MELBOURNE ENERGY INSTITUTE
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REMARKS BY CATHERINE TANNA, ENERGYAUSTRALIA MANAGING DIRECTOR

Thank you, Ivor and Professor Haines.

It seems every time you pick up a newspaper or turn on a radio there's a headline about energy. That's good, because energy is essential to the health and wellbeing of all Australians.

You might have also noticed there is, to put it mildly, a divergence of views in the debate.

But there's one thing almost everyone can agree on: Australia's energy mix will look very different in the future.

That's good, too, because the way we use energy simply must change.

It doesn't matter where you stand on climate change, lower emissions – less pollution – can never be bad.

And finding better, more efficient ways to use energy can't be bad either, because when people use less energy they save money and help protect the environment.

We've seen big changes already; in the past few years demand for electricity from centralised sources, like big power stations, has declined.

Roof-top solar systems and batteries are bringing power generation out of remote parts of the country and into the suburbs.

Coal provides around 76% of total electricity output in the National Electricity Market.

It's the bedrock on which Australia's electricity system was founded a century ago. That remains true today and will be for a long time to come.

The challenge lies in how we integrate renewable energy into the system.

It means finding ways to deal with cloudy and windless days when renewables are not producing power, or enough power.

EnergyAustralia is studying gas-fired generation, battery and demand response as part of a portfolio that can provide reliable, affordable and cleaner energy for all customers, regardless of what they earn or where they live.

We have a $1.5 billion program to make real some 500 MW worth of new wind and solar projects in eastern Australia.

But you'll have seen and heard criticism of renewables, how wind and solar have undermined affordability and reliability.

Here's something I found interesting: there's a section in the Finkel report that describes the national electricity market.

According to the report, there's more than 47,000 MW of installed capacity in the NEM, yet the most the system has been called upon to deliver at one time is 33,000 MW.

So, let's be clear, we don't have a renewables problem. The real issue is planning.

We know it's not easy to solve. Solutions to big and complex problems need big ideas, new thinking and approaches.

I remember being called to Sydney in February to brief the Prime Minister on one example of that new thinking, a pumped hydro project at Cultana in South Australia. (This meeting was more pleasant than a couple of more recent ones you may have read about…)

Of course, pumped hydro isn't new technology – it's a way of storing energy so it can be used when it's needed, like a giant battery.

It's proven and already provides around 7500 megawatts of capacity to the national electricity market[1].

But Cultana is unique in Australia – it would be our first project to use sea water, rather than fresh water.

Using seawater avoids the need for a lower reservoir. It means there are ready supplies of water to top up losses from evaporation – that's a key consideration for dry state like South Australia.

Some of the new energy projects being proposed, like building new poles-and-wires interconnectors spanning hundreds of kilometres, are expensive and just shift the problem.

Finding ways to store energy, whether in the form of pumped hydro or batteries, actually solves the problem.

At the February meeting, the Prime Minister's enthusiasm was palpable. He'd devoured the briefing pack and was firing question after question, anxious to learn more.

His Cabinet energy committee colleagues tested us, too. We didn't get an easy time of it.

I don't think they were sceptical that Cultana could work. More likely it was the opposite: the government recognises the potential of seawater pumped hydro and wants it to succeed.

Those ministers were making sure we were doing our homework.

They grasp what pumped hydro from seawater will mean for a modern energy system in Australia.

So, since then, EnergyAustralia, Melbourne Energy Institute and Arup have been doing our homework. It's not been easy, but when I talk to our people you can sense the excitement; their enthusiasm is palpable.

In the past few months, we've assessed the technical, financial and environmental elements of this project.

We've also spent a lot of time talking to the community, because the reality is that today major projects don't proceed without the public's support.

[1] AER, *State of the Energy Market 2017*; CEC, *Clean Energy Australia Report 2016*

Now, thanks to the Federal Government's support through ARENA, we're pleased to present the results of all that work.

The esteemed panel of Roger, Julian and Paul will give us an overview of the Knowledge Sharing Report shortly.

But basically, here's what the report tells us: a seawater pumped hydro project at Cultana is technically feasible, economically viable and environmentally sound. The concept has been welcomed by the local community.

Now, the next step: that will involve thoroughly assessing all the technologies and design options available, so we pick the best approach, one that minimises impacts on people and the environment and maximises the project's benefits.

Once we have done the physical design, we can proceed with detailed engineering and the approvals works required to reach a financial investment decision.

Construction would take around three years, which means we hope to have the project up and running in 2022.

Of course, no project is certain until a final investment decision.

But we're pleased that the feasibility study has shown what's possible. It's now up to the people in this room to make it a reality.

We've lots more to do, but we're excited about the potential of seawater pumped hydro and what it will mean for Australia's energy system, and for the millions of families and businesses which depend on it.

It's been a wonderful experience working with Melbourne Energy Institute and Arup. On behalf of EnergyAustralia, thank you both.

Thank you, Ivor, for the government and ARENA's encouragement and support.

I know there's great interest in this project. Pumped hydro has great potential to solve one of the most pressing energy issues we face; that's integrating intermittent renewable energy supply into the power grid of the future…

…and doing it in a way that delivers reliable, affordable power.

We'll do our best to keep you up to date.

Thank you.