16.9% against EFTS. These figures are summarised below.

<b>University of Wollongong</b>	<b>Baseline Year (2005)</b>	<b>Reporting Year (2008)</b>	<b>Change</b>
Energy use per annum (GJ)	116,771	103,818	-11.1%
Greenhouse Emissions (tonnes)	26,737	26,863	0.5%
Baseline energy use corrected for variation (GJ)	116,771	103,818	-11.1%
Business Activity Indicator 1 (m2)	167,899	182,898	8.9%
Business Activity Indicator 2 (EFTS)	13,296	14,222	7.0%
Baseline Energy use Key Performance Indicator 1 (KPI 1)	695	568	-18.4%
Baseline Energy use Key Performance Indicator 2 (KPI 2)	8,782	7300	-16.9%



The net energy saving between 2005 and 2008 calculated from the above figures is 23,385 GJ, which corresponds to an abatement of emissions of 5,295 tCO<sub>2</sub>-e (based on the emission factors provided in the reporting template).

### 3. Management Actions

The University has progressed through all of the Energy Management Actions identified in our ESAP as shown in the reporting template. The key actions are summarised below.

#### Key Actions

- Environmental & Sustainability Unit created comprising 7 staff, implements environmental and sustainability policies
- Performance Indicator Project System (PIPS) based on sub-metering setup for sustainability reporting. A 5 year plan has been established based on goal setting and targets
- The University now purchases a 19% Green Power component
- New maintenance system (BEIMS) implemented.
- Procedures implemented in the new building development process. Design standards amended and continuous building review.
- New Utilities Monitoring and Management System (UMMS) and a University-wide Performance Indicator Project System (PIPS) being implemented
- Review process for new services and systems completed as part of design standards
- Maintenance and operational improvements are being implemented on a progressive basis together with building by building projects
- Funding for energy management projects has been obtained and implementation has progressed since 2007.
- Working Party has been established for accountability for energy management

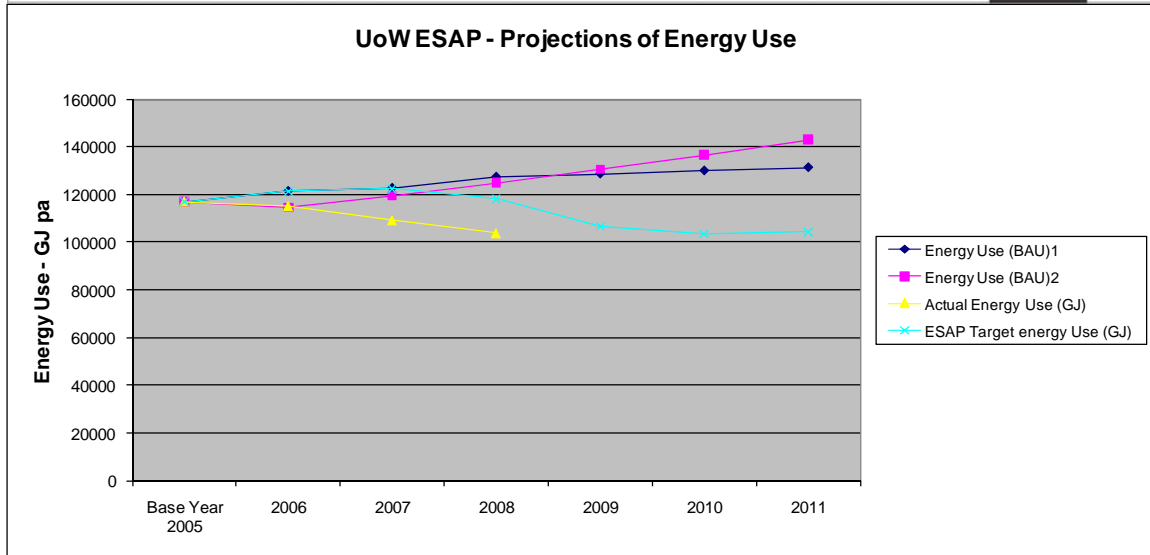
### 4. Energy Measures

All identified energy measures have been actioned to varying degrees, with the exception of the Pool initiatives (Item 13). These have resulted in the reported energy saving of 23,385 GJ (refer to Template 1 and above for the calculations), or 22.53% of “business as usual” energy use. In addition, these have been estimated to result in peak demand reductions of over 1,000 kVA in Winter and Summer (note that the peak levels have actually increased due to the increase in total building area and energy intensity of some of the building activities).

As projects are not due for completion in most cases and are partially implemented, the individual analysis of savings and costs for each component has not been undertaken. The figures shown in Template 4 are based on estimated relative implementation levels between projects. In many cases savings have been achieved in the short-term by manually simulating the changes which will eventually be automated as the projects become fully implemented.

The expected completion date for the program remains as originally programmed, although individual components have been adjusted as required.

The following timeline shows that the University has already achieved approximately 80% of the forecast ESAP savings and is on target to achieve the projected savings ahead of schedule.



I hope you will be pleased with the results achieved so far by the University. If you require any further information, please do not hesitate to call me.

Yours Sincerely,

Lisa Miller  
 Environment Manager  
 Environmental and Sustainability Initiatives Unit  
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