

Powerlink Queensland

Transmission Network Forum



2016

In July 2016, Powerlink held its second Queensland Transmission Network Forum with more than 100 customer, consumer, government and industry representatives in attendance.

The forum built on the success of last year's event with stakeholders discussing the future of the transmission network.

A presentation outlined the key findings from the 2016 Transmission Annual Planning Report (TAPR), providing an insight into future energy and demand forecasts, network development and future investments.

The presentation was followed by two interactive breakout sessions to discuss how:

- the transmission network can support large-scale renewable generation
- Powerlink can improve engagement in developing non-network solutions.

Powerlink's transmission network is an integral part of the Queensland electricity supply system, with an important role to play in reaching a lower carbon future at the lowest possible cost.

The forum provided the opportunity to gain the views of a range of stakeholders on how Powerlink can best support large-scale renewable generation, with feedback sought on a 'clustering model' which could drive economies of scale through the development of Renewable Energy Zones (REZs).

Forum participants also gave their views on how Powerlink can improve information sharing, stakeholder collaboration and risk management in developing non-network solutions.

Positive feedback was received from forum attendees about the quality of information provided, and the engagement approach Powerlink is adopting to ensure it is delivering a valued service.

For more detailed information and data obtained from the sessions, please contact Powerlink on pqenquiries@powerlink.com.au or 1800 635 369. For information in relation to business development opportunities and connections, please contact Powerlink at businessdevelopments@powerlink.com.au.

Session

|

How the transmission network can support large-scale renewable generation





Breakout session I – How the transmission network can support large-scale renewable generation

This session included an introductory presentation about the current renewable landscape in Queensland and provided an outline of Powerlink's analysis of renewable opportunities. The presentation also provided an overview of Powerlink's new 'clustering' model, which proposes the development of REZs to drive economies of scale.

Following the presentation, participants were invited to provide input into each of the following questions:

- How can the process of connecting to the transmission network for a large-scale renewable generator be improved?
- What does a fit-for-purpose renewable connection look like?
- What information can Powerlink provide to the market that will add value?
- What are your views on the REZ model?

Participants who registered for this session were provided with a copy of Chapter Seven of the TAPR which focuses on renewable energy.

The following provides a high-level summary of key themes from discussions.

Question 1

How can the process of connecting to the transmission network for a large-scale renewable generator be improved?

Better sharing of information, earlier in the process

- Market would gain value from more information on all the current connection enquiries – potentially through a register of potential connections being made available to the market (issue is the strict confidentiality requirements of the National Electricity Rules).
- Market would benefit from more documentation and guidelines on connection processes (and identification of potential risks) e.g. on website, similar to distribution network service providers.
- Market would gain value from more communication on what information is needed upfront from connection proponents to help streamline the process.

More clarity on cost and timeframes

- Current connection process timeframes are too long for renewable generation – speed is of the essence. Ideally need to shorten connection process so it is less than six months.
- Market would gain value through the provision of generic connection agreements, a single point of contact and standard documentation regarding timing to help streamline the connection process.
- Market would benefit through the provision of upfront estimation of costs for the connection process. Need to provide greater transparency on costs, including ancillary services.

Regulatory matters

- Ensure that Transmission Network Service Providers (TNSPs) appropriately manage any conflict of interest in how they provide regulated versus non-regulated services.
- Currently there are too many jurisdictions and requirements across the National Electricity Market (NEM). How can we get better standardisation across the NEM?
- Gain a better understanding of Marginal Loss Factors (MLFs). Can Powerlink work with AEMO to provide high-level advice on MLFs?



Question 2

What does a fit-for-purpose renewable connection look like?

Cost is key

- Reducing the cost of connections is key. Investigate lower cost connection configurations, economies of scale, smaller land parcels, use of leasing models, upfront cost deferrals and making sure that asset life matches plant life.
- Market would benefit from a new standard for renewable connections to better align with asset life and equipment.
- Market would gain value from standardised assets to suit specifications of renewable generation and help reduce operation and maintenance costs.

Single circuit connection preference

- Preference for renewable connections is for a single circuit rather than a double circuit connection due to reduced cost and predicted shorter asset life (20 to 30 years).
- A staged delivery process would assist with providing certainty and managing costs.

Question 3

What information can Powerlink provide to the market that will add value?

Raise awareness of potential opportunities for shared connections

- Powerlink should provide more information on other connection applications for a dedicated area and investigate whether it can facilitate better cooperation between connection proponents to drive synergies. When Powerlink responds to a connection enquiry, it should advise on how many other enquiries are active at nearby connection points.
- Be conscious about the flow-on impacts on stakeholders (local government, landholders etc.) of sharing information regarding potential shared connections.
- Consider confidentiality requirements of the National Electricity Rules (NER).



Provide more insights into indicative costs

- Better share information about proposed connections to foster greater collaboration among renewable generation proponents with a view to reducing financing risks.
- Information that provides indicative (or generic) costs for design, transmission lines, easements, transformers, additional bays etc., would be highly valued.
- Call for more information to be provided on a site-specific basis to allow proponents to better determine site viability.

Network-related intelligence

- Value in Powerlink providing some simple tools to better explain MLFs for proponents including forecasts and scenarios.
- Can Powerlink provide real-time information on network capacity and constraints through a Network Opportunity Map?
- Better access to Powerlink's Geospatial Information Systems (GIS) would provide valuable data to assist renewable generation proponents.

Powerlink's TAPR

- Having a dedicated chapter on renewables in the TAPR is a good first step, but participants believe there is an opportunity to include more information in next year's report.
- Examples of new information that could be referenced in the TAPR include a statement of network opportunities, network capacity at different locations, spare circuit breaker bays at substations and any cost assumptions made by Powerlink.



Question 4

What are your views on the REZ model?

Overall sentiment regarding the REZ concept

- The use of REZs is a good idea, but one that needs active involvement from a range of stakeholders, in particular government, to generate most value.
- REZ model needs further investigation to gain a better understanding of market impacts, funding models and project delivery.

Market impacts

- Query as to whether the co-location of renewable generators in a REZ increased the risk of intermittency across the NEM.
- Powerlink should closely liaise with AEMO to discuss potential flow-on effects of generation in REZs.

Funding models

- How can the REZ model overcome the 'first mover' risk, where the first mover takes the bulk of the risk, but later movers may pay more?
- Powerlink should investigate funding models regarding establishment of REZs, e.g. Australian Renewable Energy Agency (ARENA).
- Powerlink could commit to making the upfront investment to develop the REZ and then recover the cost over the longer term. What other incentives could be provided to drive clustering of renewable generation?

Project delivery

- The use of REZs should not add approval steps or delay project timelines.
- Land tenure is an important issue. Is the best model for the government, Powerlink or the proponent to own the land? Is there an opportunity for Powerlink to act as a developer and release appropriate land parcels to the market?
- Need to prevent future land banking that may lead to negative outcomes for renewable generation proponents.

Session

2

How Powerlink can improve engagement in developing non-network solutions





Breakout session 2 – How Powerlink can improve engagement in developing non-network solutions

This session included an introductory presentation about what Powerlink has done in the past, its current operating environment and how it is responding to the changing external environment. The presentation also provided an overview of future non-network solutions, Powerlink's processes for implementing these, and outlined a practical example based on replacement work at a North Queensland substation.

Following the presentation, participants were invited to provide input into each of the following questions:

- How can Powerlink improve its non-network feasibility process?
- Are there any other factors Powerlink needs to consider in its non-network feasibility process?
- What do you most value with regard to non-network feasibility engagement?



A significant amount of feedback was received during the session. The below provides a high-level summary of the key themes from discussions.

- Rather than focusing on a single solution, Powerlink should provide a wider definition of the need and other contextual information such as costs and benefits as this would broaden the options and draw out innovation.
- To maximise opportunities, it is important that engagement occurs early to provide sufficient time for the market to understand the network requirements and respond.
- An iterative and collaborative process, characterised by open and two-way sharing of information is important. This will support a thorough understanding of the problem and enable the development of alternate non-network solutions that are feasible.
- It is important that Powerlink focuses on achieving a balance between the management of confidential information, intellectual property and information sharing throughout the process.
- Powerlink should consider an approach to risk management to encourage non-network providers and allow more realistic pricing of non-network services.
- Acknowledge that non-network providers and Powerlink are on a learning journey together. Sharing expertise and knowledge will encourage participation, improve relationships, build trust, facilitate joint benefits and optimise solutions.



Contact us

Registered office	33 Harold St Virginia Queensland 4014 Australia
Postal address	PO Box 1193 Virginia Queensland 4014 Australia
Telephone	(+617) 3860 2111 (during business hours)
Email	pqenquiries@powerlink.com.au
Internet	www.powerlink.com.au
Social media	   