

Date: Thursday 20 September 2018	Start time: 1pm	Finish time: 4.10pm	Venue: Whittaker Room Powerlink 33 Harold Street Virginia QLD 4014	Meeting no: 11
Facilitator: Gerard Reilly (Powerlink)			Minutes: Nicole Maguire and Rachael Maundrell (Powerlink)	
Attendees: John Gardner (CSIRO) Soruby Bharathy (Adani Australia Renewables) Georgina Davis (Qld Farmers' Federation) Mark Grenning (Energy Users Association Australia) Liam Byrnes (Aurizon) Dan San Martin (Energy Queensland) Robyn Robinson (Council of the Ageing) Alice Paridisi (Shell/QGC) David Hiette (BHP) Norike Ganhao (Powerlink) Jenny Harris (Powerlink) Chris Evans (Powerlink) Narelle Fortescue (Powerlink) Powerlink observers (part-attendance): Julian Thomas Desley Briggs	Apologies: Erin Bledsoe (Shell/QGC) Shelley Ashe (Energy Consumers Australia) Jennifer Purdie (Adani Australia Renewables) Andrew Barger (Queensland Resources Council) Ian Christmas (Edify Energy) Steve Straughan (Aurizon)		Powerlink presenters: Roger Smith Jennifer Harris Matthew Myers Daniel Andersen (+Aurecon representatives)	
Attachments will include all documents provided to panel members at the meeting including: PowerPoint presentation and pre-reading documents				

Item	Discussion	Action	Due date	Who
Meeting commenced 1.	Welcome to Powerlink – Gerard Reilly			
2.	Introductions and meeting agenda – Gerard Reilly			
3.	<p>Powerlink’s Customer Advocacy role and review of Customer Panel Terms of Reference – Gerard Reilly and Narelle Fortescue</p> <p>Summary:</p> <ul style="list-style-type: none"> • Introduction to Customer Advocacy Specialist Narelle Fortescue and role at Powerlink • Discussion on proposed changes to Terms of Reference (as circulated prior to meeting), particularly change to TOR to add Customer Advocacy Specialist to the panel membership <p>Comments (C), questions (Q) and Powerlink response (R)</p> <p>Q: Does anyone want to vote in favour of proposed changes and Customer Advocacy Specialist joining the panel?</p> <p>R: I’ll vote in favour (other panel members seconded)</p> <p>C: We will also circulate Narelle Fortescue’s contact information to panel members for reference.</p>	Circulate contact details of Customer Advocacy Specialist	28 th Sept	Gerard Reilly

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4.	<p>Update on the RIT-T for replacement projects – Roger Smith, Manager Network and Alternate Solutions</p> <p>Summary of presentation:</p> <ul style="list-style-type: none"> • Current RIT-T consultations in progress and upcoming • Engagement levels for upcoming RIT-Ts • Overview of Draft Application Guidelines from AER • QNI capacity upgrade RIT-T – work starting <p>Q: Can you explain what review process the AER undertakes for individual RIT-Ts?</p> <p>R: There is no formal stage whereby the AER reviews information as part of the RIT-T process, however the AER does have an opportunity to read through RIT-T reports and consider them. In our case, they have undertaken reviews and sought additional information on some of the RIT-T's we've done.</p> <p>C: The AER does undertake compliance reviews. In my time working in this space, this has occurred a couple of times. AER looks to ensure consistency with the Rules requirements.</p> <p>Q: If someone makes a submission, what happens to that submission? Is the consultation report their only opportunity to make a submission as such?</p> <p>R: People can provide a submission on the Project Specifications Consultation Report (PSCR) or Project Assessment Draft Report (PADR). Input received at this stage is reviewed with new modelling undertaken on any new identified options. Stakeholders can't provide feedback on the final report (Project Assessment Conclusions Report or PACR).</p>			

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	<p>C: It would be interesting to know who on the panel is reading our RIT-Ts. (One panel member raised his hand).</p> <p>Q: We're keen to provide as many opportunities as possible for people to provide input on our investment decisions. This is one of those opportunities. What percentage of our capex is considered under the RIT-T process?</p> <p>R: About 80% of our capex is reviewed under the RIT-T process.</p> <p>C: So 80% of every dollar we spend in network capex is open for comment. It's important that we get that input from you.</p> <p>Q: Do they (projects that may be subject to a RIT-T) change much from the TAPR? We rely on the TAPR for information so I'm interested in whether it changes much. For example, if the TAPR has an estimated cost, will the RIT-T cost be more significant?</p> <p>C: It would be rare to have a project come up for a RIT-T that is not previously mentioned in the TAPR. Not a lot of variance there. (Costs may vary from the TAPR as more detail is developed over time in support of the investment or alternative.)</p> <p>Q: What level of response are you getting from the Non-Network Stakeholder Engagement Register (NNSER)?</p> <p>R: To be honest, the RIT-Ts we've put out to date have not included a lot of opportunity for non-network options. For instance, when you're talking about secondary systems replacement in an existing substation, there's not a lot of opportunity for non-network solutions. So to date we're not seeing a lot of interest in those. In the North Queensland RIT-T, we'll be looking at potential reconfiguration of the network so we will do more engagement on that project.</p>			

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	<p>Q: Is there an opportunity for demand management to be an option to be a replacement solution?</p> <p>R: Potentially, for example we could reduce the size of a transformer if there was some demand management support.</p> <p>Q: Is that a regional specific cost or system wide in terms of cost benefit?</p> <p>C: The RIT-T is fairly prescriptive that costs/benefits are applied system wide.</p> <p>C: In terms of the QNI assessment in the Integrated System Plan, the first stage, which is due in 2020, involves most of the work being done on the New South Wales side. So not much impact in terms of potential cost from a Queensland perspective. In stage 2, which is out to 2023, works are required in Queensland as well, so we're currently looking into how we'll be doing that RIT-T.</p> <p>Q: Is Powerlink concerned about changes to the cost threshold limit? Will it impact?</p> <p>R: No, it won't really make a difference.</p> <p>Q: What are the RIT-T consultation timeframes?</p> <p>R: The initial consultation report (PSCR) timeframe is a minimum of 12 weeks, then there's a minimum six week period for the draft consultation report (PADR). There is also an opportunity for a dispute period following publication of the PACR if anyone believes we haven't applied the RIT-T as intended.</p>			

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	<p>Q: I'm curious whether no feedback on reports says no one cares, or you're not reaching the people who do care. What are your thoughts on that?</p> <p>R: I'd suggest it has more to do with the latest RIT-Ts not offering opportunities for non-network providers. That's probably the case for these initial ones. If we get the same for the next nine RIT-Ts, particularly with the nature of the North Queensland RIT-T, then I'd definitely start to question our approach.</p> <p>Q: Who else directly receives the RIT-T reports?</p> <p>R: We email the reports directly to the NNSER members, with a link to the website. AEMO also sends the information out to market participants for their information.</p> <p>Q: How many are currently on the NNSER register?</p> <p>R: Don't have that number off the top of my head, will get that and report back. Powerlink maintains a non-network stakeholder engagement register. It would be good for potential investors and participants to be aware of how to participate in this register.</p> <p>Change to the BAU – Business as Usual scenario under the new Rules is no longer treated as a credible option, but as an economic tool to value consequences.</p>	<p>Report back to Customer Panel on current numbers for NNSER.</p> <p>Currently 32 active members</p>	28 th Sept	Gerard Reilly
5	<p>Update on ENA's Rate of Return Guideline Review – Jenny Harris, General Manager, Network Regulation</p> <p>Summary of presentation:</p> <ul style="list-style-type: none"> AER Rate of Return Guidelines Review – current status Final RoR Guideline to be released in December 			

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	<ul style="list-style-type: none"> Engagement on Powerlink transmission pricing consultation – expect to release Consultation Paper around October/November <p>C: For the record, discussion at the AER public forum was that consumer groups said the Draft Rate of Return Guidelines were capable of acceptance, but we would like to see it go further.</p> <p>R: We acknowledge the comment, thank you.</p>			
6	<p>The Energy Charter – Matt Myers, Government Relations Manager</p> <p>Summary of presentation:</p> <ul style="list-style-type: none"> Introduce The Energy Charter and outline Powerlink’s involvement Detail the charter’s draft customer-focused principles and accountability framework Seeking panel input on the draft principles, where Powerlink should focus and consider potential metrics and measures <p>C: Initial comment I’ll make is that the fifth principle doesn’t look like it includes vulnerable businesses.</p> <p>R: Feedback from the End User Consultative Group (EUCG) was that the context of this principle should focus on end users in terms of residential customers.</p> <p>C: If it’s just residential, not small businesses either, maybe end user isn’t the right word. Maybe it should be just residential?</p>			

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	<p>R: We can take that on board as part of the consultation process.</p> <p>Q: In the process of developing this matrix and framework, have you been taking input and feedback at any point during that process from consumers?</p> <p>R: To date, the main feedback has been from that EUCG, we've been focusing on that group initially. From here though, anyone can provide feedback.</p> <p>Q: In terms of the reporting side, are others able to provide viewpoints into that process? I mean if a particular business had a view that they are awesome, and my view differed from that, can they receive a submission or feedback? We work with some of these businesses every day, and some of what they say they'll do and actually do are not the same.</p> <p>R: An Independent Panel is proposed as part of the Accountability Framework for the Charter. This panel would be best placed to receive a submission on how individual businesses are disclosing their activities against the Charter.</p> <p>Interactive session discussion. See Appendix A for notes.</p>			
7	<p>Transmission Network Vision – Daniel Andersen, Manager Network Strategy and Aurecon partners</p> <p>Summary of presentation:</p> <ul style="list-style-type: none"> • Powerlink wants to establish a Network Vision to navigate through the uncertainty of the industry transformation • Want to create a clear direction for stakeholders • Vision will inform and support internal strategic processes 			

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	<ul style="list-style-type: none">Ultimately looking at longer term future to deliver services of value to customers <p><i>Interactive sessions by Aurecon partners. See Appendix B for notes.</i></p>			
8	Meeting closed at 4.10pm			
9	Visit to Powerlink's Emergency Response Room			

Appendix A – Group discussion notes re: The Energy Charter

Feedback on the draft principles and areas panel members believe Powerlink should focus on:

Principle	Principles in Action	Feedback on principles/principles in action	Areas for Powerlink to focus its efforts
1 We will put customers at the centre of our business and the energy system.	1.1 Have a Board that actively oversees the business' culture so as to be aligned with Energy Charter Principles. 1.2 Have management operationally accountable for embedding a 'customer at the centre' culture. 1.3 Ensure employees are engaged and rewarded to be focused on positive customer outcomes. 1.4 Have robust processes to determine customer and community needs and be accountable on how feedback has been considered and incorporated into decision making. 1.5 Demonstrate a culture of innovation and collaboration for positive customer outcomes, including through sharing insights with government, research institutions and across the supply chain and joint advocacy on regulatory, policy and operational issues.	Explicitly acknowledge there are different types of customers – direct connect and residential – who are they? Charter may be too broad – will be difficult for Powerlink Charter is too long at 40 pages.	Raise awareness of who Powerlink is – customer needs to understand for them to be interested. <ul style="list-style-type: none"> - Use customer interface of other businesses to get information out there – e.g. Energy Queensland - Be more direct in communications - SLO is about being seen if people don't know who we are. Need to understand our customers better including direct connects – all very different.

Principle	Principles in Action	Feedback on principles/principles in action	Areas for Powerlink to focus its efforts
<p>2</p> <p>We will improve energy affordability for customers.</p>	<p>2.1 Ensure that investment, commercial and operational decisions are cost efficient, and explain how customers benefit.</p> <p>2.2 Offer customers energy deals that best meet their needs, supported by effective tools and incentives for customers to manage their energy use and cost.</p> <p>2.3 Work cooperatively across the supply chain and with other stakeholders to put downward pressure on price over the short and long term.</p> <p>2.4 Innovate to deliver competitive energy solutions for business and residential customers.</p> <p>2.5 Advocate on behalf of customers to improve energy affordability through engagement in regulatory and policy processes.</p>	<p>National Electricity Objective – aren't these already obligations – so are they really above and beyond?</p> <p>Will be long time for customers to see perceived impacts regarding affordability.</p> <p>Hard to correlate investments and impact on bills.</p> <p>Define where flexibility is – can help customers impact their bill better.</p>	<p>Is the focus for Powerlink to stay at 7% or continue going down?</p> <p>Measure needs to be realistic – what can we really influence and how quickly can the customer see that change?</p> <p>Is there a leading affordability measure?</p> <p>Fight back against claims of 'gold plating' of networks.</p>
<p>3</p> <p>We will provide energy safely, reliably and sustainably.</p>	<p>3.1 Maintain the highest standards of safety for people, the community and the environment</p> <p>3.2 Implement solutions across the supply chain:</p> <ul style="list-style-type: none"> a) that support energy connection, service and reliability that meets customers' needs. b) to resolve service issues that impact customers and the community. <p>3.3 Engage with customers and communities to support and implement new investments, deliver innovative energy solutions and manage operations in line with their expectations.</p> <p>3.4 Facilitate new opportunities and technologies that support cleaner energy solutions.</p>	<p>Where is the word 'emissions' in this principle?</p> <p>Can't do #3 without tracking and measuring this – MUST appear in this document.</p> <p>3.4 in particular needs more beefing up.</p> <p>Safety is an assumption and a regulatory requirement</p> <p>Is there an overlap with annual report requirements?</p> <p>Could be useful to make distinction between BAU and above and beyond. Safety for customer is reliability based e.g. storms, maintenance – direct impact on end-use customer.</p>	<p>Good to include metric on safety.</p> <p>Focus on facilitating a more sustainable business working sustainably with existing customers.</p> <p>Metrics for cleaner energy solutions.</p> <p>Benchmarking to push improvement.</p>

Principle	Principles in Action	Feedback on principles/principles in action	Areas for Powerlink to focus its efforts
<p>4</p> <p>We will improve the customer experience</p>	<p>4.1 Enable customers to get fair outcomes regardless of their ability or desire to participate in the energy market.</p> <p>4.2 Empower customers by:</p> <ul style="list-style-type: none"> a) making sure all communication is clear, in plain terms, accessible and understandable; b) providing insightful and useful information and accessible tools; and c) streamlining access to, and portability of, customer energy data. <p>4.3 Ensure that innovation and design in products and services, as well as communication platforms and tools are driven by customers' needs and preferences.</p> <p>4.4 Have effective and accessible dispute resolution processes, co-ordinated across the supply chain to resolve customer issues and implement process improvements in response.</p>	<p>Will be different for regulated customers vs non-regulated.</p> <p>4.3 How would you measure that?</p> <p>4.4 Easy to track, good principle to have BUT isn't that already in legislation?</p> <p>Value is in the benchmarking.</p> <p>4.2c good to see</p> <p>Maybe include a reference to vulnerable business customers here.</p>	<p>Empower customers to act more sustainably – make the choice EASY (real choice).</p> <p>Where is the shared language across the supply chain?</p> <p>Take a whole of supply chain approach to change management.</p>
<p>5</p> <p>We will support customers in vulnerable circumstances</p>	<p>5.1 Have processes to enable early identification of customers at risk of vulnerability, coupled with intervention measures that can prevent customers falling into hardship.</p> <p>5.2 Provide products and services that are tailored to customers in vulnerable circumstances and support them in getting back on track.</p> <p>5.3 Provide flexible solutions that are easy to access and are provided by specially trained frontline staff with expertise in supporting those customers who face additional barriers to engaging with the energy market.</p> <p>5.4 Take a collaborative approach, partnering across the energy supply chain, and with government and community service organisations to implement innovative solutions that improve outcomes (cost or experience) for customers in vulnerable circumstances.</p>	<p>Farmers can sometimes be both - residential and business. How are they captured here?</p> <p>5.3 Why provide flexible solutions once customer already in hardship?</p> <p>There will always be trade-offs in this area.</p> <p>Review definition of vulnerable customer to potentially expand to include small and large business.</p>	<p>Drive regulatory change where needs are not met.</p>

Feedback on Powerlink's proposed measures for disclosure and comparison:

Principle	Desired outcome	Possible measures	Feedback on outcomes	Feedback on measures
<p>1</p> <p>We will put customers at the centre of our business and the energy system.</p>	<p>Demonstrated, embedded and aligned behaviours, practices and KPIs that drive customer-centric decision making.</p>	<p>Customer centricity score. Demonstrated examples of Powerlink driving customer-oriented behavioural change (e.g. Board activities related to driving a customer culture, adoption of customer as a value, customer training etc.)</p>	<p>Assumption all is well (complaints).</p> <p>Find information suitable for customers:</p> <ul style="list-style-type: none"> - Forms / templates more tailored - Greater transparency <p>Benchmarking against other participants.</p> <p>Are there parts of the business who don't fall into this cultural change?</p>	<p>Feedback from customers in addition to them self-assessing.</p> <p>Option for other end users for indirect customers to feed into the centricity score</p> <ul style="list-style-type: none"> - to help moderate if not influence <p>First year used as baseline going forward.</p> <p>Process for evaluation:</p> <ul style="list-style-type: none"> - accountability - need solid base to then build upon for future years <p>Wording customer training (to update)</p>
<p>2</p> <p>We will improve energy affordability for customers.</p>	<ul style="list-style-type: none"> • Reduced energy costs. • Investments are made appropriately and in the interests of the customer. • Customers have greater control/input that guides decision-making. 	<p>Energy affordability score. Demonstrated examples of customer involvement in regulated investment decision-making.</p>	<p>Perception and reality</p> <ul style="list-style-type: none"> - How to achieve alignment? <p>Delivering optimality for customers? Where does this come in?</p>	<p>Affordability only decided every five years.</p> <p>Powerlink to show it is continuing to improve affordability over course of time.</p> <p>Cost impact on innovation.</p> <p>What initiatives is Powerlink adopting CESS / EBSS / DMIS.</p> <p>What other studies / initiatives is Powerlink looking at around affordability?</p> <p>AEMO / Electranet work.</p> <p>Customer involvement – customer impact</p>

Principle	Desired outcome	Possible measures	Feedback on outcomes	Feedback on measures
				Define who the customer is (vulnerable) <ul style="list-style-type: none"> - Don't lose sight of affordability on vulnerable customers - Over collection of revenue How are the businesses going to accurately report <ul style="list-style-type: none"> - Benchmarking and the importance around this. - Report on constraints in the NEM.
3 We will provide energy safely, reliably and sustainably.	<ul style="list-style-type: none"> • Operational reliability and safety • Facilitation toward a decarbonised future. 	Reliability score. Total Recordable Injury Frequency Rate (TRIFR) scores. Demonstrated examples of Powerlink working with customers to appropriately facilitate connections (i.e. safely, in a timely manner). Demonstrated examples of effective engagement with customers and stakeholders to deliver projects	What about public safety <ul style="list-style-type: none"> - how will this be managed? Decarbonised futures <ul style="list-style-type: none"> - what measures? - not clear around this. Does not clarify availability to sustain current customers.	Who is the customer – need to define. PQ doing OK in how it tries to manage safety. Commissioning / project management of Safe Systems of Work (SSOW) and plans for dissemination of information to connecting parties are great.
4. Customer experience	<ul style="list-style-type: none"> • Energy companies that are easy and transparent to deal with. • Customers are satisfied by the service they receive. 	Social Licence to Operate (SLO) score. Customer Satisfaction (CSAT) score. Customer Effort score. Demonstrated examples of Powerlink working to improve customer interactions, service delivery and build SLO.	Timeliness of confirmation. Need more tailored approach to connection: <ul style="list-style-type: none"> - recognise different commercial drivers between customers - understanding the value of 'certainty of connection – cost and timeframe' for connecting customers and relationship to project financing issues for customer segments. Still don't know who Powerlink is vs retailer. Hard to get answers because people don't know Powerlink customer <ul style="list-style-type: none"> - Work with direct customers - Challenge around benchmarking. 	Direct customer feedback needed. Increasing difficult landscape to finance projects: <ul style="list-style-type: none"> - Bank guarantees security to consider Lenders due diligence.

Principle	Desired outcome	Possible measures	Feedback on outcomes	Feedback on measures
			If segmentation is done right benchmarking can work.	
5. Customers in vulnerable circumstances	<ul style="list-style-type: none"> Ethical and sensitive responses across the energy supply chain to address customer hardship 	Involvement in appropriate programs and with other energy industry organisations to support customers in vulnerable circumstances.		<p>More clarity around who the vulnerable customers are (residential)</p> <ul style="list-style-type: none"> perhaps need another measure to pick up small business what would Powerlink disclose? Opportunity for feedback. What would suit small business? <p>Government needs to be more coordinated</p> <ul style="list-style-type: none"> this is a public policy issue <p>Early identification of potential vulnerability would be valuable</p> <ul style="list-style-type: none"> customers who are going to default on their bill <p>How vulnerable customers can get a real price reduction (across 5 years).</p> <p>Is there account manager feedback</p> <ul style="list-style-type: none"> can EQ provide this? <p>Leverage off existing measures in market.</p> <p>AEMC price trends report -hardship</p>

Appendix B – Group discussion notes regarding Transmission Network Vision**Seeking feedback on:**

1. How are your customers' needs changing? Why is that?
2. How might the energy sector evolve to meet these changing expectations?

Key points captured:**Q1. How your customers' are needs changing and why is that?****Political**

- Paris Agreement – this may impact import/export tariffs
- Setting of emission targets – not spread evenly across industries i.e. transport don't pull their weight whereas agriculture sector gets “flogged”
- Fuels uncertainty in the business community for example, agriculture industry is deferring implementing energy technology as there is no certainty around tariffs
 - o More businesses will struggle and close as a result
- People are now more risk averse
- Seems to be continued conflict in policy
- Protectionist Trends
 - o Affects trade balance and competitiveness - national and international level
- Declining Tax Base at all levels

Social:

- Aging population and how to manage – impacts political environment. Will see kneejerk reactions which will put more people in financial stress, impacts on transport, medical services, housing etc.
- Megatrends will impact all aspects
- Society overall less socialist and more ‘want it all now’ attitude
- Managing population growth will pose challenges
 - o Immigration – changing community expectations

- Different drivers due to different customers – knock-on effect
- Expectation on consultation
 - o Level of (mis-)information
 - o Reviews and reforms are “coming out of ears” resulting in fatigue and inability to keep up
 - o Motivation to become more self sufficient

Environment:

- Climate change / high impact weather events
 - o Drought / water scarcity could become a limiting factor on populations
 - o Fire
 - o Flood
- Loss of farmland
- Denser cities – urbanisation
- Links to social and economic challenges

Legal:

- Above impacts will result in more intervention
- Social outrage is on the rise. Will see heightened activism – result in more regulatory change and impact how businesses will operate – targets for renewables
 - o Driven by social media and enables people to become more proactive
- Technology impacts
- Enforcing IP is becoming increasingly difficult
- Power of choice
- Feed in tariff drops off in 2028
- Regulation is backward looking and catching up
- Trending towards more network competition which will offer more diversity of offerings at the cost of less coordination

Economic

- Markets are being inhibited
- Customers are struggling to manage bills in the short term let alone consider the long term
- Shift to globalisation
 - o Global competition

- Labour
- Expiring gas contracts
- Demand → Boyne Retirement
- Bulk Commodities
- Investment paralysis

Technology:

- Development vast and unknown real impacts (cost reductions and rate of change)
- Breaking down social fabric i.e. crowd funding, don't need big business to get projects up
- Digital divide between the population – old vs young, increased inequality
- Consumer behaviour is changing – no longer responding to incentives
- Enablers for competition – providing optionality

Q2. How might the energy sector evolve to meet these changing expectations?

- Energy Sector needs to be more responsive
 - o Data driven:
 - Make better investment decisions / tailor solutions to customers and energy optimisation
 - Two-way flow of information
 - o Fit for purpose solutions that allows the customer needs to be in control and provides them with more choice
- Different platforms and business models
 - o More than just shifting electrons, but provides mechanism to support vulnerable customers
 - o Customers don't understand Powerlink's timeframe and vice versa
 - Need to simplify the narrative
- Understand the customer better
 - o their behaviour – rational and irrational
 - o Enabling control (taking future energy supply into own hands)
 - Different funding streams and technical support
 - Farmers building own network → becoming less engaged in the conversation
- Energy sector needs to be more proactive in regulatory change – more collaboration needed with customers to drive this

- Shorter regulatory periods
 - Greater flexibility to cater for uncertainty
 - If not, could see forced planning
- Less utilisation of network could result in RAB write downs
- Greater collaboration is required with customers
 - Partnerships to foster Innovation
 - Risk and opportunity sharing
 - Be prepared to fail – business models
 - value doesn't just relate to dollars
- Different Services – range, speed of adoption of new technology which may be incremental or transformational for various sectors, e.g. agriculture, new industries and freight
- Holistic approach to overcome uncertainty and provide greater investment certainty
- Technology developments
 - Evolution of alternate energy sources
 - Hydrogen (Transport, Agriculture, Commercial and freight)
 - Peer to peer trading
 - Impact of storage on the NEM
- Undergrounding of power lines / use of HVDC to remove impact of natural hazards, e.g. bushfires
 - Increased cost of supply