



19 October 2020

Dr Kerry Schott AO
Chairman
Energy Security Board

By email: info@esb.org.au

Dear Dr Schott,

Reference: SIMEC Energy Australia Response to P2025 Market Design Consultation Paper

SIMEC Energy Australia (SEA) has prepared the following submission in response to the Energy Security Board's (ESB) Post 2025 Market Design Consultation Paper. SEA considers that the ESB's paper provides a much-needed opportunity to appropriately frame the debate as to the National Electricity Market (NEM) settings required to deliver the sectoral transformation currently underway.

The stationary energy sector is truly at a pivotal moment in time. With the decisions, and any subsequent changes, that are made to electricity and gas market settings over the coming years effectively determining the future of those markets, their efficiency and effectiveness. It is undeniable that decisions made will have real impacts on Australia's economic growth, as well as the standards of living of energy market customers, well into the future. It is therefore crucial that the right settings are in place.

SEA notes at the outset that the extent to which the ESB is able to frame a single, coherent, approach to delivering the transformation will positively impact market outcomes. This is because ongoing investigations, and reviews, can significantly diminish market predictability which increases costs as investors must 'price' in a risk element to their investment. With any cost increases being borne by end use customers. This is a critical point.

By way of background, SEA is a member of the GFG Alliance—an international group of businesses with interests in mining, energy generation, metals engineering, financing and property. SEA is presently focused on developing investment in renewable energy and storage capacity in Upper Spencer Gulf region of South Australia to the value of over \$750 million. SEA's generation development portfolio includes the following assets:

- The 280MW Cultana Solar Farm, which will deliver new renewable generation at scale; and
- The 100MW Playford Utility Battery (PUB), which will use an innovative inverter to deliver market stability. SEA has been working closely with ARENA to secure a grant under the Advancing Renewables Program.

The express purpose of these investments is to deliver energy, at globally competitive prices, to industries that are among the largest employers in Australia.



In addition to its project development activities, SEA is also responsible for managing the energy needs of the domestic GFG businesses which include the Whyalla Steelworks, located in South Australia, and a host of other entities which have a total load of 1.5TWh per annum. SEA notes that end use customers typically face a significant number of additional charges on their bill, aside from the cost of energy itself. This includes, network charges (distribution and transmission) as well as the cost of Australian Energy Market Operator directions and market support services. These costs are not insignificant.

In regard to the ESB Consultation Paper, SEA notes that in March 2019, the ESB was requested by the COAG Energy Council to advise on a long-term, fit-for-purpose market design for the NEM. Further that, the ESB's work is framed as a pathway to a fit-for-purpose market design with all reforms being evaluated together to ensure they lead to an integrated solution (with final recommendations on all reforms made by mid-2021). SEA is overall supportive of this approach.

From SEA's perspective, the importance of an integrated strategy is clear. Such an approach will allow us to effectively manage, and supply at least possible cost, the energy needs of our current (and future) customers with greater confidence. Specifically, in regard to the Whyalla Steelworks, transformation plans at the site mean that clarity on future market design will directly influence on-site supply options and how energy consumption is managed.

Ostensibly, SEA considers that the challenges and opportunities facing the NEM are:

- Delivering predictable market settings to minimise costs for end use customers;
- Transparency and timeliness in the asset connection process;
- Timing of thermal asset exit and investment in new assets;
- Demand management opportunities; and
- Changing network utilisation (both transmission and distribution) and the extent to which measures such as the Co-optimisation of Generation and Transmission (COGATI) will address the changes.

Asset exit and whether businesses can manage risk

Although thermal generation asset exit in the NEM is required, it can create a number of issues. On the one hand the transformation requires the exit of incumbent thermal assets in order to deliver lower emissions intensity, whilst on the other hand, incumbent thermal assets provide a range of services to the market that underpin market reliability (sufficient capacity/physical capability to meet changing end use customer demand) and security (the capability to ride through significant asset/load loss and the ongoing changes that Variable Renewable Energy brings to the Grid).

Specifically, thermal units have historically supplied a number of important services to the market for free including; inertia; voltage control/grid forming; fault level control and system strength services. The exit of thermal assets has reduced the supply of these necessary services, increasing the fragility of the system and potentially increasing the time to system restoration in the event of an interruption.

SEA considers that there is merit in the ESB promoting the investigation of additional ancillary services markets i.e. an inertia ancillary services market and a market to supply grid forming services, in order to underpin market reliability and security and, further, that new entrants are incentivised to provide such services. We have already seen the Australian Energy Market Commission (AEMC) lead on this, by introducing changes to System Restart Ancillary Services (SRAS) settings – which have widened the assets capable of supplying these services to include batteries.

The introduction of additional markets will make revenue opportunities much clearer – which will increase the strength of business cases for investors to support the implementation of new assets.

Clearly, the exit of assets also changes the supply demand balance in relation to financial market products, this can subsequently increase the cost of risk management products, until such time as new assets, capable of providing the necessary services, are in place.

Although the transition is unlikely to be seamless, SEA considers that measures, such as the announcement of a long date for asset closure and greater predictability in market settings (i.e. agreement by all stakeholders on the ESB's proposed approach) will go some way to managing financial market fluctuations over the period of transformation.

Timeliness of private sector investment in the NEM

SEA has significant experience in seeking to bring new assets to market given its project development of both the Cultana Solar Farm, the Playford Utility Scale Battery and our formative work on the now shelved Middleback Pumped Hydro Storage project.

SEA's experience to date is that a key issue to the delivery of timely investments is that the asset connection process can be challenging and ultimately time consuming as each entity involved in the process effects its own strategy to deliver the connection. This is an area which SEA considers could be significantly improved, with subsequent flow on effects being a timelier completion of the connection process.

SEA considers that new physical asset investment is also being impacted by; the lack of predictability in market settings; changing asset capacity factors and revenue streams post investment.

As noted, the possibility of changing market settings creates investor anxiety and may mean that the cost of project debt increases as a result. This is not be unexpected but has the flow on impact of increasing the delivered cost of the project which, in turn, increases the cost that consumers must ultimately pay.

Similarly, the threat of increased investment by governments in new generation assets (which economic theory notes, can 'crowd out' private sector investment) may also detrimentally impact both the cost and timeliness of new investments. Investors will seek to ensure that their investments are not economically hampered as a result of a new government backed investment.

Scheduling and Day-ahead Mechanisms

SEA notes the depth of financial market products available in the wholesale electricity market which support market participants risk management strategies. These continue to be well supported by a range of stakeholders and liquidity continues to evolve despite the comings and goings of market participants from time to time.

Accordingly, SEA does not consider that there is a need to develop scheduling or day-ahead mechanisms. Such mechanisms are likely to add additional complexity to the market and, additionally, create significant change to current operational requirements.

The current physical dispatch mechanism is an efficient process to complement a transparent wholesale market and the development of appropriate risk management products. Unlike the ancillary service markets, where the complexity of these markets has not led to the development of wholesale risk management products.

Two-sided markets

GFG is an active participant in demand response across our major steel manufacturing sites and supports opportunities and efforts aimed at realising the full benefit of two-sided markets

SEA considers that demand-side response (DSR) can substantially improve energy costs for our business, as it provides the opportunity to manage spot market exposure while delivering additional economic value through the ability to contract in the wholesale market. Government directed grant support at measures to both improve energy productivity of large commercial and industrial users, as is being deployed in the United States of America and Europe would generate benefits for manufacturing industries through productivity improvements whilst going a long way to improve the stability of the Grid.

Transmission access and the coordination of generation and transmission investment

Transmission access, and access reform, has been the focus of significant attention since market start.

There is no ready solution to address the current issues facing the market regarding transmission network settings. SEA considers that forcing new entrant market participants to pay the deep network connection costs for their investment could create a disincentive to actually undertake the investment. Thereby delaying much needed investments in physical assets that are contributing to the transformation at hand.

Specifically, SEA does not consider that additional regulation is required (i.e. in the form of the COGATI package of reforms) without efficient optimisation of the network, including ensuring that there is transparency of network constraints.

SEA consider that new entrants should be required to pay shallow connection costs and congested networks are built out as required.

Conclusion

In conclusion, SEA considers that the ESB has a real opportunity to provide direction, and clarity, on a long-term, fit-for-purpose market design for the NEM. From SEA's perspective the importance of this work cannot be understated as it will enable all market participants to meet their energy needs at least possible cost. The flow on impacts, and benefits, of this will undoubtedly be significant.

Please do not hesitate to contact me if you wish to discuss any issues raised in this correspondence.

Yours sincerely,



Marc Barrington
Chief Executive
SIMEC Energy Australia