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Combining small scale behind-the-meter technologies for home and business to make the transition simpler for all customers

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Good morning.

I'd like to start by acknowledging the traditional owners of the land on which we are meeting today – the Wurundjeri people of the Kulin Nation - and pay my respects to elders past and present.

I'm from Noongar Country in Western Australia, and I also pay my respects to any First Nations people in the audience today.

I'm really excited to be with a customer-centric crowd this morning to talk about the future of retail.

But walking around the conference is a reality check, isn't it?

The fact is we still work in an industry of engineers. Of course, we love engineers. We'd be nothing without them.

But we have a big challenge ahead of us to navigate the transition.

We need to change the culture of our industry from engineering-led to customer-led.

I'm guessing that just then, a few of you thought to yourself: *"Good luck with that."*

Well, you should know that one of my favourite quotes is from the iconic Olympic runner, Florence Joyner.

Her world records, set back in the 1980s, for the 100 and 200 metres still stand.

Flo-Jo said: *"When anyone tells me I can't do anything, I'm just not listening anymore."*

I love that quote.

My daughter is called Florence

I'm also a runner too – although you can tell by my height that I'm no record holder!

I took it up running because I wanted to get comfortable with being uncomfortable.

That's our challenge as retailers as we face into the energy transition. It's going to take some uncomfortable adjustments inside our companies.

I also took up running to get fit.

And we are in the transition for the long haul, so we also need to be match fit if we are going to stay the distance.

OK. So much for running. Let me start by dialling it up a little.

For the energy Industry, I believe the title of this session underplays things.

It's not the future OF retail. To me, the future IS retail.

That's because the centre of gravity in energy is shifting toward customers fast.

Let me share a couple of insights that explain this.

Last year, a record 5.9 GW of renewable capacity was added to the grid, compared to 5 GW in 2022.

Of that, 3.1 GW was provided by rooftop solar, and 2.8 GW came from utility-scale generation.

This means small-scale rooftop solar systems now provide more than 17 GWs of capacity across the National Electricity Market.

That's over three-times the combined capacity of our largest coal generation plants in Gippsland.

It's less well-known, but increasingly, the same is true for storage. And this is really a game changer.

There are now more than 180,000 electric vehicles in Australia.

Over 98,000 of those were bought last year. That's up 120% compared to 2022.

The way I think about this is that consumers bought 98,000 new home batteries on wheels last year.

That's because the typical electric car battery stores about 67 kWh of electricity. In simple terms, this is enough energy to power your home for around three days.

Until recently, the only way to tap this opportunity was with an inverter system.

But bi-directional charging - the ability for vehicle electricity to flow both ways, is now a commercial reality. And next year, we can expect this capability to begin appearing in dealerships.

So, those 98,000 new electric vehicles have the potential to provide an additional 6.6 gWh of storage.

By comparison, the largest utility-scale battery storage project commissioned last year was Edify's 300 mWh Riverina Energy Storage System.

Incidentally, I'm very pleased to say that EnergyAustralia supported this project through an off-take agreement.

Of course, there were 27 large-scale batteries in the pipeline at the end of 2023, totalling approximately 11 GWh, although we also know the challenges with construction timetables and large assets joining the grid.

However, with some predicting electric vehicles could reach half of all new car sales over the next three years, Australia could have as many as one million EVs on our roads by the end of 2027.

Now, I know those forecasts may be a touch bullish.

EV sales have slowed in Europe due to cost-of-living pressures, the slow build-out of the charging station infrastructure, and as more conservative mainstream buyers replace early adopters.

But even if you think growth will be slower, we will have a massive fleet of these batteries on wheels by the end of 2027.

My argument is that ….. as rooftop solar continues to grow and the uptake of electric vehicles and small-scale batteries accelerates, the move to a decentralised energy system is well underway.

At EnergyAustralia, our strategy recognises this shift.

We want to make the energy transition simple for customers by incorporating behind-the-meter solutions into our growing flexible energy portfolio.

In our behind-the-meter business … although I hate that term, so let's call it our customer asset business … we are already developing the capacity to support our customers as they make investment decisions to enable their transition to net zero.

For example, as they switch to an EV, electrify their home, or upgrade appliances to be more energy efficient.

Importantly, we're establishing ourselves to play an orchestration role to support good energy choices for our customers and the broader energy system …. and create new value for our business alongside our portfolio of flexible assets.

Let me unpack this for you.

First, in an increasingly decentralised environment, we are already seeing a shift away from the traditional one-to-many retail model.

What do I mean by that?

Well, for decades, the driving force in our industry has been big generation assets.

Electricity has come from large power stations, which are usually located a long way away, through the poles and wire to the customer.

At the end of the line, there is the customer who has the same needs as every other household and simply receives a bill.

In a decentralised system, we need to think differently. For example, we are fast approaching the point where having home solar will be a must-have feature for the family home and to enable a property to be sold at the best price.

And we know that after people buy their first home, their next major purchase is likely be a new car.

Increasingly, this will be an electric car. Already, EVs make up 8.5% of all new car sales.

In this new ecosystem, consumers are clearly going to look for a different relationship with their energy retailer.

That's because our customers' homes are, in effect, our generation fleet.

As retailers will need to know our customers much better because the word "mass market" simply won't apply to energy.

By putting consumers at the centre and gaining their trust, they will be willing to share the generation and storage assets in their homes with us. In turn, they will be rewarded and see benefits from the relationship.

This will allow us to make decisions in the interests of the customer …. and the broader community.

The big idea here is that we can create a Virtual Power Plant for every community by bringing together thousands of small-scale energy resources.

This will benefit those customers who share their assets, help the community with a more reliable grid, and accelerate our journey to net-zero.

The importance of this orchestration model is that Australia needs consumers who can afford home solar, an electric car, or a residential battery to stay on the grid.

Without them, many in the community will simply be left behind, and the transition will come at higher cost.

Here I'm thinking of households that can't afford to invest in energy management systems, solar panels, home batteries, or an electric vehicle. Or people who live in an apartment or who rent and cannot physically install these assets.

Let me make a point here about the government's role in facilitating this aspect of the energy transition.

Already, there is a wide range of Federal and state incentives for households to participate in renewables and electrification.

While we need more large-scale generation, storage and transmission to support the energy transition, it's important that policymakers and regulators devote more attention to the opportunity presented by customer assets embedded in the distribution network.

For example:

- The NEM was designed for a one-way energy system flow, without the customer assets in mind.

- Electricity and gas regulation is increasingly out of date. While they are trying to catch up, they are currently a barrier to a larger role for customer assets.

- And while relevant connection agreements varies from geography to network, we need to work closely with networks to ensure the expansion of commercial rooftop solar, electric vehicle chargers and community batteries by starting to plan as early as possible so the true value opportunity of them can be realised. That extra demand that batteries and charging will bring is value that we can unlock for the grid so we need to work together to fast track these opportunities.

Let me share some specific issues:

- Regulators require all energy plans to be compared against a default offer – the VMO or DMO.

  These default offers only cover traditional electricity plans and it means this comparison point …. that is meant to allow consumers to understand how the cost of a new plan stacks up …. is not robust enough to cover innovative customer asset product offerings.

The way the comparison model works does not reflect the additional benefits tied to customer assets. It is only a reflection of electricity rate differentials.

- There is an opportunity for greater coordination of Customer Energy Resources.

  This will need to include registration, enrolment and configuration of CER. For example, it was great to see the announcement in New South Wales late last year that VPPs could participate in the Capacity Investment Scheme.

  This supports more consumer assets operating alongside large storage. We need more of this type of innovative thinking.

  Another opportunity is the development and operation of marketplaces and price signals to ensure these CER are receiving the appropriate price and dispatch signals in response to local conditions

So, there is a lot of work to do.

But it is pleasing to see governments getting on board with the challenge.

For example, last month, the New South Wales government announced that it would give households up to $2400 to install a battery to store solar energy and as much as $400 to connect a battery to a virtual power plant.

With more than 1 million homes in New South Wales with solar panels on their roofs and eligible for the incentive, it's a game changer.

Importantly, the New South Wales government has also been far-sighted on the requirements for scheme participation by recognising that many of the batteries being sold and installed today are not future-proofed.

The direction being set through the scheme is for the industry to do better for consumers with batteries with greater functionality. For example, batteries that can participate in a VPP and which therefore maintain their value for consumers over the longer term.

And what's great about this is …. that supporting VPPs with public money is creating both private and public benefits.

Let me now turn to what we're doing at EnergyAustralia to change the game.

Our purpose is *to lead and accelerate the clean energy transformation for all.*

As consumers choose to take more control, it creates purpose-led business opportunities for us to facilitate the shift toward customer assets and a more decentralised energy system.

It's reflected in our ambition for the customer asset business to *power Australia on rooftops …. and in car parks …. through Australia's leading Virtual Power Plant.*

It is also providing us with new opportunities to bundle products for homes and businesses and create new, customer relationships for future growth.

Let me give you some specific examples.

We are completing trials for a new product called **Sun Soaked Water**, where we are orchestrating the operating times for individual customer hot water systems.

If you think about it …. almost everyone has an electric hot water system. It's basically a water battery sitting inside our home.

What has traditionally happened with these hot water systems is that they heat up at night. That's a time when there is no solar and coal base load is supporting the system, and emissions are higher.

Sun Soaked Water orchestrates the operating time of participating customer hot water systems from night to daytime when it can 'soak up' high solar penetration.

At scale, the product also delivers broad system benefits and reduces emissions.

Another example is **Solar Optimiser**, our new energy plan that delivers savings to solar panel and battery owners by combining our highest feed-in tariff with a competitive energy rate.

We piloted this product in New South Wales in 2023, and we are now preparing the next version of the product to be rolled out more widely later this year.

Today, we are launching a new product called **Battery Ease**, which allows our customers to benefit financially from their battery's surplus electricity.

For us, Battery Ease allows us to link together individual home solar and batteries to our Virtual Power Plant.

By doing this, we can provide the community with large amounts of surplus electricity from batteries at times of peak demand, keeping the network stable and reducing reliance on fossil fuels.

I'm also pleased to let you know that we have been working on community battery projects as we build our small-scale flexible capacity portfolio.

Community batteries are an emerging asset class, and we need to push harder. They have more value that can be unlocked and returned to consumers.

One way is by proving how this localised storage on the distribution network can forego upstream network augmentation, which will see a reduced network tariff and lower energy bills for the consumer.

This allows us to test and learn arrangements with social housing and rental households who cannot access our traditional solar and battery solutions.

I hope we'll have a specific announcement soon.

Two other newly established pilots are also helping us build and adapt product and platform capabilities.

Recently, the Minister for Climate Change and Energy Chris Bowen, ARENA and SA Power Networks, announced an 'energy smart home' trial with energy use optimised by an energy management system.

The trial – called Energy Masters - will involve around 500 homeowners. They will undertake different levels of appliance upgrades and trial smart energy management technologies and new retail electricity plans to optimise energy use.

We are excited to be one of the partners in this trial.

The technologies we will trial include home energy management systems, solar systems, battery systems, heat pump hot water systems, electric vehicle smart chargers and smart air conditioning systems.

Separately, we are working with Ausgrid on the ARENA trial – Project Edith – which uses a new network tariff involving Dynamic Two-way Pricing.

The aim is to test how this tariff might work, to understand consumer and retailer behaviour, and how we can make this simple for customers.

This is our opportunity. To deal with the complexity in a way that has consumer's interests front of mind.

Together, these pilots are providing valuable customer insights about the appetite for new energy products in the home.

These initiatives join Solar Home Bundle, EnergyAustralia's hero product to partner with customers.

Solar Home Bundle allows customers to install rooftop solar and battery systems at home with no upfront costs and at an affordable fixed seven-year rate for all the electricity they consume.

EnergyAustralia operates and maintains these solar battery systems during a seven-year contract period and manages grid interactions through our VPP to benefit the customer and community.

Customers who signed up in 2021 have saved an average of $700 per year over the past two years …. while helping them access the solar market more readily and decarbonise their energy use.

At the end of the contract period, our customer takes ownership of the assets, typically improving the value of their home.

These are a few of the early examples in our customer asset business. We will have more announcements in the coming months.

I can see a future where, by 2030, customer assets aggregated in a VPP could be the size of one of today's fossil fuel plants.

The size of the retail opportunity is significant.

It is estimated that almost 12 million households in the NEM will spend more than $50 billion on customer energy assets in the period to 2030.

That's $50 billion over the next six years.

This includes solar and residential battery installations, community batteries, electric vehicles and home electrification.

And electrification provides further upside.

AEMO has forecast an additional 7 tWh of energy will be required by 2030 to support the growth of electric vehicles and gas-replacement.

EnergyAustralia believes the future of energy is retail.

It's one where customers have greater control over how they make, use and share energy. And progressive energy companies will be their partners in achieving their goals.

Together with the right policy and regulatory settings, we believe rapid growth in customer assets will support a reliable, cheap and clean energy system.

One that … works for customers … drives new economic and business opportunities …. and improves environmental outcomes for all.

Thank you for listening to me today.