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Andy: First of all let me welcome all of you. Do appreciate you being here and welcome to our building here in Melbourne, a six star energy rated building. On a day like today even though we have the air conditioning turned way up, we are very energy efficient and we also do have a solar array on the roof, which helps contribute to the energy. But let me start by acknowledging the traditional custodians of the land the Wingery people and their elders past, present, and emerging. It's an interesting day today. It's going to be hot. As you know, originally we had scheduled to let you draw our trading and operations centre in this building, but given that on a day like today we never know what may come our way. We thought it'd be best to let them focus on their job. Although, I do understand that today the system is in very good shape. Richard writes the systems up. So as long as the wind is blowing in South Australia things will be well and good. I think every day, as you know, as he builds things it will be more problematic but at the moment much better than we could have expected given the heat that's coming our way.

Let me start with a little piece of information. You know what that says and I'm not going to read it. That's just to make sure that we do start with safety, and this slide is about our safety, not yours. When you entered the building you should have gotten, and I hope you did, a little safety pamphlet. You did? Let me just talk a little bit about safety as we start. One is, traditionally in Australia if you hear there were two types of alarms and they're in this building as well. We have the beep, beep, beep, which just means pay attention, you'll be told what to do. And if you hear the whoop, whoop, whoop, that means that we need to evacuate the building. Now the only time that we've ever, we [inaudible 00:02:10] ever heard a whoop, whoop, whoop, was after we had our new offices in Sydney opened, and we had a smoking ceremony that hours later set off the fire alarms in the building. We haven't had one of those here.

So if you do hear the whoop, whoop, whoop, it's a real issue and what you would do is please leave your things behind. We will make sure you get them back if we can, depending on what kind of emergency it is, and you'll exit the door that you entered underneath that green running figure. As you head out you'll see another one. You'll take it to a fire stairway. Do not, of course use the elevators.

They probably will not be operative, but even if they were, do not use them. As you enter this exit area, you'll look down a very foreboding long corridor with ... It's dimly lit and it's not finished. It's not a trap. Please do continue through to the stairs and then go down the stairs in a very thoughtful and deliberate manner. Just ensure that you have appropriate footwear. If you do not have appropriate footwear you may want to carry that in your hands as you do that.

Now, that is sort of the extreme safety situation. The more likely risk for you in this room are trips and falls, so if you do have bags please make sure you keep them out of the walkway. If do you have a jacket, we prefer that you do not put it on the back of your chair as that could fall and become a hazard. We do have a closet outside. We'll be very glad to take your jacket to make sure it's hung properly. So, just be attentive to the degree we have hot liquids in the room during breaks. Bumping into each other and spilling hot liquids is not a pleasant thing either. Those are your major safety issues. Be aware of that.

I think the other thing would want to say before we get into the details, is that by your seats you see a little battery. That's there because should you have to charge your phone or other devices we don't have wires running across the floor, so that's also a safety thing. You'll hear a lot about batteries today, not those batteries per se, but that is also an indication that the world is changing and you have a little piece of that future to take with you. But it's really for you to use here should you need to charge your phones or do other things. Now let me start.

There's going to be formal presentations here. But the real purpose of this is for you to ask us questions. So all during the process, there'll be plenty of opportunity to do that. Okay? We'll give presentations. After each presentation we'll spend time, you can address and talk to the presenter or anybody else on the executive team who I'll introduce momentarily. One of the things that we are not planning to do today, which we did the last time we were together at [Torrens 00:05:05] is empaneled the entire executive team and put them in front of you. We think you always have the opportunity to talk to all of us and we'll make ourselves available at the brakes and during the session. So we're not planning on doing that. We think we can accomplish it, but I want you to feel free to feel absolutely confident in engaging the executive team on any topic when you need to. When it's formal, we'll have a microphone available. If you want questions to the presenters, all I do is ask is that when you use the microphone just introduce yourself and your affiliation. I think that would be helpful.

So let's sort of work down from that side and just, I'm going to ask that each executive team member stand up and turn around. I think you know most of them, some you may not. Starting with Elizabeth Britton, who heads up our New Energy area. Before the session and probably at the race you can find her around the New Energy ... in the US we call those Lucy booths out of the Peanuts cartoon, but at our displays there. Next to her is Alistair Preston, who heads up our Organisational Transformation and Strategy group. So any questions about the future, don't ask me. Ask Alistair, because he lets us know what the future holds. He has a scenario for every eventuality and they have colors. So we have coloured scenarios. If you can get him off that, that would be a good thing. He's in charge of planning but also our org transformation process improvements. Next down is John Fitzgerald, who is our company secretary, keeps us in line. No matter what Alistair's scenario says, he'll tell you whether we can actually do what they imply or not. John, thank you.

Next to John is Lisa Harrington, who is probably ... I make her the busiest person because she deals with all our stakeholders and government, and has done just what I think is a marvellous job in helping us communicate over the last 90 days, and I think still to a positive outcome. So about stakeholders, the challenges are recognising not only do we have customers and investors, but we have other people who can keep customers and investors from getting what they need if they're not paid attention to. Management of our stakeholders is critically important. Another member of our team, our Chief Customer Officer Melissa Reynolds, relatively new. You may have met her after the last results. The first time we've actually had the title of Chief Customer Officer. We should give you a sense of how we're thinking about the customer. She'll be talking to you later and she has one of the biggest challenges, which is dealing with the issue of affordability as it comes to our customers.

I think we need no introduction. We're dressed in the same uniform today. We think that gives the sense of solidity and alignment. Brett Redman, our CFO. He's going to have a, I think a very comprehensive presentation of how we're thinking about capital allocation, which I think I know is a question that you all have and I think you're going to find it to be a pretty interesting presentation and he'll love to engage in conversations there. Coming out to the side of the room, newest member of our executive team, head of People and Culture Rita Trehan [00:08:22], who's just joined us. I don't know, seems like you've been here forever. You going to tell me how long you've actually been here?

[inaudible 00:08:31]

Andy: Okay, a couple of months. But having a major impact on the organisation. If you just have chance to meet her you'll find it to be delightful and you can get a sense of everything she's doing. People who have to actually make sure everything's running every moment, Doug Jackson, our head of Group Operations. I'm sure you know him. He's the one who worries about everything that rotates, spins, doesn't move, but has something to do with producing electricity. And fundamentally has a key responsibility in delivering on a lot of the commitments we've made along our 90 day plan, which we'll talk about. Richard Wrightson, who manages our wholesale markets. You'll hear from him today about various things like the NEG, the changing market rules, how we're positioned with new stuff, because that world always changes as well. He will be talking to you as well.

We have some other members that I want to recognize. Where's Phaedra? Phaedra [Deckart 00:09:29], who's in the back, who is in the wholesale team. She's at the key projects. Dave Johnson, who is in group ops, but also with key projects. He is responsible in managing many other things. Craig Lauchlan, who will be here. He's the CET guy. So if you have a question about CET, which is really called CXT because it's customer experience transformation, really a lot of exciting stuff going on there. You'll hear some of that in Melissa's presentation, but you can actually see it and experience it, right Craig, here at the booth. Where is Tim Nelson? Tim, Tim, Tim, Tim, Tim. You got to put your hand up. Tim, as some of you know, is our Chief Economist. I actually believe this, and this is not to give him anything, a little of a bonus, is really setting a lot of the thought processes when it comes to market designs and how we're moving forward in the transformation. He spends a lot of time talking to a lot of thought leaders to try to get them to think the way he does. If he accomplishes that, it'd be a great thing. Tim is here, so if you have questions around policy, or how the markets are designed, and what we're thinking about various components, Tim can deal with that.

[Narelle 00:10:48] Charity, where are you? Narelle is ... [inaudible 00:10:52] a smart home? She'll tell you. She's in the New Energy group. That actually is a not a scale model of your house, but it has a lot of interesting components in a way of representing that. Narelle is probably here maybe half a year, joining us after doing a lot of the smart home and home automation work for others. I don't want to give anybody else brand recognition, but she's ours now. We have high expectations for the things she'll do as we transform into that future. Then we have the Capital Markets team here, who you know as Chris. She's holding up to the far wall and next to James, who you know.So that's that's what we have in terms of the people here, and please do engage them. There'll be plenty of time for that as you see on the schedule.

I'm going to talk to you relatively briefly in terms of content, and then I'll be followed by Richard. Then we're going to take a break. This is a great opportunity now at the end of both these sessions you'll have time to ask us questions, but also when we break, grab a coffee, visit the booths, and also engage with folks as you want during the afternoon tea. Then we'll come back with the customer markets update. We'll end on the capital allocation, and then we'll at least hopefully enjoy some opportunity to chat informally over drinks. I don't know whether those will be outside or outside, so we can all feel the heat together. Let's move on.

I want to start with safety. I know I talked about safety, but here is Safety and Beyond and it's why it's important for us. We have a lot of people working in a very dangerous world, doing very dangerous things. It's our job to make that safe, and I think we're performing quite well. We don't only think about safety when we think about our people in our power plants doing construction, or delivering projects, we think about it in places like this as well. We call it Safety and Beyond now because we started out, as everybody else did, talking about physical safety. But this is no longer just about physical safety, it's about mental health and wellness, which is very important and becoming a bigger issue in the workplace, and stress. People tell me, especially working for me, it's a big issue, the stress factor, so we want to make sure we are attentive to that.

The other element of this is actually creating a safe environment for people to talk. I'm very keen on hearing all voices. I don't necessarily need to follow all voices, but a sense of discipline pluralism is critically important to a business that's changing rapidly. We want all our people to feel free and safe to speak up, because if we don't hear those voices we can get locked in and engaged in quite honestly a navel gazing. We know that the knowledge of this organization is not fully the remit of the executive team, but of all our people and we encourage that. So Safety and Beyond's important. Now, I started this meeting with sort of the safety notice, and probably before October 1986 nobody ever did that. And now almost everybody does it.

This is the Paul O'Neill story from Alcoa. If anybody's read or heard the book, The Power of Habit and a keystone habit that's what that was. Literally, Paul O'Neill said that he turned around Alcoa by focusing on safety. When he first said it in October of 1986 at his first investor meeting, everybody thought he was nuts always talking about safety, but that basic attention to that one habit, keystone habit changed the company because to be good safety you have to be good at a lot of things. There's a discipline to it. It's a quality metric. So focusing on safety allowed them to deal with quality issues throughout the business. So it wasn't just about safety. Now people forget that, but now almost everybody talks about safety and opens a meeting with safety. Paul O'Neill did it for the first time in October 1986 and now we would be surprised if somebody doesn't do it. So safety's important for us. Our performance continues to improve. We have a lot of initiatives there.

But the reason I want to say this is because I want to introduce the next element, which is driving gender equality. Okay? This is an important issue and I've made a commitment as a male champion of change that every time I talk to investors, every time I talk to our board, I will talk about gender balance issues. Now, you can say, "Nice to do, great stuff," but I'm viewing this as I start every meeting talking about gender metrics and balance whether it is the issue of pay disparity or our numbers as another keystone habit, because to be good at gender diversity you have to be good at a lot of things around fairness, and equity, and issues with your people. Okay? So it becomes a keystone habit for us. If you can see by our numbers, are numbers are pretty good. I actually believe that they're probably close to industry leading but that's not sufficient.

The other element of this thing is that why is gender diversity so important? One of the big cultural issues that have a potential of destroying a lot of value, in case you haven't been paying attention, is all the issues of sexual harassment and sexual misbehaviour in large businesses and those aren't issues of sex. Those are issues of power. Okay? The question is, as you become more diverse you lower that higher power hierarchy so that you eliminate the cultural negatives associated with that. That sounds a little bit odd, and it sounds like a little bit of a stretch but I honestly believe it that this is a fundamental cultural lever. We're serious about it. It's also the reason why we're very serious about the LGTBIQ debate, and why we start off early. 8%t of our people, 8% identify in one of those characteristics, okay? It's important because again, it's investing in your people. It's that keystone habit of thinking about equity.

So we pay a lot of attention to this and I know we get challenged by this a lot but we won't stop doing it. This is what we do. It's all about the people. What's really funny is that I used to think the business was easy and people would say, "Well, what's your key on leadership?" I said two things. I said, "One is, I tell people you can do anything you want but there's two things you can't do. One is, you can't break the law, and the other thing is you can't create an unsafe work condition." I thought that's all you had to say. They said, "Go do great things." Then I realized it wasn't so easy because the rest of the job is making sure everybody gets along. Right? And you have to do all those things within this eco structure. And when we look at the eco structure issues performance of your organization really needs to deal with these kind of issues, and that's why we put them out in the front.

Now a second issue is that there's an old adage in being a retailer that you can't treat your customers better than you treat your employees. It's that simple. And so for me, while Mel's going to get up say the customer voice is there. Customers are front and centre, but from where I sit my people are front and centre because we need to get them into position to do their jobs, do them well, and serve the customers well. So these issues become really, really important to us. And you'll hear about them from me every time we get together. You'll hear from me. But there'll come a time, there'll come a time when you'll expect to hear that from everyone. It will be an important metric for you, okay? Now as I look out in this room, I know I have to keep telling this story over, and over, and over again as we start to see gender balance becoming reflected in all our businesses and all our sectors. And it's a it's a big list. There's no question about it but it's really, really important for all of us.

So going from there, this led us to essentially redoing our value system because culture is critically important in a business. Everybody will tell you, "Culture's soft. You can't measure it." It's not true. You can because culture projects as management practices. If you want to know the culture of a business, look at what they do and how they do it. What they say is important. What they do, how they prioritize, how they keep themselves accountable, the management practices that they have. But we've talked about Safety and Beyond, which says it's a safe place to work. Say what you want to say, your voice is going to be heard. It's going to be respected inclusive of all, alright? We want everybody to feel welcome, included. Now there's a difference between being diverse and being and feeling included. Now diversity is fine for me to say, when I say I want a diverse workforce, but for individuals to feel included that's a big deal. That means we respect you, we want your contribution, you're going to be involved, you are included. You're not only welcome here, but you're included as part of what we are and who we are and inclusive of all. If you can get people to feel included and they feel safe, then you get them to focus on what matters. Let's get the business done.

I love the saying, it's an old Peter Drucker saying that, "The greatest waste of corporate resources is to do well that which should not be done at all." And for us, it's always a question of deciding what not to do. Let's do the important things. Let's do the important things. That reminds me of one of my favourite quotes. It's an American political quote coming from one of our greatest presidents ever, Calvin Coolidge. Now maybe you don't know Calvin Coolidge, but that's okay. Most Americans don't know who Calvin Coolidge was either. There are a couple of things he's known for saying. He was once asked, "How many people work at the White House?" He said, "About half." The quote of his that I like is that, "You can't do everything at once, but you can do one thing at once." It's all about finding out those things you have to focus on and deliver on. Focus on what matters. Then the last thing we require of all our people, all our people, is sustainable thinking.

Now, sustainable thinking doesn't have to do with being green. It has to do with making decisions today as if you fervently believe that you're going to be there tomorrow to deal with the consequences. So, it's a question about always thinking about the implications and impact of your decisions and the fact that you will be living in the future, your family's living in that future, your children are living in that future, and you're going to be accountable for the decisions you make today in terms of that. This is a refreshed set of values. We build a lot of things off of this. I thought appropriate for me to tell you this because everything we do you can reflect back whether it's in line with our values. Organizations that have strategies that are not aligned with their values creates dysfunctions and bad things happen. The worst thing that happens is people are not energized, they don't do their jobs well, and value is destroyed. When you have organizations where you have your strategy, your culture, and your values aligned, it's a brilliant place to be. Now, can I say that we're 100% there? No, because it's hard work and it's easy to claim it. It's not as easy to deliver it. This is another piece that we've done, and we're doing it very methodically laying in all these issues.

So let's talk about business. I'll put this up here. I'm just going to take ... Give you the tour of this. As you can see, it always starts with our imperatives. Somebody was asking me as we were assembling, "How do you deal with these issues when the world is changing and when you go political cycle to political cycle?" That's really to try to take a long term view. And two things we know, and two things that I actually drive this organization to take on board. One is that the future is going to be carbon constrained. There's no doubt in my mind. It may not get there tomorrow. You may have noise, you may have people leaving the Paris thing, but the fact of the matter is it's very simple. We are overloading the atmosphere with a heat trapping gas and the rest is details. Okay? It's details. That's the fact. We're already exceeding limits on the temperatures that we ... the concentration of CO_2 in the atmosphere. It's an issue, and I think ultimately the world will be wondering where carbon is going to be an issue, carbon dioxide. We are going to act as if we believe in that future, and decisions we make are all going to be the sense of continuing to move forward to lower our carbon impact.

Now the other key dimension is, one thing we can't live without in any future, our customers. Now, when our regulated business, we don't own them. So we have to do something called ... We have to build advocacy. We use that word specifically, and it means something specifically. It means that it means brand loyalty. It means somebody else is advocating for you, right? Now that does a lot of things. One, is it gets you more customers. It gives you loyalty with the customers they have, and it gives you tremendous political protection. At the end of the day, it's advocacy of customers that protect businesses. I'll give you a perfect example. Let's take Uber before the Uber problems. Uber had to fight in almost every country against a vested interest in livery, in license, in hired cars, on taxicabs. There was no politician who would give in to that easy because it was the system. But what made almost every government modify the rules is that customers love the service and you weren't going to stand in the way of that strong customer advocacy. So that's what we want to build. All right.

I know that building customer advocacy is essential to the success of my business. Now, easy to say, Andy, but what does it mean? Okay? Yeah, I know it means loyalty but how do you build it? Here I'm going to take you on a little bit of a trip, not much, but you have to go with me on this, because I'll talk to you about something that's in my own head, which I try to convince everybody when I get certain about something, I'm not always right, but there was a very interesting piece of work done by David Brock who is a founder of the Neuro Management Institute who basically believes that management has to take account of the way the human brain is wired. A lot of people talk about behavioural safety and behavioural this. He believes that the brain is wired in a specific way, and if you understand how the brain works that's how you should guide what you do. It was really about change management, okay? The article you can find on the internet, he's got a couple of short ones there, it's probably worth the read. He says that the human brain is wired for survival. It approaches those things which increase the likelihood of survival of the entity and it repels from things that threaten it.

When you think about changes, you want to do things that attract people by the way their brain is wired to you as opposed to repel. He came up with a very simple five dimensional ... I think you would call it a mnemonic, right? It's called SCARF, S-C-A-R-F. The first one, S means status. Is that if your status improves or decreases based on an interaction, your chances for survival increase or decrease in a group. The higher your status, the better you will survive. The lower it, the less. We know that treating customers as if each one is important and that we make them feel important, that would be a good thing. Just when you hear Mel talk, she'll talk about things. We know this. Loyalty programs, give me specific personalized service, make somebody feel important. They're going to come to you versus people who felt like they're just one of the crowd. C stands for certainty. If you're more certain about your environment your chances for survival are higher. How do you create certainty in our business? Give good information. Right? It's good metering information. It's accurate bills. It's giving people the information that you need to survive. If you look at our CXC, if you look at New Energy, it's all information bases. It's about giving customers information. So if we give them the status and certainty, we're two-fifths of the way there.

Autonomy. If you're controlling your world, your chances of surviving are higher. Autonomy is giving people the ability to manage the business with you. Give the power to the customers to be in control, alright? R, it stands for relatedness. How do you fit into the whole world? You'll hear in New Energy about our attempts in peer to peer training, of involving customers in our commerce, giving them not only the autonomy but the ability to know how they interact with everybody else in the market. And F, the big one, fairness. If you're treated fairly, you're going to approach. If you're not treated fairly, you're going to go away. There's been experiments done that if I had a dollar and offered you 10 cents, or I had ten cents and offered you a nickel, which deal would you take? The nickel. Why? Because you're being treated fairly. It's not the right economic outcome for you, but you're treated fairly.

So it's about fairness and you're going to hear from us about the Fairer Way program and [inaudible 00:28:19]. We want to treat and give our customers a fair deal. If we can start developing our programming along this model, giving the status certainty, autonomy, relatedness, and fairness, I believe we will slowly build that advocacy. That's just one model, but I think it intuitively makes sense to me. And so when you hear the presentations, especially out of Mel, you're going to hear how we're trying to drive on a number of these things. That's how we're looking at building customer advocacy. Okay, I'm not going to talk through these other dimensions. You'll hear more about that, but I do want to focus on the key areas for us in the coming year. We talked about the continued drive for safety and diversity. I'm not going to talk to that again, but I'm going to go to that yellow box affordability.

Why is this important? Because I think the probability of government intervention is proportional to the square of affordability. Okay? So, as affordability becomes more challenging, political intervention goes higher. You can see that everyone, don't have to tell. Affordability to us becomes a critical issue. Affordability doesn't mean necessarily giving people the cheapest of everything, but it does make them get affordable having the way we interrelate and give products to our customers to allow them to consume, and consume confidently, and within their means. And you're going to hear Mel talk to this in some detail, but what I want to draw back is to that centre box, which I know has been an issue that a number of you have talked us about, which is the renewed emphasis on cost discipline. The only way we can have more innovative products, have more affordability, is by driving cost out of our business. A lot of what you'll hear about the customer experience transformation is all about using technology to drive out costs.

That's really important. That is our key strategic lever in driving the affordability thing, and it's one that we are going to get back to in spades. We probably, in the future will tell you specifically how we're going to think about that target but right now the fact of the matter is the numbers we had at the beginning of this year, in terms of opex and capex, is probably the high water mark. We will be on a very focused trajectory to drive our cost down. I'm not ready at this point to tell you what that is, but I'll tell you it is that important that we are going to sort of refocus ourselves in stays, to get those costs down because it is a strategic lever. I was talking to somebody before, said, "Everybody's doing that. Origin's doing that." Said, "Yeah, but we're better than Origin." "No, no. Origin thinks they're better than you." Okay, great. I think we should all do it because then we all, for the industry, lower the potential for government intervention and we'll compete on other things.

That's fine with us because we're all for competition. Let it come out in innovation, customer service. But driving costs out are important. If we would be the only ones doing it, it wouldn't protect us. I would encourage, and I know where the others are. If everybody's doing the same thing, that's great. If everybody's investing in technology to do it, excellent. It's the ABCs of technology. Artificial intelligence, big data, cloud computing, use that power to drive cost out. A lot of our costs are driven by people having to talk to us about bills and relocating and all the things which we can deal with, with technology. We'll talk about that, Liability of the security of thermal fleet, think about it every day. It's what has driven us to take decisions around [Liddell 00:31:42]. I hold up on this all the time. He says we're operating in the sweet spot. I said, "What does that mean?" He says, "We're going to run our plants that are older so they're producing more with less outages, with less impact."

We saw that for a long time at Liddell, but Liddell's getting old. I think the head of our Mac Gen complex said that she was an old lady. I would never have said that. I would've said it was a geriatric patient. Old lady, and yeah you know what? We still got units that aren't running today because we suffer tube leaks and rotor issues all the time. Doug's up all night long trying to forget it, keep me happy with these plants. We're operating an aging fleet, takes a different way of operations. You've heard this before from this. It's still front and centre for us. Market design evolution national energy grid. The NEG is a good thing. Is it the perfect best thing? No. But do we believe that it could work? Yes. Are there more and more conversations that have to be had around it? Absolutely. Are we engaged in it every day? All right.

But fundamentally underneath that are issues of market design. NEG doesn't sort things for the long term. It's a fix. It's a fix to deal with the issue of the trilemma. Good solid market [inaudible 00:33:05] it's still the objective of everyone, it's just harder to do. Okay? But, we know that ultimately it's the right outcome and NEG doesn't get away from it, it buys us time to sort it. We're very, very supportive of the NEG. What you'll see in our 90 day plan is our 90 day plan was designed specifically to fit that, so that we can build the bridges around the 90 day plan and get people to align with it, and use it as an example of how it sort of deals with that. But there are other issues that are up there. The move to a five minute market versus the 30, and Richard will you talk to you. There's some really keen insights in that whole reveal. I'm not going to talk about those now, see if you're going to get them, but I think they're really exciting.

Continue evaluation of energy supply investments, you're going to hear that in detail around the 90 day plan conversation, but also when you look at our key projects as we continue to look at our big challenges, growth. Brett will talk about some of that today but we do believe there's significant opportunities for growth in our market and they're going to come from innovative projects and yes, do we have the challenge of being big? Absolutely. Do we think we can manage that appropriately? Yes we can. But to think that there are no opportunities for new investments and that's if that's the end of where we can go, I don't think that's the right answer. We can talk more about that. And then the last one, which Brett will talk about and I'm not going to say much more about is the way we think about capital allocations to allow you to know the way we think about capital allocation.

Here it is. There's been a lot of information out on the Liddell 90 day plan. I want to talk about it. I'm not going to talk directly to it. You can ask questions about it, we can talk about this in any level of detail you want, but I want to do a few things. One is that we really believe that what we've come up here is what you'll see more and more of. We firmly believe that as generation reliable and efficient generation is replace in the [NEM 00:35:07] where it is aging rapidly, you're going to see more of the type of things of what we're doing. We do not believe that any private capital will invest in coal plants. Now someone may want to. I don't believe they will. Government may say they will. And if they want to, have at it, but it's a pretty risky proposition.

Coal plants are custom design plants. Everyone is built in as a custom plant. They cost billions and billions of dollars and can take anywhere from eight to 12 years to complete. That's a big risk and if somebody can take that on given where we believe the world is going, they can. It's not for us. We believe that the way we think about this is the way a lot of private investors would think about it. What we're showing is that what we think is where the market is going, and that's why we believe that ultimately you'll get to issues of market design to accommodate something that is fundamentally different than what we have today.

The energy only markets were designed for something that was very specific. They need to be redesigned to accommodate and by the specific products that are in the market. We think what we've offered here actually does solve the trilemma of affordability, reliability, and sustainability, and we believe that people will gravitate to that and we'll come to that same view. We're not going to be arrogant enough to say everybody will. There are lots of viewpoints out there, but we think that this plan meets the challenges we were handed a few months ago. Now, I also want to tell you that this plan didn't happen only because we had a meeting with the Prime Minister. We have always had a view of how we were going to replace Liddell. When we announced it seven years early, we didn't think it was necessary for us to talk about. Quite honestly, one of our principles and it's a principle of most businesses, don't make a decision until the last minute that you can because the world changes every day and you get smarter every day and therefore you reserve. There's a free option, in essence, to hold the decision until you have to make it. Now we didn't have to make this decision now. We could have made it later.

The problem was that we didn't inform the market. And when I say the market, I should say the government, as to what we were going to do and so they created and filled the vacuum their way. That's what this whole question has been about. I think at the end of the day, what we were challenged with, which was replacing the full impact of the removal of Liddell in 2022, in terms of the reserve capacity of 1,000 megawatts, its energy output, and also not put any upward price pressure on prices. We've achieved that. Alright? AEMO has been requested to review the reliability component of that. We've had independent analysis on affordability and reliability, which we've supplied to the government. We fundamentally have provided them a plan, which meets their needs. They also asked us to look at the sale and there are a lot of reasons why a sale doesn't make sense, but one of the most important ones is we need the site because we're going to repurpose that site. That infrastructure is very valuable and you all know how difficult it is to do anything with a green field.

We have electrical infrastructure. We have components that we want to reuse. We want to ensure continued employment for a portion of that workforce that's been committed to that, and we also want to make sure that we continue to provide an economic engine in the community that's around that plant. So repurposing the plant, taking full advantage of what's there, is really important. It's of more value in our hands than we believe it's in somebody else's. So you can see it here, comparing the extension to the replacement. I'm not going to talk on this in detail, but this has been out here for a while. The two pieces that I do want to talk about, which is somewhat new, this issue where it says synchronous condensers. There is a way, and it's been done before to take your turbines, disconnect them from the steam system, get the generator off the message, just spin them and they become synchronous condensers. We can do voltage support, or you could add mass to that and actually provide synthetic inertia.

There's no market for that today, but we would bet that it's a necessary product and the capital investment to convert those turbines into a synchronous condensers, I think is low enough where you would gamble that that market would develop. We can talk more about that. We may not need all of them but we certainly can use some of them. This was done before. I actually did this at AES, at Huntington Beach, a gas plant in the L.A. basin when a nuclear plant had a service needed voltage support. There was a market to get paid for those, but we did that, we converted the turbines to synchronous condensers. That can be done here. That's a new piece of this plan. The other thing that came out and emerged was the issue of exploring pumped hydro, the opportunities, which we started the feasibility work on. Have we said the location? No. So sorry, you will not be the first to know. But it's in New South Wales and we're looking at some pumped hydro opportunities, which are really important because we believe that the Liddell opportunity provides us an option to be a platform for other renewable energy development because we can add synchronous condensing, inertia, as well as storage.

Now the other aspect of the plan is here, and I want to say, it's staged. We recognize that we're not the only ones who might want to replace this work, that there are others. You see a staged approach to this. This is reflected in something that we call our approach, which is agile capital, which Fred will talk more about. Agile panel has three dimensions, optionality. We don't invest capital unless it gives us options. You can talk about options any way you want, but the option is that you can change. You're not flatfooted, you're agile and you can pivot on your investment. That investment leads to other things, you can easily get out, but to give you optionality. There's optionality, as we call at the next dimension, the quantum that we spend only the amount we need to get the effect we need to get. Sort of like ... I won't say anything more about that, but it's just investing the minimal capital to meet your objectives and less time to value. You can see that in this plan, we do those things, which are much more important. First, there are almost no regrets, then the next level, and next level past that.

We believe that this is the appropriate way to do it because it gives us the flexibility of choosing not to do something if somebody else is going to do or if there's a cheaper way to get it done. What you see here, the only thing that has been really improved and underway, that's why I said this didn't start yesterday, it started a while ago with the investments in the park in Coopers Gap in Silverton, that energy we need. You see that we've just signed another contract with Solar PPA. You can see we start to build this up. The 100 megawatt upgraded at base water wrote an extremely high return project. It's an efficiency improvement in the turbines, which will give us this additional 100 megawatts without burning any more coal. So there's no need to actually add more coal. We get greater output from the same fuel input. So it builds up this way in demand response, which is in there. Some of that demand response comes out of big plants, other comes out of the New Energy group that has a distributed demand response opportunity.

So a lot of exciting things in here, but I want to give the sense we have the whole plan, but the plan is based on a very methodical step-through, always recognizing that the market can do something else, the world can change. We're not over-committing. We're doing those things early on that makes sense. We started to spend money on feasibility studies to understand the other things we can do. There's a lot of flexibility in this thing and we think this is the way, a number of things we do are going to look going forward. But all these components are what you're going to see no matter who does anything. Alright? And the gas thing's important because there's a lot of gas in here. But remember the gas is firming, so this is like what is expected out of the NEG. And also initially our first look at gas investments most likely says gas [inaudible 00:43:48], but probably something more akin to a Barker Inlet project, which is reciprocating engines because until batteries actually are economic, large scale batteries, the closest thing you can get to a battery in performance is a multi-stage reciprocating engine. Richard will talk more about that.

And then we do reserve the opportunity to get batteries into Liddell, where we do have the electric infrastructure once their performance and costs are in line. So, quite interesting stuff. I'm going to stop there. We can talk to any level of detail in this in terms of questions. If you ask a question you don't have to worry about my long-winded response because I have a lot of people here to answer the questions. We can do that any time of the day so I'm going to stop here and say, questions. Microphone's coming.

James Burn: Good morning, Andy. James Burn from Citigroup. Look, I just wanted to understand what you felt was the compelling way for you to create incremental shareholder value here. As I look at where the business is today, and I look at the criticisms around market concentration, there's an argument that there's an impediment to further growth here, a lot of the capex that you're spending is about replacing Generation Electricity futures are in backwardation. Yes, you could argue that maybe that's wrong, but where they are saying they're in backwardation. Retail competition is really heating up. Where is that incremental value? What are the catalysts to unlock shareholder value here?

Andy: Yeah, and this is good because we had this conversation earlier, sir. You're not blindsiding me. I actually noticed that Chris just gave Brett the microphone. Because part of this will be in his capital allocation thing, and you've already heard my first answer to this, so Brett, maybe you want to respond.

Brett: [inaudible 00:45:47] responding. I think there is value, and I'll pick it up a bit in later slides. I distinguish a little bit between, say a 10 year view and a one year view. Out on the 10 year horizon, there is tremendous investment opportunity in the market. When you think about the age of the thermal fleet, the big need, the move toward renewables, the way it's coming with storage, all the different things that are going to be happening with distributed generation. When I think about that medium to longer term horizon, I could pull out a whiteboard and write some enormous numbers about the amount of investment and the amount of change that's going to happen. The thing that becomes a little trickier in these sorts of discussions is often real focused the next 12 months, next two years, and also with the events like the Liddell closure, where we know that that will create a hole. How well will that hole be filled in a world where the future is uncertain in terms of timing.

I can talk about 10 years plus with almost more confidence because we think we can predict where the big investments will come. But the transition to that future is choppy. The choppiness is exacerbated by government policy and the smoothness that we're allowed to transition into that future. The shorter term horizon, the answer is harder. The longer term horizon, the position that we've got, I think sets us up with confidence.

Andy: The only thing I would add to that, and Brett will talk in more detail about that view as he does his presentation, but there's this view of what I would call ... First the thing is that there is always the new markets angle, and Brett will talk to our thinking about that. But there's also what I would call the interstitial projects. What I mean that, is take a jar, fill it with big rocks and then see how much sand you can get in there. That's new energy. That's innovation. That's technology. It's all the things that we'll evolve. It's all the investments that we're starting to make in the capital investing, it's $50-100 million a year in technology positions, which may work in this market and may work in other markets. The fact is that the nature of the business proposition changes in terms of what we're actually doing.

The challenge in your question becomes extrapolated in business as usual, it sort of seems to die. The challenge for this executive team is to reinvent its value proposition, think about new ways of going to market, delivering a different set of products and services. Either getting that through the venture investment side, or through the products innovation, or with selling. If you want to have sort of like a very exciting view, talk to Elizabeth because this is what she's charged to do for us. So yeah, getting bigger is a challenge, but I also go back to this other thing around customer efficacy. That's why customer efficacy becomes important again. If you're really getting customers who love you, it gets more challenging to be attacked for being too big.

You get attacked for being too big when you don't treat your customers well, and you use that size to benefit yourself, but not provide any benefits to your customers. There's a lot of dimensions to that, but the only that I wanted to add to what Brett said was that that's why we're doing the new energy thing. The new energy program was conceived because we knew that the traditional model would attenuate in value at some point if we didn't start to grow it and repeat it outside.

You get one question, that's it. No go ahead. I was only joking. I thought they turned your mic off.

James: Yeah. I guess you talk about array invention of the business as opposed to business as usual. We're two years through that reinvention process. The market still looks difficult. Does that create the imperative then to go offshore and only once you've tried to reinvent that you actually really think seriously about going offshore?

Andy: Yeah, look let's be clear. Maybe it's an elephant in the room, but serious about potentially going offshore now. It only works if you find the right thing. What you'll hear from Brett is we're working hard on it, but we're not foolish. It's a very disciplined approach, and at the moment it hasn't necessarily ... nothing has bubbled up. Look, the move into Western Australia was existing products, new markets with existing products. Now the boundary of Australia says, "Well why should you stop looking? If you see something that makes sense, you do it."

Growing your market is an important thing. I understand where all the fear and trepidation is, and we take it very seriously because we're not foolish.

We've reintroduced the term disciplined in our capital allocation. It's always been that way, but we want to reinforce it that we're not feeling that there's something burning a hole in our pockets. I don't think we have an immediate crisis. I think we're doing a lot of things now that are actually changing, changing the way we go to markets. You'll hear more of that from Melissa. I think that's a longer term proposition. I think when you hear Brett talk, he'll talk about all these dimensions and how we think about these opportunities. I want to say, we don't view ourselves limited by anything other than sound practice and a focus on return for the risk we take. That's what I can say now. We'll talk more as we go on.

Yeah, there was a question right in front.

Rob: Good day, Rob [inaudible 00:51:02] with Stanley here. Thanks very much, Andy and Brett. Maybe let me ask a more specific question on slide nine here, where you talk about the levelized cost for different options. Is it easy to run a scenario for the Liddell extension at a normal market discount rate? I presume you've used a carbon risk discount rate for that, and run it for say, 10 or 15 years. What would that cost look like?

Andy: I'm going to look over to Richard first, and then we'll see if other team members want to reply. Jamie, you're in the back and I know that you manage this project, so if you have a view you want to provide, feel free to as well.

Richard: I'm going to just check Jamie's eyes when I say this because I think taking carbon out, you're dropping $10 off the Liddell price, but you're also doing a just slightly small equivalent off the plan. Even when you remove the carbon cost on that, it very much a lower levelized cost manger than replacing Liddell. That's when we talked about solving the trilemma because it does the affordability reliability and you get the sustainability for free.

Andy: Good. Jamie said good. You did good.

Richard: Thank you [inaudible 00:52:21].

Andy: Yeah well, we've all been there.

Speaker 6: Andy, [inaudible 00:52:27]. You talk about the market design, and clearly that's pretty critical in the business. What do you evisage as the appropriate market design? Given you're making investment decisions, which are as you described, a 10-15, which is really risky, 20 probably. You're investing in an energy only market. How's this going to create your pivots, as you describe them, for energy only ... This new market design, how do you invest with that uncertainty?

Andy: It's a brilliant question. That's why we have our Chief Economist in the room. Tim, we'll bring you a mic and ... opine.

Tim: Thanks, Andy. The way I tend to [inaudible 00:53:18], a little bit like what Brett was talking about in the sense it's much easier to see what the long term future may look like just because of the simple fact that if most of the costs become fixed because you've got heavy fixed cost infrastructure, by definition you tend to have to have a market that values those fixed costs, which tends to increase the amount of payment that you get for capacity rather than the energy. That said, I think that there's probably an interim step, which is the way in which the contract market basically evolves to deal with things like the NEG. If you scratch beneath the surface, both the Finkel review and the NEG design, it's really designed, in my mind, to basically try and incentivize the generation that's currently not participating in the contract market, to come up with innovative ways of participating in the contract market.

You get a blend of those fixed costs that renewables tend to have a high proportion of because the fuel cost is free, being complimented with the right flexible dispatchable generation. I think there's a long-term road that you go down just by the nature of the costs, but there's also a short-term step, which I think the NEG is designed to, which is to really incentivize the market to come up with the right solutions to ensure the right partners are contracting so that the unique characteristics of those technologies are being priced in that contract market.

Speaker 8: We've got a question on the web chat from a gentleman by the name of Rob in South Australia. He's asking about the synchronous condenser. What is its role and the need for it in the context of South Australia where there's already a high degree of renewables penetration operating without similar technologies? Could you go into more detail about the role of the synchronous condenser in New South Wales?

Andy: Doug, why don't you give us everything you know about synchronous condensers?

Doug: Alright, thank you. Synchronous condensers are fairly low cost and proven technology way of creating inertia. The South Australia example, inertia's required. There's some options to think about and we're looking at that as well. In New South Wales it's not only creating inertia for the future, because there will be a time when a lot of that generation starts retiring, as Brett pointed out in 10 years plus. The question for us is, what do you with the existing asset to create inertia? When you take the retirement of Liddell into account, you will lose inertia in the system. Yes, there will be other inertia. There's also localized voltage support that will be possible as well. As we take a 1,600 megawatts of generation out, that will make a difference. This gives you the opportunity to repurpose existing assets, continue them on to provide ongoing services to the grid, both for inertia, but also for voltage support in the shorter term. That helps you bring renewables and intermittent generation forms in, in a more sustainable long-term way. That's the purpose of it. It's very low cost and well-proven. We see it as an old technology that has an advantage in a new world.

Andy: And to the point of South Australia, our Barker Inlet Power Project will continue to provide some level of inertia. But as that market evolves, we have the same opportunity as we think about the retirement of units at Torrens. We haven't made any commitments, but we're thinking about this as well. But here's the issue, there's no market for that service. There's no revenue that comes back with it. This is somewhat of a bet because we believe it will. When we make bets we want to make them small. We want to encourage involvement in the market because we can't make investments that we don't get paid for. What we're hopeful about is if we talk about the ability to supply a pure inertial service, or voltage support, that we can encourage market rules, even on a pilot basis to get paid for it. That's still what we would hope to do even in New South Wales. Before we get too far ahead, we want to see, and to Ian's question, how the market's going to respond so you can deliver these different products, which used to always to be delivered with one plant. This is part of that evolving market structure.

We'll take one more, and then we are going to move on. There's plenty of time for questions throughout the day, as I said, as we break, and things of that nature.

Peter Wilson: Peter Wilson, Credit Swiss. [inaudible 00:58:11] this question later on, it may be, but just a detailed one on the Liddell modeling. Built within that Liddell extension plan is a coal cost for Liddell? Tell us what that is, and take us through the journey of the coal cost for Liddell now through to 2022 and I guess [crosstalk 00:58:31]

Andy: Okay. I'm going to do this in two pieces because since Damien [Nix 00:58:34] was the project manager, you might be in the best position to talk of some of these assumptions. Then if we want to talk long range issues around coal supply, since it's in [inaudible 00:58:42] markets, we can do that. Damien, you may want to stand up so people know where the voice is coming from.

Damion Nicks: I'll just jump through here. Look, I want to get Richard to talk to the coal piece first, given Richard's probably the best place here on coal. But the long-term, and what we assume with Liddell is with regard to coal, some of those coal contracts for the overall [inaudible 00:59:04] piece, they roll off in 2025. We've made assumptions there around when those coal costs run off, and what the coal costs are going there as part of the modelling. I don't propose to go into details on those commercial contracts, but that's how we looked at some of that modelling, and both benefits and costs.

Richard: That one's on. Yeah, we've been looking at our coal book. One of the interesting things about the market now, and the requirements for coal, is the actual cost of renewables, and whether the renewables coming into the market, and how that will drive how much coal we need to book both of the assets. Obviously, when a renewable is built, they're generating, the wind is free. You'll see other energy back off the market. That's driving a lot of our thinking when we're seeing the cost of new levels of renewables coming into market, how we pitch our coal book around that. We do have coal in the book to 2025 in the [inaudible 01:00:01] contract, and that's well-known that we have that contract. That is more than adequate to supply the portfolio up until 2022.

We have a period where we have extra coal in the book that we're looking to stock and supply beyond 2025. Clearly post 2025, we'll have to do some more contracts to replace. In terms of the plan, we took a very much view that incremental coal for Liddell would need to be bought, specifically post 2025, and base it on our assumptions about where we think the coal market is, also compared to what we're seeing spark coal in Newcastle. The problem with Newcastle for a session like Liddell, to buy coal you have to compete with exports. Yes, it's a low quality coal, but the price is set by those exports. We're seeing that in the stuff that we've seen since the [inaudible 01:00:46] closure is, yes, we have our underlying domestic coal contracts that were already built in.

When you go for more supply, you actually have to compete to take coal out of export, and you have to pay an export style price, or knock back a little bit because it's not the same quality, less washing, but you still have to compete. That's not just from the mines, it's also from accessing haulage on the round that works as well.

Peter Wilson: Just following up. I guess what I'm getting at is, I'm trying to see what the transition from 2022 to 2023 looks like for you [inaudible 01:01:24] you've played out. To do that, you kind of need to know what the blended coal cost in Liddell's last year of operation is. Can you give us an insight into what that is, and how that might compare to the cost, Richard?

Richard: It's actually a very hard question to answer because you've got an idea of over-existing [inaudible 01:01:46] contract, and you can see that transition away that is adequate coal to supply the base order. Probably the bulk of base order coal requirement in those years will come from that contract. It's post 2025 when it changes significantly. I keep on coming back, is for AGL, it's not just the economics of that coal, it's where it's buying its energy from including the renewable investments in the portfolio and how much coal we need to buy [inaudible 01:02:11] factor.