



Tune in...



Project Fulgar

Exploring Australian consumer perceptions of risk and cost in a changing electricity network

Prepared for
Deloitte / AEMO

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What did we need to know?

At a broad level, a need for understanding at four levels:

Awareness of current supply

- What do consumers understand of their current supply of electricity
- How Australia generates electricity
- The relative role of fossil fuels vs renewables in the current market
- How it is transmitted and distributed to homes
- How energy infrastructure is maintained and paid for
- The role of state governments in energy supply
- Why electricity costs change in the current market

Understanding of how its changing

- How are consumers seeing change in their energy supply?
- Are they seeing the shift from fossil fuels to renewables?
- Are they seeing (and conscious of) changes in their own consumption and that of other Australians?
- Are they seeing, and do they recognise the need for) change in the electricity infrastructure to support this change?

Sentiment to change

- How do consumers feel about the changing electricity landscape?
- How do they perceive the risks in this change?
- How do they feel about the need for an improved infrastructure?

Paying for change

- Are consumers willing to pay more for an improved infrastructure?
- Are they willing to pay more for reducing risks of price fluctuation? Are they willing to pay more for reducing risk of supply unreliability?

Understanding the broader context

The key issues for exploration

A systematic approach to gauging understanding and opinions...

What do they understand of the changing supply landscape, and how do they feel about it



Our approach

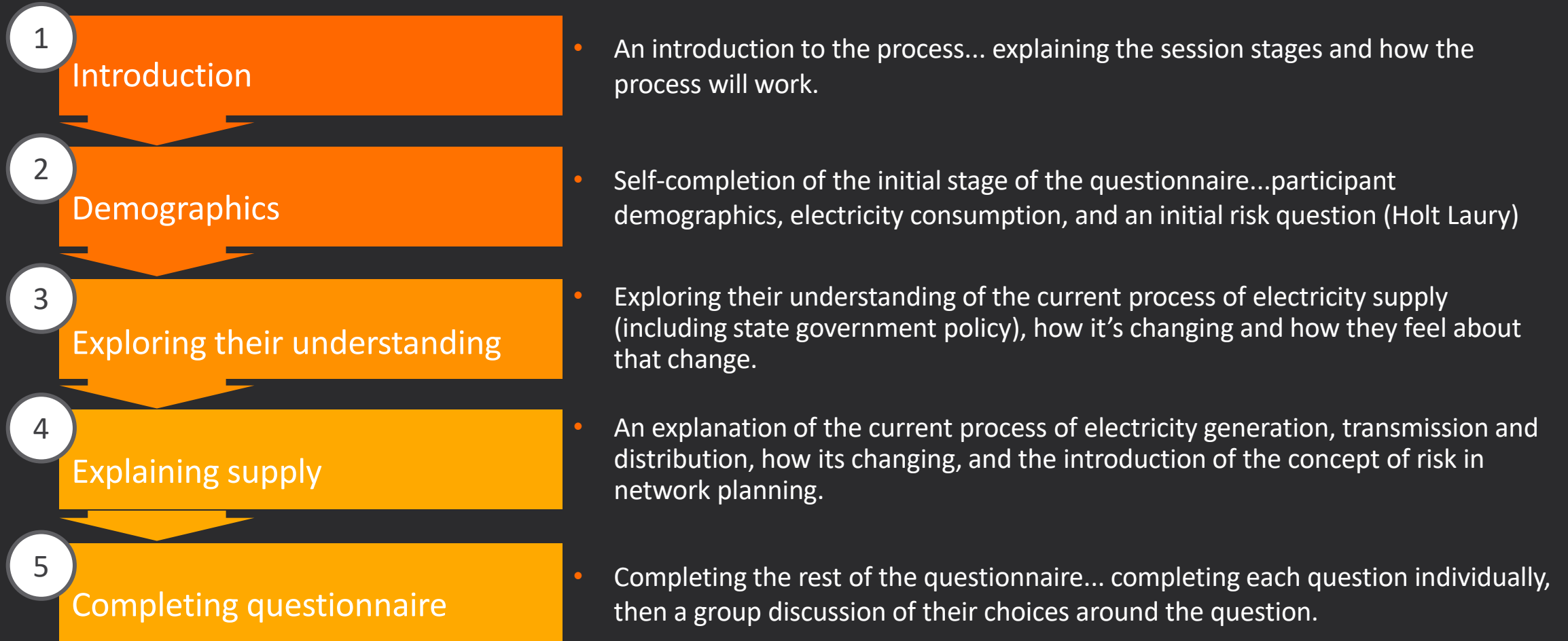
- Seven sessions of 11-12 participants across our eastern states, with a mix of metropolitan and regional locations:
 - Melbourne (26th April)
 - Ballarat (27th April)
 - Sydney (1st May)
 - Goulburn (2nd May)
 - Brisbane (3rd May)
 - Rockhampton (4th May)
 - Adelaide (8th May)
- Within each session, main / joint electricity decision-makers for their households, with a representative mix of age and life-stage... at least:
 - 1 x living in share household
 - 2 x SINK
 - 2 x DINK
 - 2 x Young Family
 - 2 x Older Family
 - 2 x Empty Nester
- In addition, a representative range of rooftop solar... four in every session (33%).

In all, we've spoken to 83 electricity decision-makers as a part of this process.



Our focus group discussion flow

With the need to complete the questionnaire within each session, our discussion flow followed a more didactic flow: a hybrid of traditional focus groups and archetypal deliberative forum design:





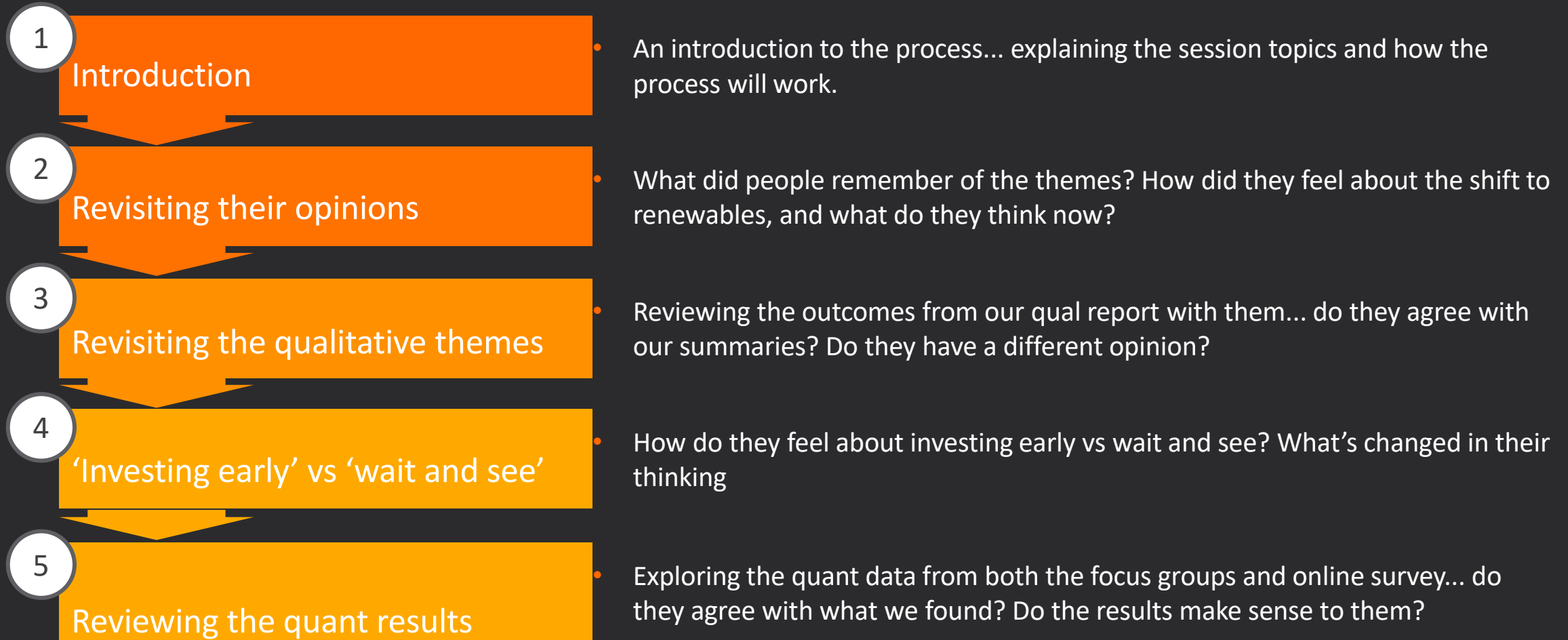
We revisited some of our participants 4 months later

- Reviewing both the qualitative themes and some of the quantitative results from both the focus group survey and the national online survey hosted by Octopus.
- Three online groups reconvened with five participants each from our Melbourne, Sydney and Brisbane sessions
- Participants randomly recruited from the original 11-12 participants in each city... a random mix of age, gender and attitudes toward electricity and the shift to renewables.
- 90 minute online sessions:
 - Melbourne (31st August)
 - Sydney (1st September)
 - Brisbane (4th September)



Our online group discussion flow

A simpler conversation flow in these online sessions:



A

Focus group learnings



What are the big themes being evidenced here?

1. In general, a **familiarity with the broader process** of electricity generation, transmission and distribution, but a **lack of understanding for many of the finer detail** of how their electricity is produced and supplied.
2. **With the majority of our participants, there's an awareness of the change that's occurring in their current energy supply** from fossil fuels to renewables, with a focus on the more visible elements of both generation and usage.
 - Visible change in generation... more wind farms, more solar
 - Recognition of their own changing usage... more conscious of energy efficiency in the products they use, and an increasing consideration and ownership of where they're sourcing from.
 - Less visibility of change in the transmission and distribution networks.
3. **Most consumers recognise the need for change, and are positive about it...** greenhouse emissions and the shift from fossil fuels to renewables is an important issue for most. This attitude is also reflected in their own behaviours, with an increasing focus on features like energy-efficient appliances and adding rooftop solar to their home.
4. **Importantly, most consumers are willing to directly pay for this change through their electricity bills.** But it's clear that there is an upper limit in how much our participants are willing to pay, and it's also clear that there's a significant portion of the broader Australian community who are not willing to pay more for this change.



How we've structured the focus group presentation

- 1** **Their current electricity supply**
What do consumers know about where their energy comes from?
- 2** **How it's changing**
What do they know of the shift in generation, distribution and usage?
- 3** **Sentiment to change**
How do consumers feel about the shift to renewables?
- 4** **How they see risk**
What are consumer perceptions of risk in this space?
- 5** **Questionnaire design**
Opportunities for refining our quantitative survey design



1

Their current electricity supply

What do consumers know about where their energy comes from?



What do they understand of their current energy supply?

While our participants are often lacking on the finer detail, there's a surprisingly good level of understanding across our sessions of how the current electricity supply works... we're hearing:

1

We currently generate with coal (and gas), but also solar and wind.

- Coal represents the bulk of energy consumption at present, with its proportion normally estimated at between 20% and 90%... most commonly, our participants assume around 70%.

"Mainly coal." Female, Rockhampton

"I'm going to go with about three quarters, across a year." Male, Melbourne

- Gas far less considered than coal... gas is not mentioned as a source by most of our sessions.
- When it comes to renewables, solar and wind are top of mind.

"Solar panels" Male, Ballarat

"Don't we have the wind farms around here too?" Female, Goulburn

- Hydro is mentioned in many of our sessions, with mention by some of hydro being used in Tasmania and providing electricity to the mainland states via Basslink

"What is the cable that runs from Tasmania into Victoria?"

What kind of voltage does that carry?" Female, Brisbane

- Some belief (by a slim minority) of the use of nuclear in Australia... this misconception is usually dispelled by others in each session.

"Do we do nuclear in Australia?"

Only at the Lucas Heights, which is a research facility. It's not a power generation." Male, Adelaide

"Do we use nuclear in Australia, anyone?"

"No. It's not legal in Australia to produce electricity from nuclear." Male, Melbourne

- Wave generation is also mentioned, but even fewer.



What do they understand of their current energy supply?

While our participants are often lacking on the finer detail, there's a surprisingly good level of understanding across our sessions of how the current electricity supply works... we're hearing:

2

Electricity gets to consumers through our transmission and distribution networks.

- While they recognise the difference between transmission and distribution, most consumers don't look to think in these terms... to them, these are simply two different aspects of the same network.
 - While our delineation makes sense to them – especially with the analogy of highways and roads – it is our delineation, not theirs.

"Through the grid." Male, Ballarat

"Transmission lines." Male, Rockhampton

"Are you referring to power lines?" Male, Ballarat

"Through substations." Female, Sydney

- The transmission network is generally more strikingly visible – high voltage lines on large pylons - while the distribution network is more generic and unnoticed.

"If you want to move a load of electricity a long way, that's the big pylons." Male, Adelaide

"They take coal power for instance to be generated through a power plant, or what have you. I think it's burnt, combusted, converted into electricity. Then it's sent out through wires via substations. Something like that." Male, Melbourne

"Yeah, it has got to go to the sub-stations first and then get filtered out from the sub-stations." Female, Goulburn



What do they understand of their current energy supply?

While our participants are often lacking on the finer detail, there's a surprisingly good level of understanding across our sessions of how the current electricity supply works... we're hearing:

3

Rooftop solar is commonplace

- There's a ready awareness of rooftop solar and the different schemes introduced by retailers around this – we'd pre-loaded our sessions with solar rooftop owners. Most of their assumptions of rooftop solar are broadly correct – around one-third of Australian households.

"Rooftop solar has been around for a while and has been steadily increasing over time." Male, Rockhampton

- There's a consistent narrative amongst those who have adopted rooftop solar of reduced returns over time... that earlier adopters get a higher revenue from their electricity suppliers than later ones (including some who regret the decision because it's not paying its way).

"It gave me a false sense of security that having solar was a good option, because they were helping to fund it... I've bought this with thousands of dollars and not really reaping any rewards. So I feel a bit duped."

Male, Ballarat

"I put solar panels on my house and they are charging me way more for the electricity that I use than when they give me the money back for the electricity that my solar panels make. I get absolutely nothing."

Female, Goulburn



What do they understand of their current energy supply?

While our participants are often lacking on the finer detail, there's a surprisingly good level of understanding across our sessions of how the current electricity supply works... we're hearing:

3

Rooftop solar is commonplace

- Many of our participants have adapted the way in which they consume electricity in their homes to maximise the advantage of solar... consuming more during the day.
“For me, I have solar. So I try to run everything during the day, like the dishwasher and washing machine, charging my phones and whatever. So yeah, don't really use anything at night except for basic stuff. So yeah, changing your habits to make the most of what's available.” Male, Melbourne
- Despite the portion of our total sample with rooftop solar – around 30 in total –none of them had batteries in their home... a message of high costs, and an expectation of this reducing over time.
“It needs to be at a price that's affordable. Because if you worked in your sums, in your lifetime you would never recoup that money.” Male, Melbourne
“You'll never make the money back from getting the battery and a solar panel at the current price” Male, Melbourne
““Did any of you also put in a battery?”
“No. They're too expensive at the moment.”
“The companies have told us wait a few years.” Male, Ballarat



What do they understand of their current energy supply?

While our participants are often lacking on the finer detail, there's a surprisingly good level of understanding across our sessions of how the current electricity supply works... we're hearing:

4

Different companies own different parts of the supply chain

- Outside of Queensland, our participants generally understand that generation, infrastructure and retail are all operated by different businesses, but they don't understand the specifics of each company in the process.
 - "It turns out that quite a few people own the electricity before it gets pumped to us." Female, Melbourne*
 - "Well, they're farming the energy and they're selling it to someone." Female, Ballarat*
 - "The retailers probably just keep track of what you're using and then billing it to you. Whereas, the wholesaler or the distributor, they maintain the infrastructure as well." Male, Melbourne*
 - "I knew about retailers and distributors, but I never really thought about, I guess, the actual power plant and how they provide that to you." Female, Melbourne*
 - "I think it all comes from one company but then there's all different distributors like companies which sell it to us." Male, Adelaide*
 - "Wholesale and retail? There's a middle man." Female, Sydney*
- But for these states, consumers generally haven't made the inferences that different companies work to different goals and that this can potentially deliver negative outcomes... that a generation company can shut down a coal-powered generator without a replacement source available .



What do they understand of their current energy supply?

While our participants are often lacking on the finer detail, there's a surprisingly good level of understanding across our sessions of how the current electricity supply works... we're hearing:

4

Different companies own different parts of the supply chain

- Amongst Queenslanders, an understanding that most, if not all, of the supply chain is owned by the state government.
"Queensland governments still owns our generating capacity. We have Energex, which is our distribution arm, and then the government decided to have a free market in terms of retail. So, that's Queensland. Other states have other things in place." Male, Brisbane
"I believe the government owns the generators." Female, Brisbane
"They [the generators] sell it to wholesalers. I think the different power companies out there buy from the wholesaler and they just sell it off to consumers or individual households." Female, Brisbane
"I think there's probably a proportion, like the government owns a proportion of Australia Post and the government owns a proportion of other entities as well." Female, Rockhampton

5

There's a traded market for electricity

- Only a minority of our better educated participants already knew that there is a traded market in electricity... while most assume that there are contractual arrangements between the different stakeholders in the supply chain, most haven't considered that there's an actual marketplace.



What do they understand of their current energy supply?

While our participants are often lacking on the finer detail, there's a surprisingly good level of understanding across our sessions of how the current electricity supply works... we're hearing:

6

I pay for electricity, but I didn't know I pay for all of it.

- While participants see and know about the supply charges on their bill, many don't ladder this to being a payment for the infrastructure of their electricity supply without prompting... this is something that they haven't thought about by themselves.

"I'm just realizing I know a lot less than I thought." Male, Sydney

"It feels like it's hidden." Male, Sydney

"As part of your bill, you used to have a network charge." Male, Rockhampton

- There is, however, an assumption that infrastructure costs are ultimately covered by the consumer.

"I think we pay for it as customers." Male, Rockhampton

"We pay for maintenance and network, because it's on your bill." Female, Melbourne

"It's paid for by taxes." Female, Rockhampton

"I think we pay for it as customers." Male, Rockhampton

"It would be in the supply charges." Male, Adelaide

"It's same as the water where you're paying for the maintenance." Male, Ballarat



What do they understand of their current energy supply?

While our participants are often lacking on the finer detail, there's a surprisingly good level of understanding across our sessions of how the current electricity supply works... we're hearing:

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I pay for electricity, but I didn't know I pay for all of it.

- There's little knowledge or consideration of what this supply charge is composed of either – while they assume it's for the 'poles and wires', it's not something that they have critically considered.

"I know there is a service fee, but I don't exactly know what that actually is." Male, Brisbane

"I think I've just looked at my bill and gone... you're going to pay [the service fee] regardless of who you go through. But I never actually thought about what that actually entailed." Female, Brisbane

"So when your supplier sells you the electricity, they've got to give part of that for maintenance, to the main provider. Otherwise, nothing gets fixed." Female, Melbourne



What do they understand of their current energy supply?

- While our participants are often lacking on the finer detail, there's a surprisingly good level of understanding across our sessions of how the current electricity supply works... we're hearing:

6

The government plays some role in this, but I'm unsure what that role is.

- For most, an assumption of some level of government involvement, but they're uncertain about the extent:

"I think it's just regulations... regulatory bodies." Male, Melbourne

"It's the way business work. I don't know if the government contributes, but we definitely pay it at some point." Male, Sydney

"If you ask me if it's regulated though, I'd be questioning it." Male, Ballarat

"There's a electricity regulator...iPod or something...but I don't know if the retailers are meant to abide by it currently." Female, Sydney

"They're supposed to regulate the process." Male, Adelaide

"The Government regulates it, don't they? They get involved." Female, Sydney

- Even in Queensland – where the majority of electricity generation, transmission and distribution is government owned – there's uncertainty.

"I think there's probably a proportion, like the government owns a proportion of Australia Post and the government owns a proportion of other entities as well. I don't know if it's all government-owned, but I do believe that they hold a stake in it." Male, Brisbane.

A lack of clarity here too.



What does this mean for us?

- From what we're seeing here, there's a broad understanding of the process of how electricity is generated and distributed to them in their homes.
- But we're also seeing substantial gaps in their knowledge around the commercial aspects of the supply chain, and in particular how the infrastructure of our electricity networks is paid for: while many assume this is a part of their service charge, as many haven't considered the specifics of how this works, nor the role of government and private corporations in paying for this.

Consumers understand the broader process,
but there's been no reason for them to understand the finer detail in the past.



2

How it's changing

What do they know of the shift in generation, distribution and usage

How is energy supply changing?



- Like their understanding of the current state of play, we're seeing a general recognition and understanding of how their energy supply is changing:

1

More renewables

- Most participants are seeing the physical signs of more renewables... most wind farms and solar farms as they travel in Australia and overseas:

"There's more renewables, there's more of a push to renewables. There's more pressure to have renewables and to get rid of coal and gas." Female, Sydney

"People don't want coal generation. They want something that's better for the environment." Male, Brisbane

"I know they're bringing, there's more wind towers coming. Everywhere. They're popping up everywhere." Female, Ballarat

"If you travel around the UK, everywhere you go that is coastal, there's wind farms everywhere, out in the sea." Female, Brisbane

"And we do need for the planet to move forward to renewable. You can stick wind farms everywhere as far as I'm concerned." Female, Rockhampton

"They're trying to shift from fossil fuels across to renewables, producing more systems, batteries." Male, Adelaide

"Well, I've visited some farms of our family in the Riverland and a lot of farms that would have been under agriculture, now under solar panels." Female, Adelaide

- With this, it's clear that renewables are becoming a part of the retail offer.

"I would say our options to choose for renewable if you want as well. I recently signed up to someone when I moved and there was an option to go a little more renewable." Female, Goulburn



How is energy supply changing?

- Like their understanding of the current state of play, we're seeing a general recognition and understanding of how their energy supply is changing:

1

More renewables

- Similarly, they're seeing – and being marketed to – around the increasing amount of rooftop solar in their own communities...something they're assuming will be a default in the future.

"We've got a few people who already in the session who've already made the jump into having solar on their roofs. Do you think solar is going to be the norm?"

"Yes, in 20 years."

"20 years' time? Will everybody have it?"

"Yeah, I think we will." Male, Melbourne

- While renewable generation is clearly happening, our participants point to gaps in how we store electricity.

"I think the storage is going to be better, seeing they have the production means down pat. The batteries have got a long way to go." Male, Goulburn

"They have got to be made so that they are affordable just for the normal person." Male, Goulburn

"I know from friends on Golden Coast who got solar and they were thinking of getting battery but it's expensive." Female, Brisbane



How is energy supply changing?

Like their understanding of the current state of play, we're seeing a general recognition and understanding of how their energy supply is changing. Our participants talk to the way in which they are using electricity and how it is changing in their own worlds:

2

They're increasingly conscious of their own electricity consumption

- There's a theme here of transparency and empowerment... consumers are increasingly aware and conscious of their energy consumption.

"Over the last few years there's a lot more transparency and ways to access your electricity like apps that let you look at the wholesale price and buy at certain times. So I think consumers are driving it a lot more... the fact that we want renewable, I think is pushing them, so I think there'll be a significant shift because of that over the next couple of decades." Male, Sydney

"You've got the star ratings on every appliance we buy now people look at them but look at what our usage is." Rockhampton

- More technology in the home means more electricity consumption... our participants point to their families having more devices, especially tablets and phones.

"We seem to be using a lot more electricity, because there is a lot more technology around... the general power usage of kids now, compared to what it was, 30, 40 years ago, is hugely different." Male, Rockhampton

"I mean, it's hard because we need such big amounts of energy to power our. Lifestyle and the way we live, we just need so much energy. So, yeah, I take point.... you've got to consider the environment. But I mean, I think in doing that, people need to radically change how they live." Male, Rockhampton

"Also, a lot more of the shifting to EVs as well, which is putting a lot more demand on our systems than our generation." Male, Adelaide



How is energy supply changing?

Like their understanding of the current state of play, we're seeing a general recognition and understanding of how their energy supply is changing. Our participants talk to the way in which they are using electricity and how it is changing in their own worlds:

2

They're increasingly conscious of their own electricity consumption

- At the same time, our participants are conscious of improvements in energy efficiency in the products in their homes, with most participants believing that they're more conscious and considerate of the energy efficiency of what they're buying (with a focus on their star ratings).

"Houses are getting better lighting to get them better... lights are more efficient. That'll keep improving, I'd say." Male, Goulburn

"I think every new build, everything that's going to be built now would have to have all of the four ratings or five ratings." Male, Melbourne

"A lot more places have solar now than 10 years ago. So, a lot of new houses with the batteries, it's mandatory to have it. And at the same time, a lot of older houses are being renovated, and they tend to go to the solar as well." Male, Brisbane

"Made sure everything in the house, all the LED lights that will probably last me 50 years and just now I'm going to do this right from the get-go." Male, Ballarat



How is energy supply changing?

Like their understanding of the current state of play, we're seeing a general recognition and understanding of how their energy supply is changing. Our participants talk to the way in which they are using electricity and how it is changing in their own worlds:

2

They're increasingly conscious of their own electricity consumption

- Consumers are conscious of the costs in shifting to more energy-efficient devices in their homes, with some regions incentivising and others not.

“Well, obviously if you're going to change all your appliances from electricity, so from gas to electricity, that's quite a big outlay. It's just puts a lot of people off. There are really no incentives at the moment.” Male, Melbourne

“I suppose there's going to be incentives as well, to make changes as well to the household. Otherwise, people are just going with the flow” Male, Melbourne

“And there's incentives, incentives for solar and renovating your house so it's more energy friendly.” Female, Brisbane

“I basically just bought a new dryer, clothes dryer, and a new washing machine. I went for options that were more efficient energy-wise. The reason that I purchased those is because I needed a new washer and dryer, not because I made a conscious decision to go and get something that was more energy efficient.” Female, Melbourne



How is energy supply changing?

Like their understanding of the current state of play, we're seeing a general recognition and understanding of how their energy supply is changing. Our participants talk to the way in which they are using electricity and how it is changing in their own worlds:

2

They're increasingly conscious of their own electricity consumption

- While EV usage remains low in the overall population (around 5-6%), these vehicles are more visible in their world... they recognise that these are becoming a part of Australian living and have an impact on the amount of electricity being consumed by households.

"Isn't it Canberra that's introduced no petrol cars are something no longer sold from a certain point? So it's going to be electric."

"Well, in Europe it's they've got to stop by 2035. It's the law in Europe, so we'll have to follow that. There won't any cars, any petrol cars."

"Yeah, which is going to be pretty crazy for everyone plugging their chargers at 6:00 at night." Male, Melbourne

"I think the uptake of electric vehicles and any motor vehicle transportation will be hopefully a lot. The US Army has announced that they're going to research into wireless power charging." Female, Brisbane



How is energy supply changing?

Like their understanding of the current state of play, we're seeing a general recognition and understanding of how their energy supply is changing. Our participants talk to the way in which they are using electricity and how it is changing in their own worlds:

2

They're increasingly conscious of their own electricity consumption

- A smaller narrative around the introduction of smart metering and being able to see their home energy consumption in real-time through apps provided by their retailer.
- As mentioned in their current usage, an increasing use of rooftop solar, with a slim portion of our participants talking about a future end-point of going 'off grid' with the addition of batteries.

"Might be better just having a battery at home and looking after it yourself in some regards." Male, Melbourne



How is energy supply changing?

Like their understanding of the current state of play, we're seeing a general recognition and understanding of how their energy supply is changing. Our participants talk to the way in which they are using electricity and how it is changing in their own worlds:

3

But there's comparatively little consideration of the infrastructure needed to support this

- While our participants focus on the ends of the supply chain, there's little real consideration of the infrastructure that's delivering to this and how this will need to change... they're not seeing the change in this, nor recognising that it needs to change with the changing generation and usage demands. When challenged around this, they do recognise the need:

"It never crossed my mind. I would like to know the answer, but for me, it's like, well, I need power. I need to run my household. If that's the way it is, and that's the way it is." Female, Rockhampton

"Yeah, they've got infrastructure. It needs to be updated and improved."

"Just like with higher loads, like you can EVs or inductions and stuff like that. They're all moving towards electricity, like with heating and everything. Yeah, the system might not even cope with the load all at one time." Male, Melbourne

"I don't know for sure. But I would suggest it would nearly have to change. How, I have no idea." Male, Goulburn

"It's like a whole new grid, because the old grid wasn't designed for that, with that in mind." Male, Brisbane

"Not just repairing. We actually have to change the structure of the network itself." Male, Rockhampton

"The grid needs to be updated because it's breaking down." female, Ballarat



How is energy supply changing?

Like their understanding of the current state of play, we're seeing a general recognition and understanding of how their energy supply is changing. Our participants talk to the way in which they are using electricity and how it is changing in their own worlds:

4

Costs have risen
(but I don't
understand why)

- While all of our participants know that their electricity bills have increased in recent years, and will continue to increase.
"I heard that electricity and gas are going up either 20% this year and 30% next year or 30% this year and 50% up again in the next few years." Female, Goulburn
- But most of our participants don't understand the role of global coal and gas supply and how it has impacted their electricity bill. Instead, they point to corporate misbehaviour and demand-supply economics for the electricity itself.
"Price gouging." Male, Ballarat
"If you ask the government, war in Ukraine." Female, Sydney
"Could also be, now that more people are getting solar panels... Is it going up because not as many people are buying it?" Female, Ballarat
"The last what, 5, 10 years, how many houses they've built in Australia? They haven't had any more power stations being built." Male, Ballarat
"Closure of a power station. Obviously, it affects the supply. So the prices will go up because of the limited supply." Male, Melbourne.
"I was thinking maybe coal powered generated electricity might be a little bit cheaper because there's so much availability of coal, whereas I don't know for sure, but maybe renewables are a little more expensive at the moment." Female, Adelaide

How is energy supply changing?



- Like their understanding of the current state of play, we're seeing a general recognition and understanding of how their energy supply is changing:

4

Costs have risen
(but I don't
understand why)

- Regional differences add to the confusion in consumers' minds... not just for electricity, but also other commodities:

"Yeah, because I've had this conversation with my cousin, she's from Brisbane, when she was down last early in the year, and her electricity price is a lot less. And she's got six adults in the house." Female, Sydney

"People that are paying \$1.70 for fuel up in Sydney and we are paying \$1.90... we are getting slammed because we're in the country." Female, Goulburn.

- And these increasing costs are fuelling interest in alternatives.

"I think the big thing is the cost of power. So, it's already starting to hurt people and they are looking for other means of producing their power consumption." Female, Brisbane



What does this mean for us?

- While consumers are focussed on the generation and usage ends of the supply chain, they're largely inconsiderate of the need for change in the infrastructure to support this... they're not seeing the change in the same way they are with generation (more solar farms, more wind farms) or their own usage (more energy efficient devices).
- While it's not top of mind, the argument for this change is accepted when it's presented to them... if we're changing the way we generate and use electricity, then we need to change the infrastructure to support that.

We're seeing an opportunity here for a communication strategy around infrastructure change...
One that explains the need and the benefit of this change.



3

Sentiment to change

How do consumers feel about the shift to renewables?

For the most part, our participants are positive about the change that's happening in their energy supply...



- As a rule, our participants are positive about the change that's happening in their energy provision... as a whole, Australians have been generally positive about the shift from fossil fuels to renewables and the positive impact that this will have on greenhouse emissions. We are seeing some differences across our sessions when it comes to those who are more (and less) enthusiastic about the change.
- Generally, it's our younger participants who are more accepting of the need for change and reducing greenhouse gases... they've bought into the idea of global warming and the implications that it has for their lives and the lives of their children. They understand the mechanics of CO2 and global warming, how renewables work, and the role that they will play in reducing our emissions, and want it to happen (and quickly!).
 - "I feel like speaking to people my kind of stage in life, which comfortable and have a home, but you're going to have a lot more choice. You're going to be a lot more informed and making those decisions to have more ownership over how your electricity is produced and generated when in your own home. I feel like that's the way it kind of has to go a bit more, because you can't rely on the government all the time and everything." Female, Melbourne*
 - "That's a necessary evil. I don't really like it, but I understand why we need to pay for it." Male, Ballarat*
 - "I think I would be willing to pay more now. I guess it depends on how much more, but I'm willing to pay more now"
Male, Ballarat*
 - "I think it's something we should be doing. I also think it should be something that people who are able to at different levels should carry the burden a bit more than those that can't. It's a shared responsibility. We need to pull together as a society and help pull others up by their bootstrap gaps and not just leave them behind." Male, Sydney*
 - "I think to a certain extent, yes [I am comfortable with early investment]. And I think it comes back to sort of getting a full understanding of the picture. I think it's hard when people here snippets from different sections and just take that face value rather than fully understanding and knowing the facts. And I think generally people tend to extrapolate and always fear plays a big part." Male, Rockhampton*
 - "I want to do that sooner than later. I can invest in my future and my kids' future and all that sort of stuff." Female, Rockhampton*

Younger
Australians are
more
enthusiastic...

For the most part, our participants are positive about the change that's happening in their energy supply...



- As a rule, our participants are positive about the change that's happening in their energy provision... as a whole, Australians have been generally positive about the shift from fossil fuels to renewables and the positive impact that this will have on greenhouse emissions. We are seeing some differences across our sessions when it comes to those who are more (and less) enthusiastic about the change.
 - In contrast, many (but not all) of our older participants are sceptical of the cost of this change... within these sessions, we're hearing rationalisations for 'wait and see' around:
 - For some, a rejection of climate change overall
 - "At least every person you talk to, it's climate change, climate change, climate. It's climate change this, climate change that. We can get brainwashed by it."* Female, Melbourne
 - For others, claims that renewables are more expensive than fossil fuel generation, and that since Australia is such a small emitter globally, our behaviour will have limited impact.
 - And for some, the timeframe of change (15-20 years) won't have a specific benefit for them in their lifespan... *"I'll be dead by then"* (with no consideration of their children).
 - "I think for the most part, that particular [older] generation isn't as invested in the future, as perhaps younger generations might be, because they might not necessarily be around themselves."* Female, Rockhampton
 - "What's the point of spending so much money when I'm not going to get a return myself?"* Male, Ballarat
 - While it's simple affordability for others:
 - "I'm worried because I am on a fixed income, and in the group, I seem to be the only person representing people that weren't working. So that's something that I'm conscious of."* Female, Brisbane
 - "People just don't have the money, I don't think maybe to be able to afford it to put a number on it because circumstances change all the time. Death, illness, unemployment, all sorts of factors."* Female, Adelaide

...While some older Australians are more sceptical...

For the most part, our participants are positive about the change that's happening in their energy supply...



- As a rule, our participants are positive about the change that's happening in their energy provision... as a whole, Australians have been generally positive about the shift from fossil fuels to renewables and the positive impact that this will have on greenhouse emissions. We are seeing some differences across our sessions when it comes to those who are more (and less) enthusiastic about the change.

...and
Queenslanders
are less
enthusiastic

- For both our regional and metropolitan Queensland sessions, a sense of less enthusiasm for the idea of the shift to renewables. And within our Rockhampton session, an active dismissal of the idea for some.

"You've got a hundred thousand school students who will wag school because they feel very, very strongly about the environment, but none of them will ever turn off a screen, or a ceiling fan, or an air conditioner, or shut the fridge. So, there's a little disconnect there between the amount of passion for not going to school and the amount of passion for actually the environment." Male, Brisbane

- Coal and mining are a critical part of the Queensland economy, and for the Rockhampton region specifically... there's a legitimate fear of the economic impact that the shift to renewables will have on them and their lifestyles.
 - Even those who support the change prefaced their commentary with *"Almost everyone in my family works in coal, but..."* Male, Rockhampton
 - "I guess, for [Rockhampton locals] they know that the energy now works, so there's no point in trying to change it. And I think for them, there's more of a personal risk involved with them switching over to sustainable energy sources than. There is just keeping it the same and on an individual sort of perspective and viewpoint. I guess they're right. Why change it? It works now." Male, Rockhampton*

It's clear that the broader strategy of change isn't being effectively communicated to consumers



- From what we're seeing, a gap in the industry as a whole communicating the change and why it's important for our future.

"We do not seem to have a direction where we are going with the electricity supplies, which kind of hating on the coal, kind of touching base a little bit on renewables, but there is no real direction." Male, Goulburn

"I wish they'd they come out with more information, actually tell us that there's 100 wind farms occurring all the way up. Didn't even know there was a wind farm up there. So just acre after acre, mile after mile of turbines. I didn't know that. Why isn't that project? It's all farmers in far North Queensland. There's just not enough information about it... It's just not taught." Male, Melbourne

"I just feel that there is not a lot of information out there. I think there's a lot of stuff that we found out about the saving just from having this chat that is going on, yet there hasn't been a lot of communication about it." Female, Melbourne

"I'd need to kind of be certain about what the trade off is. Am I spending a tonne more to have the price come down a little bit, or am I spending a marginal amount more to flatten it out so there's not the peaks and troughs and panics?" Male, Brisbane

"I think the biggest reason for that [distrust of electricity suppliers] is that your electricity bill doesn't show you what you're actually paying for. I think if there was more clarity for customers to where that money's gone, things would be more a lot more positive. Male, Adelaide

"So is this plan out 'til 2030, 2035, is that going to be an open plan? Are they going to be sharing about this is what we expect to happen and stuff like that?" Goulburn

"I think that education around that is extremely important. I think that if the wider community have access to that information in a clear, concise, and just a very simple form, I think that they would be better equipped to make those decisions." Female, Sydney

"I'm really pro that. I think transparency is really important and knowing what's coming sort of helps to mitigate some of that uncertainty around that risk." Female, Rockhampton

And with this lack of understanding, there's a hesitancy from a minority to pay more for their electricity



While most of our participants are enthusiastic to change to renewables, there's considerably less appeal in the idea of consumers paying substantially more to support the change. **While most of our participants (in particular our younger participants) are willing to pay more for renewables, there's a considerable push-back from many in our sessions, citing:**

Cost of living pressures

- We're seeing increasing cost of living pressures in Australian society right now, especially in our capital cities with rental and mortgage rate increases. While most of our participants weren't willing to say outright that they can't afford it, there's a considerable amount of language that 'other people' won't be able to afford an additional fee around this.

"I feel like there's always going to be low-income people who struggle a bit more, and they need that kind of assistance." Female, Melbourne

"I still think price drives more people's decisions than the desire to save the planet, particularly at the moment." Female, Sydney

An absence of unreliable service

- While participants acknowledge prices have increased, they're not seeing a pronounced unreliability in the current network.

"It's not broke. Don't fix it." Female, Melbourne

"We only really look at things when it stops working." Male, Melbourne

Distrust of private companies

- There's also a considerable narrative amongst our sessions that the electricity supply companies (generators, infrastructure and retailers) should foot the bill for this structural change... that since they reap the rewards of the current process, they should pay for the change.

"Do you feel like those energy companies are profiteering?"

"Yes... because we're paying for those supply charges as well."

Have the supply charges gone up?"

Yeah."

Yeah, heaps. Double, triple." Adelaide



What are the implications for us?

- While there's enthusiasm for the idea of replacing our fossil fuel generation with renewable sources of energy, it's clear that most consumers aren't aware of the specifics of this change - the timeline, the costs and the benefits for them. **Moreover, in the context of both high cost of living pressures and an already high cost of electricity, there's a reluctance from a minority (if not active pushing back) to the idea of paying more.**
- From what we're seeing in these sessions, this information gap represents a major issue in winning over consumers to the idea of paying more for this change: without it, there's likely to be a pushback against additional service fees and an assumption of profiteering by those corporates maintaining and building the infrastructure.



4

How they see risk

What are consumer perceptions of risk in this space?

How do our consumers perceive risk in this change?



Price Volatility



Prices go up and down suddenly (and generally, more likely to go up)

Reliability



Risk of excessive blackouts

Emissions



Meeting state and federal targets for emission reductions

-
- For the most part, our participants haven't considered the potential risks in making changes to our energy supply:
 - While there are negative comments around the shift to renewables, these focus more around consumers' individual opinions on climate change and the role of Australia in remediating this (see slide 32).
 - Independent of these sessions, **our consumers haven't considered the potential risks that exist in a shift from fossil fuels to renewables, and don't volunteer risks when they're prompted within our sessions.**
 - Participants were prompted within our sessions on the risks of cost volatility, reliability of supply and meeting greenhouse gas emission targets. **While our participants readily acknowledge and understand these, it's clear that they haven't considered these risks before.**



Once it's considered, where do they see the risk in the change?

Price Volatility



Prices go up and down suddenly (and generally, more likely to go up)

Reliability



Risk of excessive blackouts

Emissions



Meeting state and federal targets for emission reductions

-
- When educated on the potential risks of changing our approach to generation but maintaining the same infrastructure, our participants focus on the more tangible and direct impacts of this change:
 - **Cost volatility is the most common concern for our participants**... a tangible negative outcome from this shift, and something they've directly experienced over the last few years.
 - While blackouts represent a greater impact – especially in more regional locations – **our participants see this as a lower likelihood than cost volatility**. For this reason, most place this second to price volatility as a risk.
 - **Emission targets are consistently treated as a lesser concern by our participants**: while they are receptive to the need for emissions reductions, there's a less immediate and impact in this to their cost of living and lifestyle.



Where does this take us?



What are the big themes we're seeing?

1. In general, a **familiarity with the broader process** of electricity generation, transmission and distribution, but **a lack of understanding for many of the finer detail** of how their electricity is produced and supplied.
2. **An awareness of the change that's occurring in their current energy supply** from fossil fuels to renewables, with a focus on the more visible elements of both generation and usage.
 - Visible change in generation... more wind farms, more solar
 - Recognition of their own changing usage... more conscious of energy efficiency in the products they use, and an increasing consideration and ownership of where they're sourcing from.
 - Less visibility of change in the transmission and distribution networks.
3. **Consumers recognise the need for change, and are positive about it...** greenhouse emissions and the shift from fossil fuels to renewables is an important issue for most.
4. **Importantly, most consumers are willing to directly pay for this change through their electricity bills.** But there is an upper limit in how much our participants are willing to pay, and there's a significant portion of the broader Australian community who are not willing to pay more for this change.



5

Questionnaire design

Opportunities for refining our quantitative survey design

Within the questionnaire, we're seeing specific design issues that limit comprehension

Some relatively minor issues, and some more complex and challenging ones:



Part A Demographics

Part A | Demographics

What is your age range?

- 18-24 years old
- 25-34 years old
- 35-50 years old
- 51-64 Years old
- 65 years old and above

What is your gender? Male Female Other

What is your residential post code?

How interested are you in the availability of renewable energy options?

Not Interested Moderately Interested
Mildly Interested Very Interested

How interested are you in understanding how electricity prices are set?

Not Interested Moderately Interested
Mildly Interested Very Interested

How interested are you in knowing where your electricity comes from

Not Interested Moderately Interested
Mildly Interested Very Interested

Some minor design issues within this section:

- We'd recommend **labelling all questions** (Q.1, Q.2 etc) to make it easier to track changes... Something we had a challenge with in our sessions when it came to talking to specific issues (e.g. C3).
- We'd recommend using an open ender numeric question for **age** (i.e. *Q. How old are you?*). This approach will mean we can apply both age bands like the current question, but also recut it for specific applications like generations (e.g. Gen Z are 14-27 years old... not a clean fit to our age ranges).
- **Gender** questions should include non-binary and prefer not to say as options in addition to male and female.
- Our **interest** questions should use a 5-point scale, which provides a mid-point:
 - *Extremely interested*
 - *Very interested*
 - *Moderately interested*
 - *Mildly interested*
 - *Not at all interested*

Within the questionnaire, we're seeing specific design issues that limit comprehension

Some relatively minor issues, and some more complex and challenging ones:



Part A Electricity Engagement

Part A | Electricity Engagement

How often do you check the cost of your electricity bill?

- Every Bill
- Sometimes
- Rarely
- Never
- Never (I have my bill on autopay)

Have you switched electricity providers in the past year? Yes No

How often do you compare electricity prices with other providers?

- Monthly
- Quarterly
- Yearly
- Once every few years
- Never
- Never (because there are no other providers)
- Other (Please specify) _____

Approximately, how much is your household electricity bill per year?

Do you receive a rebate for your electricity bill? If so, how much?

Does your home/property have solar panels for electricity?

- Yes – we installed them once we moved in
- Yes – they were already installed when we moved in
- No – but I have installed solar panels in a previous home
- No – and I have never installed solar panels.

- We saw confusion with the phrase ‘check the cost’ in the first question of this section. To differentiate against the third question (*Q. How often do you compare electricity prices...*), we’d recommend a more conversational phrase like ‘look at’.
- When it comes to the rebate question, we need to make the distinction between government rebates and those provided by energy providers as a part of a locked-in contract.
 - We’d also recommend pre-coding both our price questions with ranges, and including a ‘no – I don’t receive a rebate’ response for the rebate question
- Our last question (solar panels) doesn’t include consideration that the respondent may own more than one home. We’d recommend changing the language here to:
 - *Q. Tell us about the home that you most often live in. Does this home have solar panels for electricity?*
 - It would also be worth asking here if they live in a freestanding house, a townhouse or duplex, or an apartment.

In the rest of our questionnaire, we're seeing opportunity for something simpler and easier to understand



One of the challenges that we're going to have in our larger-scale survey is that we don't have the luxury of asking if people understand and answering any questions: we need a questionnaire design that is easily understood by all of our participants. When designing the final form, we'd be strongly recommending:

Colloquial language

- Easy to understand, commonly used vernacular phrasing of questions, e.g. *new technologies* not *emerging advancements*
- Active tense rather than passive tense of words, e.g. *investing in new ways of storing electricity*, not *insufficient investment in new generation and storage capacity*

Explanation pages

- With a lot of explanation needed around how electricity supply is changing, break out these sections into separate pages independent of questions, with 'next' buttons at the bottom.
- Similarly, make these easy to read and understand.

Tracking performance

- Ensure Octopus use time stamps on individual explanations and questions to ensure that our participants are actually reading them and not skimming through.
- Include at least one open-ender question in the second half of the questionnaire to ensure our participants are reading and answering (i.e. screen out gibberish responses).
- Ensure there's a 10% oversample so poor quality respondents can be excluded from the final sample.

Our more complex questions require more complex solutions



Part B Introduction to Scenarios

Part B | Introduction to Scenarios

Instruction

As discussed, we need to make changes to our electricity system to prepare for the future. The key decision is when. Please select the Scenario you prefer for each question.

Early Investment	Wait and See
<p>Investing more and earlier in electricity infrastructure prepares for the future and mitigates external shocks. It enables us to integrate renewable energy, develop storage technologies, and adapt to emerging advancements. This reduces vulnerability to sudden market changes, like coal plant closures or fuel price increases.</p> <p>While it leads to higher short-term bills, investment lowers the chances of prices changing too much in the future.</p> <p>Over time, electricity bills still will go up but we expect them to be more stable and predictable.</p>	<p>Invest less and later in electricity infrastructure. This approach may lead to smaller short-term increases in electricity bills. It allows for flexibility to adapt and incorporate potential new future technologies that could be more advanced, efficient, and cost-effective.</p> <p>However, there are downsides to consider. The aging grid, potential reliance on less cost-effective fossil fuel generators, and insufficient investment in new generation and storage capacity make the electricity market more vulnerable to market shifts, supply disruptions, and uncertainties. Consequently, electricity prices could experience significant fluctuations, particularly in terms of increases.</p>

Which Scenario do you prefer? 1 2

STOP

- The two scenarios explained here mix what we're doing to the infrastructure with what it means to the consumer. While there's a need for a more comprehensive explanation before this, consider grouping the two as separate paragraphs, e.g.:

Early investment

What we'd do: Invest more and earlier in electricity infrastructure so Australia is better prepared for the future. This would enable us to add more renewable sources of electricity (like solar or wind), develop ways of storing electricity (like batteries, and hydroelectric), and better adapt to emerging technology. This would also reduce the risk to our electricity supply from issues like closing coal-powered generators, or increases in the global prices for coal and gas.

What it means for you: While this would mean higher electricity bills over the next 5-7 years, it would make prices more predictable and stable in the longer term (10+ years).

Our more complex questions require more complex solutions



Part C1 Scenario-Based questions

Part C1 | Scenario Based Questions

Instruction

In this question, you will see rows with two options: A and B. Each option represents different scenarios of potential electricity bill increases. Your task is to pick either A or B for each row.

We expect you to choose A for the first row and B for the last row. Please indicate the row number when you switch from choosing A to choosing B. For example, if you choose A for the first 3 rows and B for the next 7, your switch point would be row 4. If you choose A for the first 3 rows and B for the next 3, your switch point would be row 6.

Remember, this is not about actual bill increases but a way to understand your preferences regarding hypothetical scenarios.

Row	Option A	Option B
1	10% chance of a \$700 increase and a 90% chance of \$900 increase to your annual bill	10% chance of a \$250 increase and a 90% chance of \$800 increase to your annual bill
2	20% chance of a \$700 increase and a 80% chance of \$900 increase to your annual bill	20% chance of a \$250 increase and a 80% chance of \$800 increase to your annual bill
3	30% chance of a \$700 increase and a 70% chance of \$900 increase to your annual bill	30% chance of a \$250 increase and a 70% chance of \$800 increase to your annual bill
4	40% chance of a \$700 increase and a 60% chance of \$900 increase to your annual bill	40% chance of a \$250 increase and a 60% chance of \$800 increase to your annual bill
5	50% chance of a \$700 increase and a 50% chance of \$900 increase to your annual bill	50% chance of a \$700 increase and a 50% chance of \$900 increase to your annual bill
6	60% chance of a \$700 increase and a 40% chance of \$900 increase to your annual bill	60% chance of a \$250 increase and a 40% chance of \$800 increase to your annual bill
7	70% chance of a \$700 increase and a 30% chance of \$900 increase to your annual bill	70% chance of a \$250 increase and a 10% chance of \$800 increase to your annual bill
8	80% chance of a \$700 increase and a 20% chance of \$900 increase to your annual bill	80% chance of a \$250 increase and a 20% chance of \$800 increase to your annual bill
9	90% chance of a \$700 increase and a 10% chance of \$900 increase to your annual bill	90% chance of a \$250 increase and a 10% chance of \$800 increase to your annual bill
10	100% chance of a \$700 increase and a 0% chance of \$900 increase to your annual bill	100% chance of a \$250 increase and a 0% chance of \$800 increase to your annual bill

- From what we're seeing, the current design of C1 works for the most part – if only because our participants are familiar with the format from the previous Holt-Laury question.

Our more complex questions require more complex solutions



Part C2 Scenario-Based questions

Part C | Present Costs vs Future Volatility

Instruction

The next questions ask how much you'd be willing to pay **today** to reduce uncertainty on your **future** energy bill. We'll present you with different scenarios where the uncertainty around your bill is reduced to a specific range, and you'll tell us how much more you'd be willing to pay today to have that level of certainty.

I would be willing to pay \$_____ more today if the uncertainty around prices in the future was kept to a range of \$1050 on my annual bill

I would be willing to pay \$_____ more today if the uncertainty around prices in the future was kept to a range of \$787.5 on my annual bill

I would be willing to pay \$_____ more today if the uncertainty around prices in the future was kept to a range of \$525 on my annual bill

I would be willing to pay \$_____ more today if the uncertainty around prices in the future was kept to a range of \$262.5 on my annual bill

I would be willing to pay \$_____ more today if the uncertainty around prices in the future was kept to a range of \$0 on my annual bill

Of our questions, Part C2 represented the most challenging for our participants.

- The current design doesn't loudly communicate that the additional payment today is a once-off.
 - *"I would be willing to pay \$_more today as a once-off..."*
- The question design doesn't explain that the future increase is in addition to what they're currently paying
 - *We can pipe their responses around their current bills (in Section A) into this to calculate the range.*
- The question doesn't give a timeframe for when this additional cost would be included
 - *We need to add a timeframe... 10-15 years.*
- From what we're seeing, the graphs used to explain this make it more complex, not simpler.
 - *Opportunity for an easier to understand graphic?*

Our more complex questions require more complex solutions



Part C2 Present Costs Vs Future Volatility

Part C | Present Costs vs Future Volatility

Instruction

The next questions ask how much you'd be willing to pay **today** to reduce uncertainty on your **future** energy bill. We'll present you with different scenarios where the uncertainty around your bill is reduced to a specific range, and you'll tell us how much more you'd be willing to pay today to have that level of certainty.

I would be willing to pay \$_____ more today if the uncertainty around prices in the future was kept to a range of \$1050 on my annual bill.

I would be willing to pay \$_____ more today if the uncertainty around prices in the future was kept to a range of \$787.5 on my annual bill.

I would be willing to pay \$_____ more today if the uncertainty around prices in the future was kept to a range of \$525 on my annual bill.

I would be willing to pay \$_____ more today if the uncertainty around prices in the future was kept to a range of \$262.5 on my annual bill.

I would be willing to pay \$_____ more today if the uncertainty around prices in the future was kept to a range of \$0 on my annual bill.

- While our additional qualifiers with this question (spending on infrastructure, emission reduction goals) largely make sense, our participants needed to be reminded that this was a new question and not a repeat... We need to be loud about the additional qualifier here.
 - “Now we’d like you to answer the same question again, but with this additional criteria...”

Our more complex questions require more complex solutions



Part C3 Future Costs vs Future Volatility

Part C3 | Future Costs vs Future Volatility

Instruction

The next question asks how much you would be willing to pay in the future to eliminate the fluctuations of your future electricity bill. Circle YES or NO.

I would be willing to accept my future bill increasing by \$0 a year if the uncertainty around prices in the future was eliminated YES NO

I would be willing to accept my future bill increasing by \$25 a year if the uncertainty around prices in the future was eliminated YES NO

I would be willing to accept my future bill increasing by \$75 a year if the uncertainty around prices in the future was eliminated YES NO

I would be willing to accept my future bill increasing by \$125 a year if the uncertainty around prices in the future was eliminated YES NO

I would be willing to accept my future bill increasing by \$200 a year if the uncertainty around prices in the future was eliminated YES NO

I would be willing to accept my future bill increasing by \$275 a year if the uncertainty around prices in the future was eliminated YES NO

I would be willing to accept my future bill increasing by \$400 a year if the uncertainty around prices in the future was eliminated YES NO

I would be willing to accept my future bill increasing by \$525 a year if the uncertainty around prices in the future was eliminated YES NO

I would be willing to accept my future bill increasing by \$800 a year if the uncertainty around prices in the future was eliminated YES NO

I would be willing to accept my future bill increasing by \$1050 a year if the uncertainty around prices in the future was eliminated YES NO

STOP

- With the range of volatility removed, this format of question is significantly easier for our participants to understand... we're seeing no issues with this design.

Our more complex questions require more complex solutions



Part C4 Future Costs vs Future Volatility

Part C4 | Cost Increases vs Volatility Preferences

Instruction

The cost of living has been on the rise in recent times. Let's assume that the overall cost of living (**excluding electricity**) continues to increase.

First, we will provide you with information on how much your other necessary expenses might increase each year. Then, we would like to know the maximum amount you would be comfortable with your electricity bill increasing. This will help us understand your preferences regarding the elimination of uncertainty around future electricity prices.

If the cost of my other necessities increased by \$0 a year then the most I would be willing to accept my future bill increasing by to eliminate uncertainty around prices in the future is \$ _____ a year

If the cost of my other necessities increased by \$2500 a year then the most I would be willing to accept my future bill increasing by to eliminate uncertainty around prices in the future is \$ _____ a year

If the cost of my other necessities increased by \$5000 a year then the most I would be willing to accept my future bill increasing by to eliminate uncertainty around prices in the future is \$ _____ a year

If the cost of my other necessities increased by \$7500 a year then the most I would be willing to accept my future bill increasing by to eliminate uncertainty around prices in the future is \$ _____ a year

If the cost of my other necessities increased by \$10000 a year then the most I would be willing to accept my future bill increasing by to eliminate uncertainty around prices in the future is \$ _____ a year

STOP

- The one challenge that we see with C4 within our sessions is that there's a lack of clarity around this being a question of cost of living and its impact on their ability to pay. We'd recommend a more direct line of language at the beginning:

We're conscious that the cost of living has been on the rise in recent times. Let's assume that the overall cost of living continues to increase over the coming years.

If your overall cost of living increased, what would be the most you would be comfortable with your electricity bill increasing if it meant that electricity prices remained constant... if the cost per kilowatt hour didn't change?

Our more complex questions require more complex solutions



Part D Analogous categories

Part D | Analogous Categories

Instruction

The following question requires you to rate insurance in other aspects of life. Please consider two key parts of insurance – coverage and cost. Please refer to the information provided by the facilitator to for further information.

Low cost → High cost
low coverage → high coverage

Health Insurance

① ② ③ ④ ⑤ ⑥ ⑦

Home Insurance

① ② ③ ④ ⑤ ⑥ ⑦

Car Insurance

① ② ③ ④ ⑤ ⑥ ⑦

If you were to buy a new car, would you rather:

- buy a brand new car that is more expensive and more reliable
- or a second hand car, which is less expensive but less reliable?

STOP

- Like other sections of our questionnaire, this needs more explanation... something in line with the explanation that we gave in our sessions:

When it comes to insurance – whether its car insurance, health insurance or home insurance – there’s a range of insurance providers. Some are cheaper and cover fewer aspects, while others are more expensive and cover you for more situations.

If you were choosing each of these types of insurance for yourself today, where on each of these scales would you want your insurance to be?

Lastly, some tweaks to our demographics at the end



Part E Demographics

Part E | Demographics

What is your current employment status?

Unemployed Full-time Student
 Part-time Part-time Student
 Full-time Retired
 Other (Please specify) _____

What Industry do you work in?

What is your highest level of education completed?

<input type="checkbox"/> Doctoral degree	<input type="checkbox"/> Advanced diploma or associate degree	<input type="checkbox"/> Certificate (II)
<input type="checkbox"/> Master's degree	<input type="checkbox"/> Diploma or certificate (RPL)	<input type="checkbox"/> Year 12 or equivalent
<input type="checkbox"/> Graduate diploma/graduate certificate	<input type="checkbox"/> Certificate (I)	<input type="checkbox"/> Year 11 or equivalent
<input type="checkbox"/> Bachelor's degree	<input type="checkbox"/> Year 10 or equivalent	<input type="checkbox"/> Year 10 or equivalent

What is your total annual household income, before tax?

<input type="checkbox"/> \$1-\$7,299	<input type="checkbox"/> \$7,300-\$13,299	<input type="checkbox"/> \$13,300-\$17,999	<input type="checkbox"/> \$18,000-\$25,999	<input type="checkbox"/> \$26,000-\$39,999
<input type="checkbox"/> \$40,000-\$49,999	<input type="checkbox"/> \$50,000-\$64,999	<input type="checkbox"/> \$65,000-\$79,999	<input type="checkbox"/> \$80,000-\$99,999	<input type="checkbox"/> \$100,000-\$149,999
<input type="checkbox"/> \$150,000-\$199,999	<input type="checkbox"/> \$200,000-\$249,999	<input type="checkbox"/> \$250,000-\$349,999	<input type="checkbox"/> \$350,000-\$499,999	<input type="checkbox"/> \$500,000 or more

How many people live in your household?

How many people in your household are under 18 years old?

In general, how open are you to taking risks?

Low	Moderate	High	Very High
①	②	③	④

Some minor changes to this section:

- **Employment status** should be for the main breadwinner of the household, not the respondent themselves. A stay at home parent doesn't set the socioeconomic status of the household.
- We'd recommend including a **collar question** here too... see our questionnaire template.
- We'd reduce the number of options in the **education question** to graduate degree, undergraduate degree, TAFE or diploma, Year 12, Year 11, Year 10.
- We'd also reduce the number of **income ranges** (again, see our questionnaire template)
- It's also worth considering an **ethnicity question** here
- Add a 'moderate' midpoint to the **risk question**

B

Online (reconvened) group learnings

What are the big themes being evidenced in these reconvened online groups?



1. **Consensus on the major qualitative themes from our initial groups...** our participants agree with what we've learnt about their understanding of the energy market, how it's changing, and what it means to them.
2. **Several theories from them around why our focus group data and our survey data may be different...** methodological differences in how our two questionnaires were presented, but also changing media focus on cost of living pressures and seasonality may also have played a role here to their minds.
3. **Willingness to pay makes more sense to them than risk premium as a metric...** a clearer model of how it works, but more importantly, a more accurate quantum of how much they'd pay to offset risk: think hundreds of dollars, not tens.
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1


Reviewing the qualitative themes


Our participants agree with our summary of our original focus groups





- When presented with a summary of the key themes from our deliberative focus groups, our participants agree that these reflect their current views on the topics.
 - With a four- month break, it’s understandable that our participants don’t remember most of the content we shared with them.


 Understood how the current electricity supply works

 Little consideration of the infrastructure that delivers electricity

 Did not fully understand that energy market was a traded market

 Understood differences between generation, distribution, retail (QLD exception)

 Conscious of the shift to renewables, with a focus on solar and wind

 Little consideration of what electricity bill is composed of

“Yes, for me, it does.” Melbourne

“Yes, definitely.” Melbourne

*“Not to me, no. I don't understand them enough.”
Melbourne*

“Yeah, that's correct.” Sydney

*“Yeah, I think that's pretty similar to what I remember.”
Brisbane*

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Household consumption is increasing and why

“Well, mine is increasing, obviously. Working from home and installing appliances. Having more appliances. Yeah, it has increased.” Melbourne



Don’t fully understand drivers for electricity price increases

*“I’d say no to that as well.” Melbourne
“I’ll say probably no.” Melbourne
“Yeah, I don’t really know why electricity prices are going up to be.” Melbourne
“Yeah, that sounds familiar.” Brisbane*



Supportive of increased renewable energy generation

“Yes, I like the idea of it, but I’m less inclined to pay a lot for that.” Melbourne



Less inclined to pay substantial amounts to support the shift

*“I understand it is important to have renewable energy and that it will cost, but I don’t want to pay too much for it.” Melbourne
“For me personally, it was like I’m supportive of it, but it depends how much. I’m more than happy to pay an extra \$100 or \$200 per bill, but if it’s an astronomical amount, I don’t see the point.” Melbourne*

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Haven’t considered the potential risks in making changes to our energy supply



Cost volatility is the most common concern for our participants

- Across our three sessions, only one participant disagreed with one theme from the original sessions: that there is little consideration of what electricity bill is composed of

“I would say that pink box, though I do have a good understanding of that. I don't know whether it's because I've got solar, so I sort of know feed in tariffs and the usage tariffs and stuff.” Female, Melbourne



2

'Invest Early' vs 'Wait and See'

Like before, most of our participants embrace the idea of early investment



- While randomly selected from our original deliberative focus groups, the majority of our participants currently agree with the idea of early investment.

“It's just that risk factor of waiting and seeing, especially if we need to develop our system, I just think it's a big risk. So I think early investment, as long as you're not paying too much more, I think makes much more sense.” Melbourne

“I also was early investment. I think I described it as like, if you wait and see, it's sort of like just like a band-aid, just trying to fix the problems as it shows up. Whereas if you proactively update the infrastructure and stuff, it's more.” Melbourne

*“I was the same early investment for me, too, because obviously, like it was mentioned before, there is a risk factor if you wait and see that's a relatively lower electricity bills in the short term, but then it'll result in higher volatility prices in the long term.”
Melbourne*

“If you ask me, it would be early investment, because I'm probably at a stage in my life where I can afford to spend a little bit more because I don't really have any kids or anything yet, but a few years down the track, it may change.” Melbourne

“Well, I think it's early investment is more inclined to think about now because it's part of the problem that we're in at the moment is because early investment wasn't made.” Melbourne

“I was always an early investment.” Brisbane

Yeah, I think I was always invest early investment. But I wasn't one of the ones that was prepared to spend a huge tonne of money right now to maybe save a little bit later.” Brisbane

“What I learned on my travels and just looking overseas as well to countries that are really struggling to rely on fossil fuels because their infrastructure is like garbage. So I feel like I don't want to delay that.” Brisbane



What was shown...

- Revisiting our survey investment question:

Our two investment options

We presented these two scenarios to you previously.

Early Investment

Investing more and earlier in electricity infrastructure will result in higher electricity bills, but it will help to stabilize energy prices over time by reducing the impact of external factors that cause price fluctuations, and by allowing more efficient energy distribution and dispatchable electricity generation.

This means total energy bill increases over time, but with relatively low-price volatility when compared to Wait and See

Wait and See

Investing less and later in electricity infrastructure will result in relatively lower electricity bills in the short term, but it will result in higher price volatility due to an aging and less reliable grid, dependence on fossil fuels, insufficient energy efficiency measures, and insufficient investment in new generation capacity.

This means total energy bill increases over time, but not as much as Early investment. Results in a high risk of volatile prices, especially on the upside.

Like before, most of our participants embrace the idea of early investment



- And like before, a segment of our sessions are more in the ‘wait and see’ camp:

“I think there was another thing that was brought up as well. Yeah. We said, what was the point in just Australia doing this? If the rest of China and India are not doing it, we're insignificant.” Sydney

“A few of us were saying, what's the point? It's 50 years away. So it's not really we're paying it for the other people in 50 years.” Sydney

“It looks like the bills have gone up quite substantially already, and it's not that great. So I'm still in the wait and see.” Sydney

- With the survey data available to us, we were able to reconcile their responses in-group against their survey responses. All but one maintained their current position on early investment vs ‘wait and see’... one participant was uncertain of what she had chosen (she had chosen early adoption) and now chose a ‘wait and see’ approach.

It's important to recognise that the framing of the question differs between the scenarios, despite us using the original question



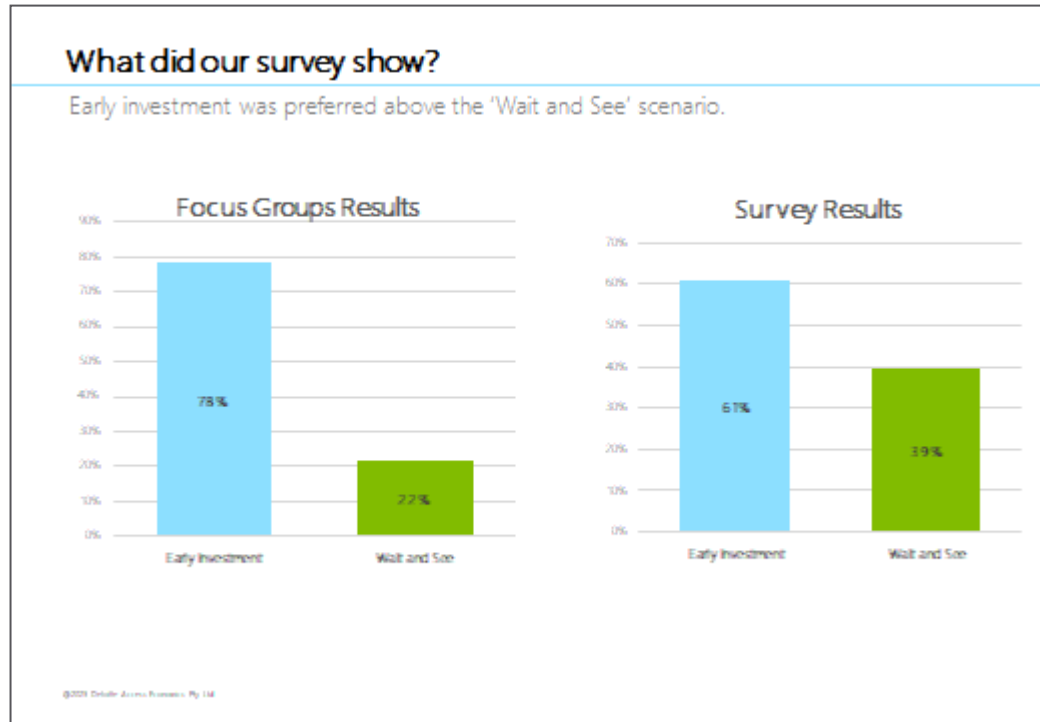
- In our original survey, we hadn't added the condition that they would be paying for this change as a part of their electricity bill...something that is an inference in the question as we ask it now. So it's encouraging that despite this qualifier, almost all of our randomly selected participants maintained their original position.

“They're probably thinking more like a politician, like, yeah, I want to help the climate. But then as you start thinking of numbers later, and you start thinking about the amounts that you might have to pay, and can I afford \$20 more a month, or whatever it is, then I would argue if that question was asked at the end of it, there might be different results.” Sydney

“I think it depends a lot on how much you have to invest early. Yeah, I'm happy to pay a bit more early, but if it's a figure I physically can't pay, well, you're not going to do it.” Brisbane

“I think it really depends on the value, like how much to invest, because there is so many other costs of living increasing. But if it's a reasonable investment, I think that's a smarter choice to make now.” Brisbane

Both the focus group and the online survey data sets make sense to our participants



- When both the focus group and survey data are shared with our participants, the overall preference for an early investment generally fits with their expectations and personal views.

“I think so, yeah. I think that was the feel of the room for the one we were in.” Brisbane

“I personally think it's a little bit predictable... because you see early investment, especially the people that can afford it. I mean, there is obviously people that can't because of cost of living pressures. But you can see the reasoning for early investment in the long term gain if you can afford it.” Melbourne

“I suppose it is a little bit surprising just due to the cost of living at the moment. I don't know. As a nation, I think we're a little more 'it'll be all right, we'll get to it' when it comes to this sort of thing. So I was sort of expecting more of the wait and see.” Melbourne

While our participants aren't able to point to one set being more accurate, they point to multiple factors that may have played a role in the difference



Explanation and education

- Our participants point out the emphasis in our focus groups on explaining the market and the change from fossil fuels and renewables... what is happening and why.
"I don't know what the survey comprised of, so it's hard to say, but I think maybe because we discussed it further in depth in our sessions, some there was, like, views from both sides. So I guess people were able to make a better or more informed decision." Melbourne
"Maybe just the focus group having more time to think about it and talk through it. For me anyway, I think that probably influenced me a bit more than if I was just doing an online survey." Brisbane
- When it's pointed out that the survey also shared a similar content (though truncated), they point out:
 - Participants in our survey may not have been concentrating on the topic... it's easier to skim read and not comprehend the narrative in a survey.
 - Our focus groups provided a platform for a Q&A-style session of answering their specific questions around the change and clearing up any uncertainties...something that a survey cannot provide.

Peer review

- Our participants point to a potential for peer influence in the focus groups. While this question in our surveys was completed prior to the group discussion on it, there was scope before this question for participants to voice opinions around the change, and that socially there is a social acceptability in embracing 'green' philosophies and behaviours.
"It's important for the environment when they're being asked in front of other people, but when they're being asked in private, then they might be thinking more self-interest and the cost to them." Sydney
"And as someone said, there could be virtue signalling where you go in a group. Some people can get quite nervous in a group. They want to look like they're a good person." Sydney
"I don't know about all the other people, but I am conscious that in a group of eleven or twelve people, there can be a pressure to say what everybody else is saying." Brisbane



While our participants aren't able to point to one set being more accurate, they point to multiple factors that may have played a role in the difference

Cost of living pressures

- Our participants point out that there has been a considerable media focus over the last six months around cost of living pressures.
"There's been a lot of media attention, sort of the cost of living, and I think people are more conscious of costs." Melbourne
"For me, now that the cost of living crisis has moved further on, it is making me think rethink. Maybe I want to hold back on the investment, but the logic in me says early." Brisbane
- Additionally, they point to a direct experience of cost of living pressures in increasing utility bills (including electricity) and food and grocery costs.
"I think for me personally, it probably would have been just because of the time of year as well...because we had a couple of rate rises, and that in between the time frame, and I know that would have changed my tune dramatically, probably." Melbourne
"Like literally just this month, they've jumped up in one month... usually when you see a bill increase, it's a small one. You're like, oh, yeah, that's okay. This was, like, massive. It was a bit of a huge bill shock for me. It's within my budget. I can afford it, obviously. But it means you're snipping more into your disposable by paying that." Sydney
"No one ever told me how much more I'd be paying. I didn't actually get, like, an estimate or anything. So if I had had an estimate two, three months ago to say, if you maintained your usage and then when the price rises come in in August, I knew there'd be price rises, I just didn't realise that I would be paying this." Sydney

Not climate change

- In contrast to their narrative around cost of living pressures, there's little consideration of the increased narrative around climate change in these groups. Despite record temperatures and bushfires in Europe over the summer, our participants focus more on the immediate cost of living concerns.
"Everyone else is catching up with us for Bushfires. Welcome to the party... it's kind of just more of the same. It's not quite Groundhog Day, but it's nothing that's a surprise, I think. It's nothing that's changed my view." Brisbane

Seasonality?

- When prompted on the idea of seasonality, there looks to be some traction... our participants (especially in Sydney and Melbourne) acknowledge that a survey delivered mid-winter in late June is likely to be completed when people are thinking about heating their homes and electricity and gas bills.



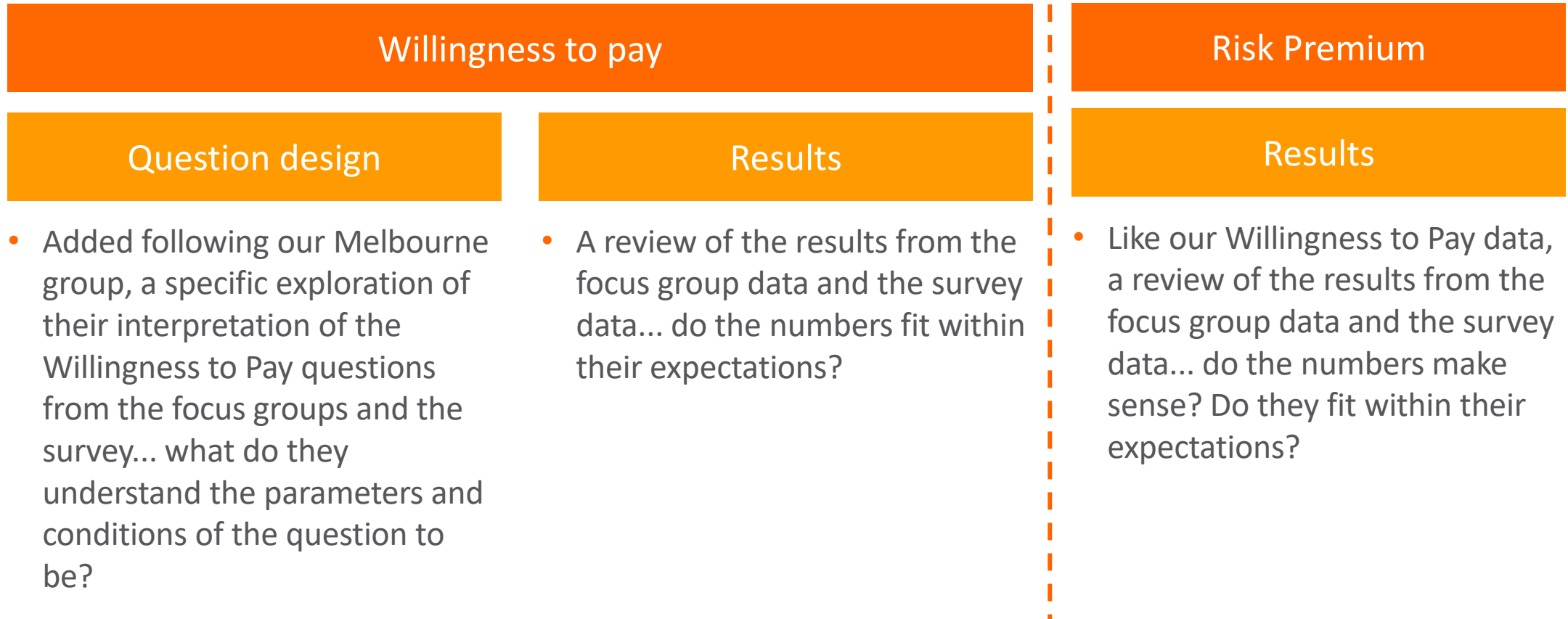
3

Reviewing the metrics



What was explored

Three areas of exploration that evolved across our sessions:





How do they see our focus group Willingness to Pay question?

- While the question structure itself makes sense – how much would you pay to reduce uncertainty - it's clear from these sessions there's ambiguity in how the parameters have been interpreted within our focus group version.

One-off payment

- While the moderator stressed that this was to be considered a one-off payment, we're conscious that not all of our participants may have listened for or understood this condition.
- Within our sessions, it's clear that the idea of 'one-off payment' is open to interpretation: while most see this is a single, not-to-be-repeated payment, others second guess this narrative, and assume that there will be another form of similar payment asked of them in the future. In general, this window of time is seen as at least 5-10 years in the future.

"Never again. Yeah. One off should be never again. Yeah." Sydney

"One off for the rest of my life." Brisbane

"I'd say probably more like one off payment to upgrade the electricity infrastructure until there's a new technology that requires a further upgrade." Sydney

"I'd be interpreting that as being what it says, but I'd be expecting that kind of like, oh, we'll never increase the GST past 10%." Brisbane

"I expect it to be a one off payment, but I'd take it with a bit of scepticism" Brisbane

"I always assumed there would be more than one payment. Like whenever someone says, oh, this is the only time you'll have to pay for this, it's never true, even though that might be the intention. You always have that in the back of your head. You're like, yeah, there'll be another payment." Brisbane

Duration of volatility reduction

- In line with slightly fluid interpretation of 'one-off' payment, there's also an assumption that the capping of prices if a permanent feature for most, while a minority see it as a 5-10 years+ timeframe.

"I was just going to say for me, it'd be the same as the payment. So if it's a one-off payment, then I think it's got to be, at least for the long term, ten years or something. It's talking about on your annual bill implying it's more than one year." Sydney

"For me, it's long term. Yeah, it's definitely got to be more than one year, because generally when they do a price increase, they say that that price is going to be locked in for the next year anyways." Sydney

"I was sort of thinking a long enough time, maybe like 10-20 years, but it's not going to stay like that forever." Brisbane

"I mean, I'd love it to be forever, but realistically, nothing is. It's not like it can just be controlled like that forever." Brisbane

- Importantly, our participants see the payment in line with the duration of uncertainty reduction... if these see a 5-10 duration for 'one-off' payment, they see a similar timeframe for the capping of prices.

"What would be the point of paying a one-off if it's only for a year?" Sydney

From what we're seeing here, there's a greater clarity in our survey question



Payment

- With the repeated reference to an annual electricity bill, all of our participants see this as an annual payment, not a singular, 'one-off' payment.

"Basically sounds like it's saying for the next year." Sydney

"It tells you this one is a lot more focused on we're only talking the next twelve months, forget everything else. And there's no one off payment. It's just this is. Just think of the next twelve months." Sydney

"It looks like it's an annual amount. So it's like insurance for next year's electricity bill." Brisbane

Capping volatility

- 'Limit your annual electricity bill' and 'to make sure your annual electricity bill only increases by an amount' both imply that the duration of capping is only for a period of a year, in line with their payment assumptions. All of our participants make the same assumption here – that this is an annual reduction in uncertainty.

"In my mind, I'm interpreting as my next bill for the next year." Brisbane



With these parameters in mind, the outcomes of the two Willingness to Pay questions make more sense

- With the conditions of the question less open to interpretation, the survey data looks to be a more robust data set. While participants like the one-off fee of the focus group data at \$329, it should be noted that this is not an exercise in which pricing they prefer, but which question (and resulting data) is less ambiguous.

“I'm surprised it's not even higher for the first one [focus group data]. Like, I'm surprised the gap is not even more” Sydney

“I think for \$240, if you pay as a once off that your bill is not going to go over \$250. I think that's good value.” Sydney

“The survey group, of course. I think it seems like we misunderstood. In the focus group, it was too good to be true. And that's why there's a big variance here.” Sydney

“The focus group question is more open... you had to guess and assume a lot of things, actually. Like, I would have answered differently if I did the survey compared to the focus group.” Sydney

“I guess for me, the 329 once off seems like the better value option. But if the uncertainty is going to go crazy and it could be potentially \$1,000 more, then that regular 240 payment makes sense.” Brisbane

- For the most part, our participants see the \$240 annual amount as reasonable as an average, but there are a few conditions to this:
 - The data shown uses a mean average, and not a median. With a question like this, there’s a potential for kurtosis in the distribution of the data set, and so an artificially inflated average. It would be worth considering the use of a median rather than a mean as a more accurate measure.
 - Some of our Brisbane participants commented to the effect that this amount seems high against the range of \$250. It’s worth considering that this range amount of \$250 creates a point of comparison against the \$240 payment – without this payment, the price of their bill could go well above \$125, but some of our participants (in particular, in Brisbane) look to focus on the \$250 range as almost a *quid pro quo*...I’m paying \$240, but it’s capped at \$125, so I’m paying more than I should.

How do our participants see the Risk Premium question and outcomes?



- While our participants are accepting of the ‘black box’ mechanics of Risk Premium question, they’re not accepting of the outcomes. In contrast to their reactions to the Willingness to Pay questions, the average amounts being delivered in our Risk Premium question are seen as too little.

“Is this just like chump change? Yeah, they are. They're very low. Yeah. Very low.” Melbourne

“That looks ridiculous. To have been paid \$22 for \$1,000 fluctuation. Possibly you'd want something like 200 and something dollars, not 22.” Sydney

“I think there needs to be an extra zero if we don't even think about the \$22.” Sydney

“Why would you do a \$22 discount for \$1,000 risk? I don't know. I can't think about this logically because I don't know. What? Too many unknowns? Too many unknowns? I don't know. I don't have an answer.” Sydney

“You would not take on this amount of risk for so little a reward.” Sydney

*“To me, it doesn't really seem like enough of a discount to accept a potential increase or decrease of that.”
Brisbane*

- Importantly, our participants don’t see the outcomes of this question are reliable, but they also challenge the question structure itself.

“A prerequisite with any survey or questionnaire, I think, should be, can you understand the question? And for me, maybe I'm dumb, but if we hadn't have discussed it, wouldn't have I wouldn't have been 100% knowing what I was answering there if I did it on a survey.” Sydney

We anticipate the same issues in comparing the focus group and the online survey data



- With the amounts in both the focus group and survey data being rejected by our participants as too little, there's comparatively little conversation around the differences between the two. We'd argue that with the two Risk Premium data sets, the same potential conditions exist here that exist with our Early Investment vs 'Wait and See' question... the difference between the two could be a function of one of more of the same conditions... our survey participants could be wanting more (and our focus group participants wanting less) as a result of:

Explanation
and education

"I've got a theory on this. I recall on the night Sam, you did your normal thing where you explained it so clearly and we discussed a lot and people were asking questions and then you were clarifying. Whereas compared to the survey, where you're sitting there alone, I think there would have been a lot of misunderstandings on the survey with this complex question."
Sydney

Peer review

"The focus group data... it's more open to discussion and people going along with the group."
Sydney

Cost of living pressures

Seasonality



In summary...



Our reconvened online groups in summary...

1. **Consensus on the major qualitative themes from our initial groups...** our participants agree with what we've learnt about their understanding of the energy market, how it's changing, and what it means to them.
2. **Several theories from them around why our focus group data and our survey data may be different...** methodological differences in how our two questionnaires were presented, but also changing media focus on cost of living pressures and seasonality may also have played a role here to their minds.
3. **Willingness to pay makes more sense to them than risk premium as a metric...** a clearer model of how it works, but more importantly, a more accurate quantum of how much they'd pay to offset risk: think hundreds of dollars, not tens.
4. **Our survey WTP question is clearer than our focus group question...** while we verbally stressed a one-off payment in our groups, there's a clearer takeaway of the frequency of payment and the duration of price-capping with the quant survey's annualised question design.



Tune in...

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