



Customer Panel Meeting Minutes

Date: Wednesday, 15 June 2022	Start time: 1.00pm	Finish time: 4:00pm	Venue: Powerlink's Virginia office	Meeting no: 12
Facilitator: Gerard Reilly (Powerlink)		Minutes: Kylie Dezotti Jules Taylor (Powerlink)		
In-person attendees: Andrew Barger (Queensland Resources Council) Andrew Broadband (CS Energy) Mark Grenning (Energy Users Association of Australia) Jo Sheppard (Queensland Farmers' Federation) Claire Hamilton (Shell) Chris Hazzard (St Vincent de Paul) John Sadler (CWP Renewables) Nicola Roscoe (EQL) Powerlink panel members: Jenny Harris Gerard Reilly Daniel Andersen Brett Mann Jules Taylor	Apologies: Claudie Brumme-Smith (Townsville Enterprise Limited) Ian Christmas (Edify Energy) David Hiette (BHP) Robyn Robinson (Council of the Aging) Cherie Josephson (QCCI)	Powerlink presenters: Paul Simshauser Paul Ascione Gerard Reilly Jules Taylor Nathaniel Dunnett Chris Evans Linda Whatman		

1. Welcome and introductions

- General Manager Communications, Customer and Engagement, Gerard Reilly
- Welcome to online panel members
- Run through agenda
- Introduction of new panel member Jo Sheppard CEO Queensland Farmers Federation.

2. Asset Reinvestment Review Working Group Update

- Paul Ascione
- Working group has now met on three occasions.
- Main focus to date has been education to ensure the working group understands our current approach to Asset Reinvestment.
- We have an agreed scope.
- Next meeting on 21 June – a site visit to Powerlink’s Rocklea Tower Farm training facility to view different power configurations and some of the climbing systems on those towers.
- We are also visiting another site which has challenging access to show some of the issues and trade-offs that need to be considered in asset reinvestment particularly in remote locations where mobilisation and demobilisation costs can be significant.
- We are also developing a strawman analysis of transmission line reinvestment approach options for the working group to consider and review to determine if any of these options are worth pursuing at a deeper level.
- Will keep customer panel informed and towards the end of the year will have some working group recommendations as part of a report that we can potentially include in our asset management practices.

3. System Strength Expression of Interest

- Nathaniel Dunnett
- We have issued an Expression of Interest (EOI) for system security services in May and it closes on 24 June.
- It involves some of the system security services that we use to keep the network secure to meet our compliance requirements on the network.
- The purpose of the EOI is to evaluate different options to meet some of the system security requirements.
- AEMO annually produces a number of system security reports and these reports have highlighted system shortfalls in Queensland.
- The EOI is seeking network and non-network solutions to address these shortfalls; Powerlink will be assessing the submissions and making a recommendation in September this year.
- System strength definition – it’s a measure of our system’s resilience when a disturbance happens such as the sudden disconnection of generating plant. It can be a sudden disconnection or fault on the network that has a significant impact on the stability of the network.
- AEMO has determined there is a shortfall declared at Gin Gin, driven by a shortfall in the resilience and generation between different parts of the network. In this case, options in Central Queensland and North Queensland may be suitable to address the shortfall. We are looking to fill that gap from March 2023.

Comments (C), questions (Q) and response (R)

Q. Are we looking for expressions of interest to come up with other non-network options so we're not having to spend more than what is required to meet that need for our own network?

R. Yes it is a call out to the market to understand available network and non-network solutions that exist or are coming into play on the network that could offer system strength services to address the shortfall in the most efficient manner.

Q. What sort of options would you typically see in the submissions coming through?

R. It could be existing generation or batteries providing that service, so something that can provide that network support during these type of events on the network.

Q. Why don't the connection standards for an inverter-based generator require them to provide this service and why should customers generally pay for it?

R. The EOI relates to maintaining the minimum levels needed for the power system to remain stable under normal conditions and return to a steady state following a disturbance. Responsibilities for Powerlink as the regional TNSP, is to address this shortfall as declared by AEMO. Generators and connection applicants also have a responsibility to implement or fund remediation when there is an adverse system strength impact, which has evolved with generator performance standards.

C. We can think of system strength in two halves. One half is in order is the minimum level required to keep the system stable, and then that's required and funded by the customers and the regulator of the business because that's the bare minimum that they actually need on the system to keep it stable. Then when you've got renewable generators wanting to connect, then they actually need a certain level of system strength as well, but they pay for that.

Reliability and Security Requirements EOI

- Reliability and Security Ancillary Services (RSAS) maintain or increase the power transfer capability of the transmission network within acceptable technical parameters.
- During times of minimum system demand, reactive power generated by various system components is not absorbed and leads to high voltages on the network.
- Services are required to meet an immediate gap of 120 MVAR reactive power absorption in Southern Queensland, increasing to 250 MVAR by 2026.
- Using packet of chip analogy – active power is the power that is transmitted through the network and used at the other end (the chips you can eat. The air that's in the bag of chips is the reactive power that's been generated and higher at specific times of system generation and demand, which is to be mitigated.

- We pay for the whole packet including the chips and the air. This EOI is about is changing the reactive power through the use of a service to actually allow us to put more chips into the bag to improve operation and utilisation on the network.
- By introducing that service we're actually getting more utilisation out of the network, so it's a more efficient delivery of service.

Q. I read this proposal, there's a short-term need and potentially a long-term need, how do you decide what to get on the short-term without having stranded asset risk?

R. That's important with the purpose of the EOI is to look at what services are available to meet that short-term need. A further regulatory test for the longer term need is also considering network and non-network options.

Energy Charter Update

- Gerard Reilly
- Disclosure Statement due for release by 30 September
- Following strategic review now using a decentralised accountability model where Powerlink's Customer Panel will play a key role in reviewing Disclosure Statement and provide feedback on areas doing well/improvement needed.
- Final Customer Panel meeting for 2022 is scheduled for 15 September (Transmission Network Forum held in November)
- Propose an additional session with Customer Panel in late October 2022 to present our Disclosure Statement and answer questions
- "Would the Customer Panel support plans to have a combined session involving other Queensland GOC signatories?"
- Review of Energy Charter Disclosure Statement contents
- Outline of case study highlights under each of Energy Charter philosophies.

- **Principle 1 – We will put customers and the centre of our business and the energy system**
 - Customer Voice@Board level implementation
 - Powering Ahead program
 - Customer Insights Forum
 - Engagement Survey results
- **Principle 2 – We will improve energy affordability for customers**
 - Revenue Determination
 - Asset Reinvestment Review
 - In-situ secondary systems replacement trial
 - Procurement strategies, local procurement focus, globally supply chain management, relationship based procurement
- **Principle 3 – We will provide energy safely, sustainably and reliably**
 - Integrated Electricity Pathways
 - Strategies to manage system strength
 - WAMPAC
 - Community Electrical Safety Plan

- **Principle 4 – We will improve the customer experience**
 - Customer relationship focus for BD team and direct-connect customers
 - Direct connect customer research
 - Early works agreements
 - Community engagement strategy
- **Principle 5 – We will support customers in vulnerable circumstances**
 - Uniting Energy program
 - Indigenous Consumer Awareness Network scholarships
 - Country Universities Centre (CUC)

Overview of Powerlink’s Energy Charter Maturity Ratings

- Jules Taylor
- Part of the Energy Charter Disclosure Statement Process is a self-assessment of our progress against the five principles.
- Ratings start at elementary and progress through to exceeding.
- Propose a slight uplift for Principle 1 – We will put customers at the centre of our business and the energy system
- **Rating changed from Emerging/Evolved to Evolved**
- Propose a slight uplift for Principle 5 – We will support customers in vulnerable circumstances
- **Rating changed from Elementary/Emerging to Emerging**
- Maturity ratings for other principles to remain steady

Q. When were these metrics developed and how long ago?

R. Three years ago these were developed by an Energy Charter wide level so all the signatories have been using this maturity model for the last two to three years to report against. We also have a dedicated working group in the energy charter called the measurement and maturity model working group. Their role would include the review of this model at an appropriate time.

Revised metrics for the Energy Charter Scorecard

- Discussion outlining key metrics to be removed:
 - Customer view of affordability (QHES data)
 - Customer view of reliability (QHES data)
 - Customer view of security of supply (QHES data)
 - Net Promoter Score (Stakeholder Perception Survey)
- Metrics to be retained:
 - Powerlink Employee understanding of Customers (Engagement Survey)
 - Renewable Generator Connections finalised annually
 - Future Renewable Generator Connections annually

- Social License to Operate (Stakeholder Perception Survey)
- Reputation (Stakeholder Perception Survey)
- Trust (Stakeholder Perception Survey)
- Complaints closed to customer satisfaction (12 month rolling average)
- New Metrics for 1 July
 - Network Security Measure (AEMO quarterly)
 - % of renewable energy in Qld electricity capacity (Powerlink annually)
 - Bulk electricity price trend forecast (AEMO)
 - Unsupplied System Minutes (AEMO)
- New metrics that require further investigation
 - Network resilience
 - Non-regulated project delivery on time
 - Affordability (Powerlink annually)
 - Landholder Satisfaction Rating

Update on current Energy Prices and environment

- Paul Simshauser
- Energy Market Suspension
- Review of Winter Peak demand
- External impacts driving energy prices
- International comparison.

Update Borumba Pumped Hydro Energy Storage Project

- Chris Evans
- Pumped Hydro Energy Storage Context
- Significant investment in Queensland in new renewable generation projects
- Strong solar resource
- Complimentary wind resource
- >60% renewable generation observed in Qld market
- Significant periods when renewable generation <10% (predominantly when solar not generating)
- Intermittent renewable generation requires firm dispatchable generation
- Borumba Concept Study completed in May 2020, set minimum design requirement for project:
- 1000 MW generation capacity
- 24 hours storage (24,000 MWh)
- Current phase of detailed analytical studies commenced in late July 2021, with SMEC joining Powerlink as owners engineer in Sept 2021
- Optioneering occurred from Oct to Dec 2021, with a Reference Project defined. Key changes from the Concept Study include:

- Refined height of the new lower Borumba Dam wall (at least 3m lower than identified the Concept Study – and presented in December)
- Increased storage volume of the upper reservoir
- Increased capacity to 1,500 MW to 2,000 MW
- Duration 18-24 hours (36,000 MWh to 48,000 MWh)
- Moved location of Powerhouse from under National Park to below Powerlink owned land
- Concept level design was 1,000MW and 24 hours storage (24,000MWh)
- Aerial survey has identified greater storage available increasing MW (capacity) and MWh (storage)
- For the upper reservoir full supply level (FSL) two options will be assessed
- **36,000 MWh storage (485m AHD full supply level)**
- ~100 m high main dam + 2 saddle dams (800m in total length)
- 1,500 MW x 24 hours
- 2,000 MW x 18 hours
- **48,000 MWh storage (490m AHD full supply level)**
- ~105 m high main dam + multiple saddle dams needed (2.3km in total length)
- 1,500 MW x 32 hours
- 2,000 MW x 24 hours
- The cost of additional storage will be considered against the value and network benefits of additional MWh

Transmission Connection

- The engineering design package for the transmission line and associated network connection will be managed directly by Powerlink
- While the reference design is 2 x 275 kV transmission lines joining into the network at Tarong and Woolooga, Powerlink is investigating the potential for development of a 500 kV network. Utilising 500 kV connections has the potential to provide significant network benefits across southern and central Queensland. Allowance will be made for slightly taller structures in corridor identification and selection to support a broader transmission network strategy
- This configuration is expected to be able manage the likely power station configurations (1,500 MW to 2,000 MW)

Q. Are you basically pumping from the existing dam up to the reservoir and recycling that?

R. Exactly right, they're pump turbines so they generate when the water's going down and then they pump the water back up when it's time to get the water up to the top reservoir.

Q. Just on the pumping, is there an indicative efficiency factor yet or is that still yet to be determined?

R. It's around 25 per cent more electricity to get the water back up the top, what you generate when you're downhill.

Q. What is the rise and fall of the lower dam?

R. That's a good question and it's one of the design criteria that we're looking closely at. The capacity of the existing Borumba dam is 46 gegalitres. The expanded lower reservoir would have up to 220 gegalitres. What we're looking at is the rate at which water is released and

pumped, we're trying to make sure it wouldn't exceed much more than what you'd see at a marine environment from that order of two metres over a six-hour period. Lake Borumba is very popular for recreational boating and fishing.

Q. What would be construction timing?

R. We think we could have it constructed by 2030, but of course there's the environmental approvals are required first and so we'd have to look at what construction works we're prepared to do before we get those approvals, the road upgrades and the early works you might do before you really get into your deconstruction activities.

Enterprise Resilience Review

- Linda Whatman
- The nature and scope of threats and opportunities networks need to consider continues to expand
- Some of these have legislative or regulatory drivers
- Australian Energy Regulator Network Resilience Guidance Note
- *Security of Critical Infrastructure Act 2018* legislative reforms
- Government stakeholders are requesting reports on a broader set of issues
- Expectations of what networks should deliver are increasing
- Current Resilience definition - The ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruption
- Future State Resilience definition - The integrated approach to build and monitor capabilities across Powerlink to help achieve strategic objectives and keep pace with the changing business environment to strengthen our brand and reputation by delivering financial, human, environmental and societal value to our customers

Q. Is the expenditure for the resilience review in your reset?

R. No we were going to try and absorb some additional costs to manage the level at which we're at and we were also very mindful that was very cyber focused. Also mindful that legislation was in play and hadn't been enacted, so we didn't include more in our reset but if the costs involved in uplift end up being material, we may need to seek a pass through.

Q. To what extent do you internalise the costs through your capital program?

R. I think from our viewpoint it is about how can you actually plan - so we're lifting up some activity at the moment but what are some of the other things that we should be looking at, at the same time? So, it's about really looking out ahead and what can we do today with our current activity and our current program of work, rather than standing up something later on.

Actions:

- *Powerlink share the Customer Metrics Review for panel feedback.*
- *Customer panel to provide any feedback on Metrics Review for Energy Charter Scorecard ahead of the next Panel meeting in September.*
- *Powerlink to update the panel with information on additional metrics needing further investigation ahead of September panel meeting.*
- *Powerlink to ensure any pre-reading for the next panel meeting is provided a week prior to the meeting to allow for review.*

Meeting ended at 4.10pm.