Ref. A5305388

14 September 2023

Ms Rachel Thomas
Project Leader
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Sent via email

Dear Ms Thomas,

PRICE RESPONSIVE RESOURCES CONSULTATION PAPER

Powerlink Queensland (Powerlink) welcomes the opportunity to provide feedback on the Australian Energy Market Commission's (AEMC's) August 2023 Consultation Paper on integrating price-responsive resources into the National Electricity Market (NEM) Rule change proposal.

Powerlink considers integrating price-responsive resources into forecasting, dispatch, and scheduling to be a positive step in facilitating the participation of consumer energy resources (CER). Visibility and dispatch of flexible (price-responsive) load, whether CER or large controllable industrial demand will enable efficient operation of the power system and support prudent transmission network augmentation.

We support the broad intent of the reform and query the implementation as it relates to transmission network system operations. When designing the visibility and dispatch solutions, consideration needs to be given to the future interface between Distribution System Operators (DSO) and transmission network system operations. This interface would facilitate the potential use of flexible load for non-market services, further described below.

We support the approach to aggregating National Metering Identifiers (NMIs) into zones for greater forecasting, scheduling, and dispatch accuracy. Amalgamating NMIs into light scheduling units (LSUs) that align with, or are easily mapped to, Transmission Node Identifiers (TNIs) would facilitate the incorporation of flexible (price-responsive) loads into constraint equations as well as future non-market services such as:

- contracted load reduction as part of a remedial action scheme
- contracted increase/decrease of load to re-secure the network in the event of a contingency during planned work

While we recognise there may be additional complexity to aggregate NMIs at a more localised level, this mapping likely already exists within Distribution Network Service Providers (DNSPs) as part of ensuring National Energy Customer Framework (NECF) requirements are met.

In addition to CER, more flexible demand from the commercial and industrial sectors would provide market benefits if visible and controllable to the market and system operators but could provide an additional burden to manage (with associated costs) if not visible and controllable. The electrification of industrial processes and introduction of new industries

(including for hydrogen production) provides a unique opportunity to design processes to be flexible at different timescales. Being able to turn down during price spikes creates an opportunity to reduce costs for energy-intensive businesses. If these intentions were visible to the market, dispatched, and part of price formation, this flexibility becomes part of 'firming' and two-sided markets to the benefit of all consumers. However, if these intentions were not visible, the system operator would need to manage potential sudden reduction and subsequent return of load adding complexity and costs to TNSPs and system operators.

Powerlink encourages the Commission to consider how these price-sensitive large loads, in addition to CER, would be better integrated into the market and system operation.

We have provided responses to two of the questions raised in the Consultation Paper in Attachment 1. We appreciate the opportunity to work with the AEMC as part of this Rule change process.

If you have any questions regarding this submission or would like to meet with Powerlink to discuss this matter further, please contact Ms Alex Price (Manager, Strategic and Future Network Operations) on 0474 805 706 or email alexandra.price@powerlink.com.au.

Yours sincerely,

Emma Rogers
GM NETWORK OPERATIONS

Attachment 1: Response to Consultation Paper questions

Question 1. (1) Integrating price-responsive resources into the NEM

Powerlink supports the increased visibility of price-responsive resources. We agree with the five types of issues the Commission has identified.

Powerlink considers non-visible price-responsive resources have the potential to significantly impact network operation and outage planning in the transmission network. For example, a sharp reduction in demand in areas of the network because of high prices at the regional reference node could result in the network no longer landing in a satisfactory operating state for the next contingency. This would be flagged by the Energy Management System's Contingency Analysis tool and could result in an additional burden on control room operators as they are forced to manage the network reactively, for example by controlling voltage. Greater visibility of price-responsive resources would allow a more proactive approach to voltage management and minimise power quality impacts.

In addition, greater visibility of price-responsive resources could drive more efficient infrastructure investment in the longer term. We envisage that at some point in the future CER will need to be co-optimised between distribution level congestion, transmission level congestion and market outcomes.

Question 4. (4) Visibility mode as a stepping stone to the dispatch mode

We appreciate that traders may need to test the response of their LSUs and support the idea of visibility mode to allow traders to test and validate before entering dispatch mode.

There are whole of system benefits to the broader visibility of price-responsive resources. As the operating envelope of the transmission network becomes more dynamic, we foresee greater use of short-term support arrangements to operate the network in a flexible manner. These short-term support arrangements may include leveraging CER to resolve transmission network limitations, which are not solely market based. We are happy to provide a presentation on recent examples of the challenges we have experienced in regional Queensland.