# ANU Energy Update

## 18 September 2024

**The Hon Matt Kean**

**Chair - Climate Change Authority**

**Keynote speech**

*Check against delivery*

I begin by acknowledging the traditional owners of the land and pay my respects to their Elders, past, present and emerging.

Please let me also thank

. . . Professor Brown for the warm introduction

. . . the University and team behind the event for the invitation and opportunity to speak

. . . and the spectrum of participants from research, government, business and the community here with us today - both in person and online.

The Australian National University's mission since its formation in 1946 has focused on simple principles.[1]

You have always recognised the virtue of promoting national unity and purpose, in enhancing the nation's research capacity and the value of achieving Australia's full potential.

The University's foundation was an expression of the nation's determination to lift itself from the ravages of World War Two.

Another emblem of the collective optimism that infused the post-war period commenced not far from here in 1949.[2]

The Snowy-Hydro is a staggering achievement.

It was pioneering in its scale, its engineering complexity and its foresight - with the project continuing to deliver on-demand, renewable energy 70 years later.

Snowy-Hydro has been a constant in the national grid - even as the energy mix around it continues to evolve.

It is changing again today for two main reasons.

The first is that coal-fired power stations are exiting the system.

It is estimated that as much as 90 percent of the coal-fired power that has underpinned our economy is coming to the end of its technical life by 2035.

That's not a function of any decision by government.

It's a simple reflection of the fact this is old technology.

So we need to get on with the job of replacing that capacity in the system.

And it is obvious - both from the expert advice of the CSIRO and the clear view expressed by capital markets - that a system built on renewables is the best, most affordable way to do so.

The second reason our energy mix is changing is the need to decarbonise our economy to help combat climate change.

We're making good progress on transforming the grid.

That's clear from the latest Annual Progress Report released by the Climate Change Authority in late 2023.

The share of renewables in the electricity generation mix more than doubled in the past seven years.

They accounted for 32 percent in 2022 - up from 14 percent in 2015 - and more projects have continued to come online since.

We will update the data in the next Progress Report, to be released before the end of the year, but it which should give us confidence in the path we have chosen.

But that optimism can't cloud the fact the targets Australia has set itself for reducing emissions are bold

. . . a 43 percent reduction in emissions against the 2005 level by 2030

. . . and net zero by 2050.

As the Sector Pathways Review recently released by the Authority points out, reducing emissions in other parts of the economy will be more challenging.

The emissions profile, abatement task and precise solutions are arguably more complex than the grid transformation now underway.

And we will get there, but the main game between now and 2030 will continue to be the grid.

Governments have mapped out what needs to be done.

The Integrated Systems Plan gives us a clear national blueprint for the generation, storage and transmission infrastructure needed to sustain a reliable, secure and affordable National Electricity Market.

Equivalent work is underway at a state level, including the Electricity Infrastructure Roadmap that I was proud to develop and champion in New South Wales.

We will also depend on enabling initiatives such as the Capacity Investment Scheme, which is revolutionising our ability to encourage new investment in dispatchable renewable energy generation and storage.

All these measures will combine to drive Australia towards the clean energy future we hope to achieve.

But in the meantime, we need to maximise the opportunity available from the infrastructure and technology already in existence.

Solar is integral to that story, as it should be in our sun-blessed country.

In many ways, the mums and dads of Australia were pioneers in the clean energy revolution - and one in three households now have rooftop solar.

The Clean Energy Regulator forecasts that Australians are on track to install an additional 3GW of rooftop solar in 2024.[3]

What we now need to also do is unlock smart, local solutions that allow us to capture and use that energy to support reliability and drive down costs.

It will also give more households greater incentive to install solar and battery technology that has made Australia a global leader.

The second priority needs to be firming and battery storage solutions that improve reliability and continues to encourage investment in renewable generation projects.

It's consistent with the mandate of the Capacity Investment Scheme.

Success stories already exist.

The Victorian Big Battery, located near Geelong, was commissioned in 2021.[4]

The battery can store enough energy to power over one million homes for 30 minutes.

The Waratah Super Battery is even larger - and one of the largest in the world.

It can provide a guaranteed continuous active power capacity of at least 700 megawatts.[5]

But again, a crucial function of both these projects is their ability to unleash capacity and ease pressure on the existing network.

They serve as a virtual transmission solution to help underpin a more reliable system.

That's ultimately what households and businesses want . . . affordable, secure and clean energy.

Using existing infrastructure in smarter ways will give us the headroom we need to deliver the transformational work required across the rest of the network and the broader economy.

That's what the Climate Change Authority is here to assist with - to provide robust, independent, expert advice to governments on how to best advance the energy transition.

Our Review focused on five additional sectors beyond energy and electricity, namely - transport, industry and waste, agriculture and land, resources and the built environment.

They are each integral to our national wealth.

The Review identifies the spectrum of mature, demonstrated and early-stage technologies that can best assist each sector.

Let me give you an example

. . . both of how a sector can transform itself to contribute to emissions reductions

. . . but also position Australia to prosper economically in a low-carbon world.

The industry and waste sector processes, manufactures and produces goods essential to our economy and way of life, as well as disposing of materials that have reached end of life.

It accounts for five percent of our economy and generates over $140 billion in exports, but also consumes 18 percent of Australia's energy.

Emissions in the sector have begun to fall, albeit at a slower rate than some other sectors.

We understand that the task ahead is complex.

The Review identifies that a mix of approaches will be needed.

These range from energy efficiency solutions, to electrification and fuel switching, substitution of feedstock materials and other initiatives.

But if we can help erase the technological constraints, remove planning barriers and supply chain constraints, and unlock a green premium for investors, the upside is clear.

We won't just improve our prospects for achieving net zero.

We will also pave the way for a stronger future for industries, businesses and employees across the sector.

We will produce both the zero and low emissions materials essential to the domestic economy.

And we can deliver the low emissions goods and services - such as green iron, steel, alumina and aluminium - that are in demand across the globe.

It will extend our rich tradition as an exporting nation in a way that underwrites our prosperity for decades to come.

To achieve our goals, in every sector, the report places a premium on eliminating the obstacles that could stymie progress.

It provides a blueprint for legislative, regulatory and policy solutions that can drive change and will help inform the Net Zero Plan being developed by the Australian Government.

We need to give investors confidence, for example, that we're all working to build and maintain the social licence we need, and rapidly address workforce shortages.

One constant is the need to ensure that planning frameworks can enable and accelerate the transition.

Government coordination is essential for effective community consultation ***and*** approval processes for major projects.

The community deserves to be informed, have opportunities for genuine engagement and consultant, and see meaningful, lasting benefits.

At the same time, investors should have comfort that governments are working to overcome the complexities that add time and cost to project delivery.

The Authority does not seek to design the precise regulatory pathway that should apply.

Rather, our goal is to promote the ideas and spark the debates that will lead to concrete action.

The landmark report is backed by best-in-class modelling and informed by good ideas from across industry, the community and governments.

That's core to the principles that will guide me as Chair of the Authority

. . . that we should lean into science, evidence, engineering and economics - not ideology

. . . that we should acknowledge that the economic case for reducing our emissions is just as compelling as the environmental case

. . . and that collaboration is essential to taking responsible and decisive action on climate change.

We have a mammoth nation-building task before us.

It's one that dwarfs even the magnitude of what we first conceived and delivered not far from here, almost 70 years ago.

But we should approach it with the same confidence of those post-war pioneers.

And when we succeed, we will give this nation the clean, prosperous and brighter future we know is within reach.

Thank you.