



19 October 2020

Dr Kerry Schott AO
Chair
Energy Security Board
Submitted via email: info@esb.org.au

Dear Dr Schott

Re: P2025 Market Design Consultation Paper

CitiPower, Powercor and United Energy welcome the opportunity to respond to the Energy Security Board's (ESB) consultation paper on the post 2025 market design.

The National Electricity Market (NEM) must evolve as the mix of generation and customer expectations change. The ESB has been tasked to develop a market design for the NEM that delivers secure and reliable power at least cost to consumers, and accommodates the changes underway and expected in the future.

Our networks deliver safe, affordable and reliable power to more than 1.7 million homes and businesses and are among the most efficient and lowest cost to customers in the NEM. CitiPower is the most cost-efficient network in the NEM providing electricity to Melbourne's Central Business District and surrounding suburbs. Powercor is Australia's leading rural electricity distribution network supplying the western suburbs of Melbourne and western Victorian regions with 99.97% reliability. United Energy supplies the east and south-eastern suburbs of Melbourne and the Mornington Peninsula and is recognised as a leading innovator of solutions for electricity supply challenges.

We acknowledge our role in facilitating new energy technology benefitting the environment and the communities we serve. Through our networks, we are supporting the emerging products and technology offering new choices for customers and integrating power generated from a variety of renewable energy generation sources.

We support changes to the NEM over the longer term, noting:

- changes to the markets should be made gradually, where distributors can continue to enhance their ability to support greater levels of Distributed Energy Resources (DER)
- consumers must retain sufficient and appropriate levels of protection
- export tariffs should be introduced to, and subsidies removed from, the network charges framework
- all participants should have the opportunity to participate in the markets for essential system services
- changes should balance the need to deliver lower costs to customers with the obligation to meet the broader social, economic and environmental expectations of our community.

These comments are discussed in more detail below.

Two-sided market and DER integration

We support a progressive approach to the development and implementation of changes to the market to support greater DER participation, together with a clear identification of any barriers and shortcomings with current market arrangements that may be viewed as impeding DER. A progressive approach will allow reviews and improvements to be made to the program of work, while also keeping costs affordable for customers.

The Australian Energy Market Operator's (AEMO) 2020 Integrated System Plan forecasts that DER could provide up to 13% to 22% of total underlying annual NEM energy consumption by 2040.¹ A mix of investments will be required to enable distribution networks to better cater for this increasing level of DER.

We are concerned that 'operating envelopes' alone are viewed as the panacea to resolve all distribution network constraints. Rather, a dynamic voltage management system (DVMS), smart inverter settings, as well as network alterations will be required on distribution networks to unlock greater levels of solar hosting capability and ensure that new and existing customers obtain value from their investments. A DER management system (DERMS) is the next step in effectively managing constraints where they prevail to ensure fair customer outcomes. We are investing in these capabilities to build upon the foundations provided through our fleet of over 1.9 million smart meters.

Further, whilst operating envelopes may facilitate the creation of distribution-level markets in the NEM, such markets should only be established where they will provide a net economic benefit to customers and other alternatives cannot provide similar outcomes for lower cost.²

Consumer protections

The framework for the future market must be able to cater for different levels of consumer participation and provide appropriate consumer protections. Large commercial customers connected to the distribution network may be keen to actively participate in the market, and the framework should allow this to happen. Residential customers may be willing to participate, but do not have the time or expertise to respond to price signals. For these customers, the role of the market aggregator will become increasingly important however there will need to be oversight of these players. A large number of customers do not currently churn in the retail market, and these customers should continue to be accommodated in the market without penalty.

A realistic assessment of the magnitude of consumer participation should also be taken into account when assessing the costs and benefits from the transition to a two-sided market. The costs should not outweigh the benefits.

Network pricing

While we currently have no plans to introduce export tariffs, over the longer term, we support their introduction as well as the removal of subsidies as the transmission and distribution networks become a transport layer for buying and selling electricity. These changes will allow network tariffs to become cost-reflective, thereby providing better price signals to consumers leading to more efficient use of the network. This may reduce the need for additional network investment resulting in lower network costs over the longer term.

The current framework has many subsidies which distort the ability to provide cost-reflective tariffs, including:

- avoided Transmission Use of System (TUoS) payments to embedded generators on the basis they may reduce demand from the transmission network in a particular location thereby avoiding or deferring augmentation of that network. In practice, embedded generators may be contributing to the need for augmentation of the transmission system. Consumers may end up paying the avoided TUoS subsidy as well as the transmission augmentation costs (if no costs are avoided or deferred)
- micro-embedded generators do not provide a capital contribution towards the augmentation costs of their connection beyond the first point of transformation in the distribution network³

¹ AEMO, 2020 Integrated System Plan for the National Electricity Market, July 2020, p. 41.

² For example, see Energy Networks Australia, Open Energy Networks Project, Position Paper, 2020.

- guideline 15 still applies in Victoria which means that large embedded generators also cannot be charged for augmentation beyond the first point of transformation in the distribution network ⁴
- consumers also pay for feed-in-tariffs through their network charges.

Essential system services

All market participants, including distributors, should be able to participate in the provision of essential system services such as inertia, frequency control, and system strength. The arrangements should not be limited to any particular class of market participant as this may unintentionally exclude those who can provide such services at lowest cost to customers.

For example, we consider that distributors should be recognised as system strength service providers. The current framework does not recognise the challenges that distributors are facing and their role in maintaining and operating a secure power network. Both transmission network service providers and distributors are facing the reduction of system strength caused by the connection of large scale inverter-based generation and the retirement or changing dispatch pattern of synchronous generation. Distributors should be allowed to identify and manage system strength shortfalls manifested from within the distribution network.

We consider that a flexible approach is preferable for procuring essential system services, which may involve ahead of time or real-time spot markets, or a combination of these options. There are currently different arrangements in the market for the procurement of frequency control ancillary services (FCAS). Some relate to forecasting and procuring per event, or on an ongoing market basis. At this point in time it is important to retain flexibility of the arrangements, and to ensure that central planning of the need for these essential system services is undertaken to facilitate the development of markets to provide these services.

Meeting all customer expectations

We recognise the importance of ensuring changes to the NEM deliver lower costs to customers. Improving energy affordability remains the highest priority for all categories of customers. However, other social, economic and environmental expectations are also of increasing importance to communities nationally.

Stakeholder engagement and consultation supporting our 2021-2026 regulatory proposals identified increasing consumer power and interests in environmental factors as the key influencers of the most likely future scenario for the NEM. Those consulted considered it most likely that by 2035, the electricity network and market will have adapted to a greener future quickly, backed by more investment in alternative energy sources and policies that encourage more ambitious renewable energy targets.

Accordingly, the NEM needs to be designed and its market participants regulated in a way that enables better planning and preparation for new technologies which will result in better outcomes for our customers, communities and the environment. Energy affordability is just one of the benefits expected from the NEM.

³ Refer clause. 5A.E.1(b) of the National Electricity Rules

⁴ Essential Services of Victoria, Electricity industry guideline no. 15 connection of embedded generation, August 2004.

Should you have any queries, please contact Elizabeth Carlile on (03) 9683 4886 or ecarlile@powercor.com.au.

Yours sincerely

A handwritten signature in blue ink that reads "Renate Vogt". The signature is written in a cursive style with a large initial 'R' and a distinct 'V'.

Renate Vogt
General Manger Regulation
CitiPower, Powercor and United Energy