Deakin University: 'Living Lab' and leader for a carbon neutral future

Tuesday, 20 April, 2021

Official launch of the Deakin Renewable Energy Microgrid

Microgrid site, Deakin University Waurn Ponds Campus

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Thank you everyone for being here today.

And it is a privilege to have you here with us, Dr Alan Finkel, for such an important event that marks another step along the path to a renewable energy future.

The Deakin Renewable Energy Microgrid is the largest solar farm built on the campus of an Australian university.

Scale is important to both achieving the University's carbon neutral objectives, and providing a platform for industry-relevant research.

But scale is also important in this instance, as it demonstrates Deakin's whole-hearted commitment to a renewable, sustainable energy future for our country.

So often when I think of the grand challenge of our energy future and the ambition and scale required, I think of John F Kennedy and his famous 'Moon speech' at Rice University in 1962.

JFK began his speech by asking his audience to imagine the 50,000 years of recorded human history condensed into a mere half century.

He did so to highlight the incredible advances in science and technology during the 20th century. When expressed in these terms, the relative pace of change is truly remarkable:

- In the first forty years, we don't know much about what happened
- About ten years ago, we emerged from our caves to build other forms of shelters
- Five years ago, we learned to write and use the wheel
- The printing press came just this year
- Less than two months ago, the steam engine
- And only last week: penicillin, television and nuclear power.

And imagine what you could cram into the last few hours, most of which has happened since JFK's speech: computers, the internet, WiFi, smartphones, Fiber optics, AI, DNA testing, laser and robotic surgery…

Breathtaking pace indeed.

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Universities are at the fulcrum of scientific and technological progress. Their core activities in education and research have delivered a catalogue of benefits for individuals and societies.

Indeed, much of the progress over the past two centuries has been achieved through the huge expansion of research and education in universities.

In fact, one of the advances I mentioned just now, WiFi, was pioneered in Australia by university researchers in collaboration with the CSIRO.

Overall, we live in an era where life expectancy has never been greater, health care has delivered remarkable advances, and technology has spawned innovations both useful and spectacular.

But this is not simply about technology. This must be about ensuring we drive *progress* through technology. As JFK conceded, "such a pace [of change] cannot help but create new ills as it dispels old".[1]

Universities are well positioned to draw on their faculties across science and the humanities to identify and explore ethical concerns, and to test their ideas in one of the most rigorous and formidable environments imaginable: their community of peers. There is a powerful relationship between science and the humanities – this must never be overlooked or forgotten.

It is this inter-disciplinarity that enables universities like Deakin to rise to the challenge of some of our civilisation's most confounding issues. We draw on the expertise of disciplines both near and far from each other. This breadth, and depth, is crucial in being able to uncover the knowledge required and to plan the best responses.

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Humanity still faces enormous challenges. And the one overarching issue that we must collectively address, is our adoption of a sustainable approach built upon a carbon neutral, renewable energy economy.

There is no doubt that we have changed the climate, and that the pace of change will increase if we do not adapt to a low carbon sustainable future.

There is still debate about the pace of change and the required speed for reversing its effects – and how much we can reverse; but that must not undermine the key message that we are facing our most significant, urgent challenge.

In many ways – ironically and tragically – this is a problem of our own making. But we do have the means to address the problem we have created: by changing our ways, developing alternate forms of energy production, discovering and applying our knowledge, and turning from complacency to invention.

No one country and no one institution can either find all the solutions or make changes that will alter the global picture alone. However, that cannot mean we surrender ambition and leadership.

Australia is a large country by size and a small country by population. This poses challenges in this mission but at the same time provides us with a great advantage.

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[1] Kennedy, J.F., 'Moon Speech' at Rice University, 1962; accessed at: https://er.jsc.nasa.gov/seh/ricetalk.htm

Australia is in a unique position to benefit from moving rapidly in this endeavour – we must show leadership by recognising the position we are in and sharing this good fortune: the combination of a large, renewable resource rich country and a small population.

This is about genuine progress, with the approaches we develop being able to provide pathways for a sustainable wider economy and equitable, shared benefits across society.

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This brings me to our University.

At Deakin, we have an opportunity and almost certainly a duty to use our capabilities and assets to demonstrate both ambition and leadership.

In our new strategy '*Deakin 2030: Ideas to Impact*', we have challenged ourselves to be carbon neutral by 2025 and carbon negative by 2030.

This element of our strategy was very deliberately included to link to our education, employability, research and innovation activities.

We want to be a working example – a 'living laboratory' – of how a large organisation can lead through its actions and fundamentally change its ways of doing. This includes the complete, systemic integration of sustainability across all our activities.

We have mapped out a plan to deliver our 2025 goal and will continue to explore how we meet the 2030 aspiration.

This plan includes a wide range of initiatives, some small, some large, some using new technology, some changing behaviour. Importantly these are deliverable, economically and operationally viable, and will link to what we do in our education and research portfolios.

Our approach is absolutely a holistic one; the nine key areas span the entire University:

- Policy and decision-making
- Communication and engagement
- Procurement and supply chain
- Travel and transport
- Energy and emissions
- Waste and recycling
- Water
- Built environment, and the natural environment

I know many other Australian universities have committed to this sustainable future with their own ambitions and goals.

This will require a long-term, cross-sector, collective effort.

We will also require a bi-partisan political commitment – over decades – and a recognition that it will require bold decisions to which not all the answers are currently known.

As a university we are in a wonderful position to help define how we best do this. We can help shape the social policy framework that will enable this to be delivered, but the political and community leadership required will be significant.

JFK's speech at Rice University in 1962 launched the American Apollo mission – a mission that succeeded in sending astronauts to the Moon, and bringing them back safely.

I do not exaggerate when I say that we need a similar level of aspiration now to ensure we can lead and benefit from a sustainable energy future.

And as all the great achievements through history have been, the Apollo mission and the sustainable energy mission are about discovery, not merely the destination.

Yes, we need to have the ambition, and the commitment, but we must also relish the challenges, the unknown, and what may be newly discovered along the way.

Deakin University's Renewable Energy Microgrid is another step on this journey.

I'd like to sincerely thank everyone involved in this remarkable project:

- Of course, our partnership with AusNet Services, and
- The Project and Implementation Group, which was co-chaired by Deakin Energy and Infrastructure & Property Group, including members from Campus Services, the School of Engineering and AusNet Services/Mondo Power.

Thank you, very much.