

Australia's universities are not walking the talk on going low-carbon

Written by Mike Burbridge, PhD student - evidenced based innovation, Curtin University



Australia's universities are great at green innovation, but not so good at going low-carbon themselves. PrinceArutha/Wikimedia Commons, [CC BY-SA](#)

Australian universities have a proud tradition in researching, teaching and advocating the science of climate change. The famous statistic that [97% of climate scientists agree](#) that humans are altering the climate is courtesy of researchers at the University of Queensland. Nine of the nation's 43 universities have been [ranked "well above world standard" in environmental science](#), and many of the leading public voices on climate policy – such as Ross Garnaut, Will Steffen and Tim Flannery – are university professors.

The science these universities (and many others around the world) have produced is very clear. Keeping average global temperatures within 2° of pre-industrial levels, as per the [Paris climate agreement](#), will require a reduction in carbon (and other long-lived greenhouse gases) of 40-70% from 2010 levels by 2050, and near-zero emissions by 2100 (see section 3.4 [here](#)).

What's less clear is what Australian universities are actually doing about it in practical terms. Universities exist to do three things: teach, research and engage. Climate change permeates all three endeavours, and these days many academics have lost any previous reticence about expressing forthright views on political questions such as the government's [emissions targets](#) or [renewable energy policies](#).

Anyone who followed Australian politics during Tony Abbott's years as opposition leader and then prime minister will recall the fierce debates over the carbon tax, direct action, and the axing of the Climate Commission. Those with good memories will remember the furious argument that erupted around the Australian National University's [decision to divest from seven resources companies](#).

Universities clearly know what the science says and what society needs to do about it. But it is evidently easier to say what needs to be done than to do something about it. This contrast between words and actions is shown clearly by Australian universities' collective response to climate change.

Promises, promises

Of the 43 Australian universities, three (RMIT, UTS and CSU, of which the latter remains Australia's only carbon-neutral university) have committed to absolute reductions in carbon emissions. A further 12 have pledged to reduce carbon emissions but have sprinkled their commitments with riders, such as reducing emissions per "gross floor area", which would allow emissions to grow as the university expands and is inconsistent with the need to cut carbon in absolute terms.

To compile these data, I looked at all Australian universities' 2015 annual reports, forward-looking corporate strategies, and historic mission-based compacts (performance agreements with the Commonwealth). Clearly, it is possible for universities to have a carbon target that is not mentioned in these reports, but my logic is that these documents give a clear picture of the organisation's priorities and spending.

Worryingly, 11 universities make no mention at all of carbon-reduction policies anywhere in these documents.

The picture is no rosier for those nine universities (ANU, Griffith, JCU, Macquarie, Canberra, Melbourne, Queensland, UTS and UWA) whose environmental science has received the highest rating. Only Melbourne and Queensland mention carbon in their corporate strategies; the other seven are silent.

The same is true for 10 of the 12 universities whose researchers were involved in compiling the Intergovernmental Panel on Climate Change's landmark [Fifth Assessment Report](#). And if it's not in the strategy it seems unlikely to be a priority for the university.

There are ten Australian universities that consume enough energy to be required to publish their emissions data, under the [National Greenhouse and Energy Reporting Act \(2007\)](#). Data from

the
[Energy Regulator](#)

[Clean](#)

show that their emissions increased by 4.6% between 2010-11 and 2014-15.

Lead by example

This poses two tricky questions for universities. First, why don't universities act more decisively on the implications of their own climate research, while they are urging society to do so? Second, in a networked economy where knowledge is king, how will universities manage to partner with businesses to drive down greenhouse emissions, if they can't even successfully do it themselves?

Universities are not short of funds to demonstrate how to build a low-carbon future, but they are short of partners. Currently Australian universities are at the [bottom of the OECD's rankings](#) for fostering business partnerships and innovation. Yet the opportunities are there.

My analysis of universities' 2015 reports shows that universities have committed to spending more than A\$1.5 billion in property, plant and equipment capital works during 2016 alone (2016 annual reports have not yet been released). For comparison, the Australian Research Council awarded less than A\$100 million between 2011 and 2013 for universities to research the built environment and design, meaning that it would take the ARC 50 years to match what universities spent on their own property in 2016.

Yet in spite of this huge outlay, only eight universities have committed to using their campuses as "living labs" to apply their research or to help deliver teaching and research in this field.

All universities talk of the need to forge external partnerships with government, communities and business. Yet looking at the detail, there are just 17 universities – fewer than half – that have committed themselves to trying to work across the university internally. It should be no surprise that universities are so poor at partnering with external organisations if they can't manage it within their own organisations.

Evidence-based spending?

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All of this suggests that most Australian universities are failing to take proper account of their own climate science in choosing how to run themselves. Remarkably, 25% of universities do not mention greenhouse emissions anywhere in their public reports, corporate strategies or mission-based compacts.

Less than 20% of Australian universities are using their campus development to deliver teaching and research outcomes or as a living lab to innovate. Only one university is committed to doing this in the future.

Yet meanwhile, universities have spent more than A\$1.5 billion during 2016 (according to their 2015 annual reports) on their built environments. If this infrastructure spend is not used also to drive teaching and research outcomes, or to showcase how to adopt research, then it is being spent inefficiently.

If this money is being spent in a way that doesn't help Australia hit its climate targets, and the world to live up to the Paris Agreement, then this spending is not evidenced-based. And if spending and research are not evidence-based, we really do need to worry about what tomorrow brings.

This article is based on a presentation given at the [World Renewable Energy Congress](#) in Perth on February 6.

Universities Australia deputy chief executive Catriona Jackson responds:

Australia's universities have a wide range of energy savings and lower-carbon initiatives.

Actually there are a significant number of projects and programs in place across the Australian university sector towards greater sustainability. Many of those initiatives have also been recognised through programs such as the Green Gowns awards.

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But one of the challenges for universities in modernising facilities to meet higher environmental standards is having an ongoing source of infrastructure funding.

That's yet another reason why we're strongly against the closure of the \$3.7 billion Education Investment Fund, which has funded major building works on Australia's university campuses.

If we want smarter buildings and cleaner technology – let alone cutting-edge research and teaching facilities – an infrastructure fund is vital.

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