

Ausgrid Conference Sydney

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The Hon Matt Kean

Chair - Climate Change Authority

Keynote speech

Can I begin by acknowledging the Traditional Owners, the Gadigal people of the Eora nation, on whose land we meet. I'd like to pay my respects to their Elders, past, present and emerging.

It's an honour to present to the Good Grid Summit, and I'd like to thank Ausgrid, CEO Marc England and his team for inviting me to this important gathering.

We are at a decisive juncture in the race to decarbonise our electricity grid. If we head down the right track we can enable the electrification of almost all of our economy.

In doing so, we won't only drive down our own greenhouse gas emissions but demonstrate what's possible for the entire planet.

At home, we can deliver the promise of our abundant renewable resources in the form of lasting cuts to energy bills.

And luring green steel, green aluminium and even green silicon to these shores will not only generate new industries, jobs and prosperity for Australia....

We'll be making global carbon abatement one of our biggest exports – more than making up for the expected declines in coal and gas shipments.

The stakes, in other words, could hardly be higher.

For today's talk, I would like first to detail some of the Climate Change Authority's work on setting parameters for emissions cuts.

The electricity sector will be vital in driving this transformation ...

And then I'll pivot to some of the issues germane to this audience and what a "Good Grid" of the future might look like.

Some of you might find a few of the points contentious ... but that's a good thing. Consensus doesn't always foster competition, after all.

Markets matter, and not just because governments alone can't fund the new economy we need.

That principle informed NSW's Electricity Infrastructure Roadmap that I helped draw up as the state's energy minister... and the 20-year plan remains the most ambitious of its kind in the country.

Some of the lessons I gleaned in the process were these:

Technology changes are inevitable and will be overwhelming;

Incumbents aren't necessarily the best vectors for driving change;

Energy consumers must be at the centre of reforms if we are to optimise outcomes – and bolster community support; ...

And finally ... while speed is of the essence, it's not everything.

Get the settings right, and we'll generate bigger profits. Dividends will be larger and more fairly shared ... and in the process, our transition will be smoother and ultimately, quicker..

So, let's remind ourselves of the scale of the task before us....

[Slide No.1: Australia's 2035 emissions reduction target]

This chart behind me shows the Authority's recommended emissions reduction target – that is, to cut 2005-level greenhouse gases by between 62 and 70 percent by 2035.

I'm pleased to say the Government accepted our advice and now this range constitutes Australia's Nationally Determined Contribution to the global fight to halt climate change...

On a per-capita basis, the cut will actually be between 76 and 81 percent reflecting expected population growth. That reduction rate has few peers anywhere in the world.

You can see the light blue area under the emissions curve covering the projected 2021-2030 carbon budget – which served as an assumed starting point for our advice on the years from 2031 to 2035.

Taking the more ambitious end of our 2035 target range – the 70 percent cut – you can see Australia's carbon budget will be just under 1.25 billion tonnes of carbon dioxide-equivalent for those five years. That's the light green area.

The shaded wedge above the green is the extra emissions Australia will produce if the reduction ends up at the lower end of the target range, or 62% below 2005-levels. That wedge amounts to about an extra 150 million tonnes.

Either end of the 2035 target range is ambitious – but achievable. And here's how the different sectors can deliver those reductions.

Next slide, please. [No. 2: On "Electricity is expected to do the heavy lifting to 2035"]

Looking at the chart on the left, you can see the lefthand column showing emissions in 2024....

Here you can see the role of the land sector as a significant source of carbon abatement, shown as light green, at the base of the column.

At the top, you can see the light blue section...representing the electricity and energy sector.

The steps to the right show what we project as one possible pathway to cut emissions over the years out to 2035. Please note, these are not firm targets in themselves but rather, indicate what the Authority calculates each sector could do.

You'll see that light blue tile – representing electricity and energy - is clearly the largest in terms of emissions cuts at around 50%. You'll also notice the next largest sector is resources.

The other, smaller tiles, though, show that we think the other sectors - from transport to industry, resources, the built-environment and agriculture – can also start to contribute to emissions cuts well before 2035.

Returning to the electricity and energy emissions...At 2024, these were just under 150 million tonnes of CO₂-equivalent, or roughly a third of Australia's total.

By 2035, we see those emissions sinking to about 20 million tonnes – or down about five-sixths. That reflects the exit of almost all remaining coal-fired power stations, with gas playing a small but key firming role for renewables...

A lot has to go right to ensure the grid's transition is a smooth one....

Next slide, please. [No. 3: "Unlocking Australia's clean energy potential"]

As we noted in our 2024 Annual Progress Report, there are some important actions we need to see taken. [Stay tuned for our 2025 report too.]

Clearly, we need a lot more generation capacity, as noted in recommendation One.

In fact, our targets advice estimated we will probably have to double the rooftop solar we have now...triple large-scale solar, quadruple wind generation, and increase utility-scale batteries six-fold.

Securing system security and reliability will be vital, too, as Recommended action No. 2 noted.

Speeding-up connections obviously goes with this build-out too, as in Rec 3.

However, of most relevance to today's discussion, is the fourth recommended action - namely unlocking generation and storage at the local level.

If all politics is local, so ultimately, is all economics and all energy use, for that matter ... Those electrons have to flow out of a plug in the wall or down a cable, somewhere.

Next slide, please... [No.4...details of unlocking generations and storage]

Increasingly, of course, it's not just energy use that's being localised...

Solar PV - thanks to a combination of clever scientists in Australia and an eruption of production in China – is making it possible for many if not most energy consumers to become producers too.

Storage, we see, has a price curve not unlike solar's. The words, "Batteries included", may as well be printed on the boxes that contain solar systems, large and small...but that's what buyers will be ordering.

This is one technology tide unlikely to recede ... hence my earlier reference to change being both inevitable and overwhelming.

It's also exciting – power to the people can actually become power from the people – particularly when you're lucky to reside in a land as sun-kissed as Australia.

Anyway, this slide highlights some of the points made in our report, "Unlocking Australia's clean energy potential", released earlier this year.

Rooftop solar's success has been rightly celebrated. More than a third of Australians live beneath PV panels, exceeding 4 million homes in total.

The first column notes the relatively untapped potential for commercial and industrial sites....

In rough terms, we have four times as much residential solar as we have on commercial buildings ... whereas Europe, for instance, has the inverse, with about 1.5 times as much solar on businesses as on homes...

Analysts at the Victoria Energy Policy Centre estimate that planting PV on the roofs of warehouses, shopping centres and so on, could meet a quarter of Australia's electricity needs. Only a small fraction has made the move so far...

Fortunately, innovation adores a vacuum ... so we are seeing exciting new entrants into this space.

Let's say you're a renter in an apartment, and you have been frustrated at your poor access to solar opportunities. Well, there are Apps for that....

Firms like SolarCloud - to single out just one - are popping up. They're offering the ability for consumers – or anyone, for that matter - to buy single or multiple panels on commercial roofs.

They can get their own energy bills paid off by the electrons flowing down the wires, tapping solar without having to navigate through a maze of strata approvals or physical installation on their own roof.

No doubt, the Distribution Network Service Providers, or DNSPs, that own the existing poles, wires, substations, transformers, and so on, are watching these upstarts closely.

The sentiment is probably mixed. There's ambition to launch similar business models – if they're permitted to – and alarm if they can't, as the market transforms before their eyes....

After all, DNSPs are heavyweights that hold many of the cards in this game of power poker ... They know where the spare capacity is in the local grids and so where best we can add new load and coax new supply.

That's why, as we recommended – as you can see in the second column [b] - that DNSPs be required to be more transparent when it comes to providing information about where EV chargers, generation and storage should be connected.

Application processes should be standardised, and commercial & industrial connections streamlined – if we are to realise the potential of these emerging technologies.

On this score, Australia would benefit most if those changes were more national than local – to ensure we don't introduce the equivalent of different railway gauges that once hampered transport between the states.

Column D, to skip ahead briefly, echoes this point ... with our recommendation the Australian Energy Market Operator works closely with network operators to improve coordination of planning processes.

To do so will facilitate the deployment of small-scale and large-scale renewables.

It's the third column, C. that warrants more attention.

Our report recommended the Australian Energy Regulator consider extending and establishing so-called "ring-fenced" waivers for network operators allowing them to deploy community-scale battery projects, kerbside EV chargers, and so on...

I'll return to this subject shortly, but before I do, let's consider one final slide ... [No 6: 'Distributed Storage']

I suspect you'll have heard of the success of the Federal Government's Cheaper Home Batteries program ... it's just passed the 100,000-mark, not bad for a program that's not quite four-months old.

Take-up has soared well past the 75,000 home storage units installed in all of 2024, and the systems going in are often much bigger.

Consumers are using the 30 percent subsidy to bulk up on batteries that have themselves been trending lower in price...

If you squint at the chart of the right, you can see AEMO's projection for distributed storage out to 2050, from its 2024 Integrated System Plan.

The aptly purple patch – of coordinated consumer energy resources – is shown expanding to dominate the mix by mid-century.

We'll have to see how the 2026 ISP accounts for the recent dives in solar PV and storage prices ... but it's a fair bet that projections of installed capacity will be bigger... perhaps a lot bigger.

The consumers moving en masse are doing so partly because the devices are giving them greater control over one of modern society's essential services – energy.

Some are rightly attracted by a sense of anxiety and concern about the environment. We do need to decarbonise economy to combat climate change ... and they take justifiable pride in doing their bit.

But most surveys are likely to identify a more material motivation: an expectation those panels on their roofs or batteries in their garages will deliver the owner smaller energy bills

Embed and extend those savings then community confidence in the transition will grow...encouraging the take-up of yet more PV and storage.

And those savings won't be reserved for owners of these distributed energy assets...

Managed well, we'll won't need to spend as much on infrastructure – both at the local level, and in the form of long-distance transmission linking up remote solar and wind farms. Power users will save money as a result.

Social licence issues that are dogging developments, too, will ease, as will strains on supply chains and labour skills ...

What's not to like?

There's another scenario, though, that we should definitely avoid if we can ... and that one where consumers do not realise those vaulted benefits.

Yes, per-unit power cost might be cheaper but if fixed charges keep ballooning - as they have for electricity and gas – the bill's bottom line won't decline....

And then there's the prospect of virtual power plants – where individual solar and storage units can be orchestrated and aggregated remotely.

How will the benefits be split between the asset owners and the aggregators?

In a dynamic market, we're going to need to ensure consumers aren't left behind ... but nor are they taken for a ride. Again, their benefits must be a central focus of these changes...

So how might we go about it?

For one thing, the Government offers an Energy Made Easy website.

Why not provide similarly independent advice so that households can navigate their way through the thickets of contract small print, and maximise their returns?

We know that the dynamic market offers great opportunities for entrepreneurs – big and small.

Many of you in this room are here today because you want to expand your businesses – and that's a good thing ... provided your market flex doesn't unfairly muscle-out your competitors.

After all, as I noted earlier, DNSPs as regulated monopolies start from a point of power.

That's why regulators must take appropriate cautions when they consider ring-fencing operations, allowing subsidies to compete in new markets.

Likewise, the regulators must take the same care when they permit pilot programs, also known as "sandboxing". To extend that favoured industry term, we don't want someone's toys disturbing the rest of the sandpit!

Seriously, though, the matter is one that we took seriously when we were drawing up the NSW energy Roadmap.

We could have let Transgrid call the shots when we were setting up the renewable energy zones. After all, they had deep knowledge of all things transmission in the state.

Our desire, though, was to foster competition where we could. And if the regulatory framework wasn't fit for the times, well, we could reframe the market ... hence, we created Energy Co.

To extend the analogy to distribution networks, there is a third option between letting DNSPs extend their monopolies, or governments doing nothing to accelerate the rollout of so-called consumer energy resources (or distributed energy resources, if you prefer DER over CER).

As with Energy Co, governments can intervene so that the whole job of building an REZ, procuring the wind, solar and battery storage, and so forth doesn't end up with Transgrid.

Ausgrid has great capabilities but creating a path that allows it to not just be a distribution system operator but also the distribution market operator ... well, that might be akin to creating a distribution REZ with Ausgrid at the centre.

Governments have objectives in all of this, after all, and as I stressed at the start, that goal has to have consumer interest at its heart.

It'll be up to energy ministers to decide the scope of the regulations they want to deliver those objectives. Perhaps a new entity is the way to go – as we thought with Energy Co.

Or they could allocate additional regulatory and operational roles to existing entities so they become a coordinator sitting between the monopoly and the competitive market ...

We don't have to invent the wheel each time...the United Kingdom's LEVI model, where funding is allocated to local governments is one to consider...

UK consumers can sign up and receive several hundred pounds (and that's times two, roughly in Aussie dollars) a year for allowing their energy assets to be deployed for the good of the grid during peak times.

Perhaps that's one way to make our grid good too...

Who might gain from such changes? Some might be big energy companies such as AGL, but also small- and medium-size electrical contractors, as represented by their industry's peak body, the National Electrical and Communications Association, or NECA.

One thing in this sector without a shortage is acronyms...if we could only convert them into emojis, our lives would be simpler...

Remember, though, the bottom line in all these changes should be that of consumers'....

Any time we extend a monopoly, we run the risk of raising costs, constraining supply, socialising inefficient costs, crimping innovation – and in so doing, delaying the necessary transition of the sector...

If we dilute or waive ring-fencing rules, the evidentiary bar in terms of real benefits should be high...

You will know there are claims the regulators have allowed “supernormal profits” to bloom – at the literal expense of consumers - because they haven't got settings right in the five-year approvals.

We should get some readout on the issue from the AER when it finally releases its network performance report, possibly within weeks. (<https://www.aer.gov.au/industry/networks/performance>)

A separate AER review of its rate of return instrument is also underway, and may explore the so-called “outperformance” by DNSPs – and whether the gap between actual and allow profits has been reasonable or not...

(<https://www.aer.gov.au/news/articles/communications/aer-commences-2026-rate-return-instrument-review>)

To sum up, then... As I indicated at the start of this speech, it's important we take the necessary time to get the settings of this industry right...

Sometimes, speed is not the critical factor, and I'd argue this is one of those times.

We want as many Australians as possible to benefit from this transition so that their support for it, too, is a renewable resource.

Thanks for listening.... I look forward to join the panel with Marc and Chris [Nelder] a bit later on...