



APA submission – Energy Security Board post 2025 options paper

9 June 2021





Ms Kerry Schott
Chair
Energy Security Board

By email: info@esb.org.au

9 June 2021

RE: APA Response to Post 2025 Market Design Options Paper

Dear Ms Schott,

APA would like to thank the Energy Security Board (ESB) for the opportunity to comment on the Post 2025 Market Design Options Paper (Options Paper).

The National Energy Market (NEM) is going through a period of significant change. APA supports reform that will maintain the security and reliability of the energy system while ensuring that energy services are provided at least cost to consumers. This will be achieved through market settings that promote investor confidence and encourage timely and efficient investment in both regulated and unregulated energy infrastructure.

APA is an ASX listed owner, operator, and developer of energy infrastructure assets across Australia. Through a diverse portfolio of assets, we provide energy to customers in every state and territory on mainland Australia. Our investments include over \$750 million in renewable generation, emphasising our commitment to the energy transition taking place across Australia.

There is considerable uncertainty about technology costs and advancements over coming decades. We therefore support technology neutral reforms that will encourage a diverse mix of resources to replace aging thermal generators. This approach will provide customers with access to reliable energy at lowest cost.

Our submission below provides views on key reform areas outlined in the Options Paper. If you wish to discuss our submission in further detail, please contact APA's Policy Manager, John Skinner, on 02 9693 0009 or john.skinner2@apa.com.au.

Regards,

A handwritten signature in black ink, appearing to read 'P. Bolding', written over a light blue horizontal line.

Peter Bolding
General Manager
Economic Regulation & Policy
APA Group

Submission

APA is a leading Australian Securities Exchange (ASX) listed energy infrastructure business. We own and/or manage and operate a diverse, \$22 billion portfolio of gas, electricity, solar and wind assets.

Consistent with our purpose to strengthen communities through responsible energy, our diverse portfolio of energy infrastructure delivers energy to customers in every state and territory on mainland Australia. As well as an extensive network of gas pipelines, we connect Victoria with South Australia and New South Wales with Queensland through our investments in electricity transmission assets. We are also one of the largest owners and operators of renewable power generation assets in Australia, with wind and solar projects across the country.

Consistent with our ambition for net zero operational emissions by 2050, APA is supporting the transition to a lower carbon future, including by helping unlock Australia's advantages in hydrogen. Through our Pathfinder Program, we are investigating how hydrogen and other technologies such as batteries and microgrids, can support a lower carbon future.

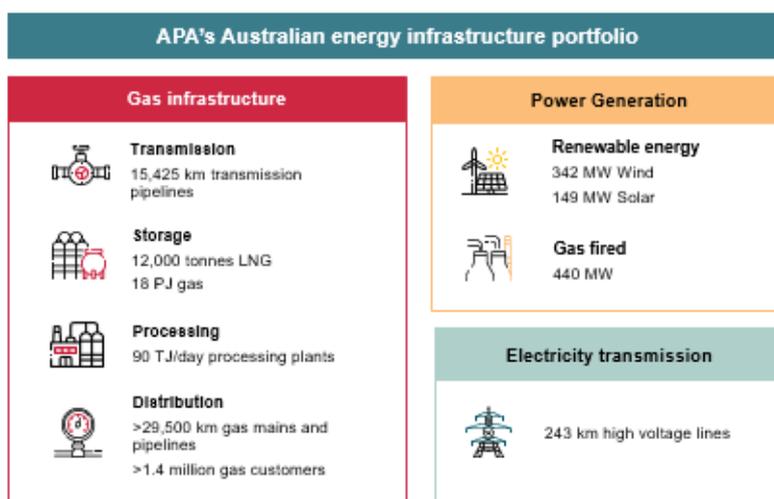


Figure 1

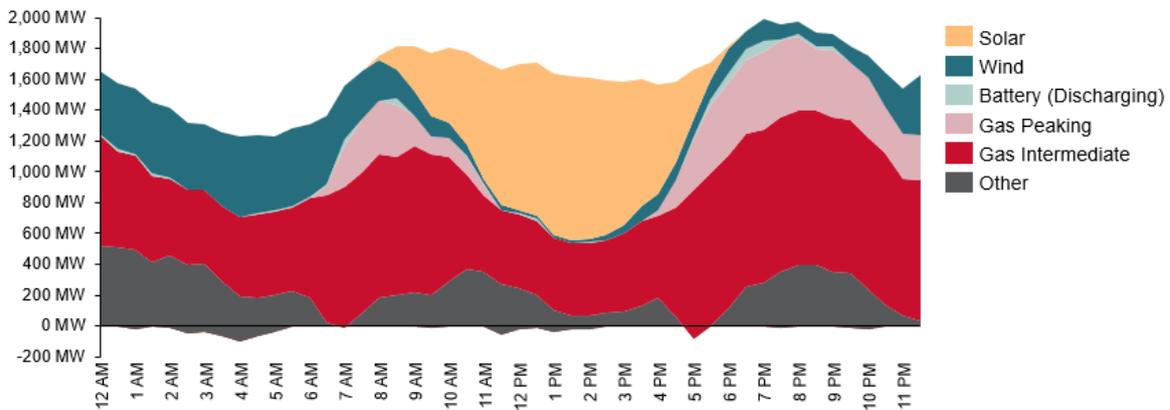
Below, we provide views on key reform areas outlined in the Options Paper. In our view, the transition to a low carbon economy is best achieved through clear and transparent market arrangements that encourage timely and efficient private sector investment in energy infrastructure. Such arrangements will deliver on the National Electricity Objective and ensure that consumers pay no more than necessary for their energy services.

1. Resource adequacy and aging thermal generator retirement

One of the key objectives of the ESB's Post 2025 work is to encourage the timely entry of the required generation and storage and the orderly exit of aging coal power stations. The ESB is focused on a reform pathway that ensures sufficient dispatchable resources and storage capacity come online and that generator exit does not cause significant price or reliability shocks for consumers.

As recent experience in South Australia has shown, periods of low wind and solar availability require significant volumes of dispatchable resources to come online to support the reliability and security of the system. On 12 May 2021, for example, gas delivered 75% of peak electricity consumption due to low wind and solar availability, demonstrating the critical role of gas during the energy transition (see Figure 2).

Figure 2 Case Study South Australia 12 May 2021



Source: Chart – OpenNEM. Solar includes utility scale and rooftop solar, other includes import, export and Distillate

The 25 May 2021 failure of a generation unit at Callide Power Station in Queensland, and the subsequent increase in whole energy prices, also demonstrates the importance of having sufficient dispatchable resources in the market.

APA supports measures that will ensure sufficient private sector investment in dispatchable resources. At a high level, any reforms should:

- **Promote certainty and investor confidence** – the resource adequacy reform pathway provides options to empower the private sector to do the ‘heavy lifting’ for the majority of new generation investment.¹ Investors such as APA wish to build long term infrastructure projects. Any proposed reforms should promote confidence in long term investment by avoiding the need for short term reforms or other intervention in the market.
- **Be technology neutral** – there is considerable uncertainty about technology advancements and costs over coming decades. It is therefore unclear as to what mix of technologies will provide consumers with access to reliable energy at the lowest cost. The Grattan Institute’s recent economic modelling has shown that a generation mix including gas generation is likely to be the lowest cost option until other zero emissions alternatives become economically competitive.² In a similar vein, Frontier Economics has recently concluded that making continued use of existing gas assets wherever possible, including for the transport of hydrogen, can help avoid the material costs of investing in new assets to deliver energy.³ We therefore support technology neutral reforms that will encourage a diverse mix of resources to replace aging thermal generators. This approach will provide customers with access to reliable energy at lowest cost.
- **Be nationally consistent where possible** – APA supports efforts by jurisdictional governments to encourage infrastructure investment that will support the connection

¹ ESB, *Post 2025 Market Design Options – A paper for consultation Part A*, April 2021, p.23

² Grattan Institute, *Go for net zero, A practical plan for reliable, affordable, low-emissions electricity*, April 2021, p.3

³ Frontier Economics, *The Benefits of Gas Infrastructure to Decarbonise Australia*, September 2020, p.9

of large-scale generation over coming decades. To the extent these can be captured within the market design, there are potential benefits from a coordinated approach to government underwriting schemes. As well as minimising the regulatory overhead associated with jurisdictional schemes, a coordinated approach will ensure investment driven by these schemes better integrates with existing market design.

In the Options Paper, the ESB is also seeking views on options to manage the risk of large thermal generators exiting earlier than expected. These risks have the potential to increase market volatility and potentially impact the stability and reliability of the energy system.

All scheduled or semi-scheduled generators must provide AEMO with 42 months' notice of closure or amendment of a notice of closure. The ESB is seeking views on whether further information would help manage the risk associated with the exit of thermal generators.

We support the provision of accurate information about mothballing, seasonal shutdown, and retirement so the market is informed about the exit of thermal generation. We also agree with the ESB that there is merit in requiring only certain designated thermal generators to provide this information. As demonstrated by the closure of Hazelwood power station, the departure of thermal generation of a particular size can have an adverse impact on the NEM and broader customer outcomes.⁴

2. Essential System Services, Scheduling and Ahead Mechanisms

The departure of large thermal generators from the NEM removes the large rotating turbines that have traditionally provided the electricity system with the necessary system strength to withstand significant faults or disturbances. We agree with the ESB that as inverter-based resources replace the retiring synchronous generation, services to maintain the security and reliability of the system must be procured efficiently.

While we support the ESB's proposal to procure system security services on a more efficient basis, there are potential complexities with the ESB's proposal. The Options Paper proposed:

- a **unit commitment for security** (UCS) for the procurement and scheduling of essential system services (such as system strength) through long term contracts between transmission network service providers (TNSP) and resource providers and
- a possible **system security mechanism** (SSM) for the procurement of system security by AEMO on a shorter timeframe and scheduled alongside longer-term contracts.

We can see some complexities associated with having two pathways for the procurement of system security services i.e. long-term contracts via TNSPs and short-term arrangements via AEMO. Not only will contractual arrangements between the relevant parties be complex, but the UCS scheduling mechanism will need a common input/bidding format so the UCS scheduling mechanism can analyse, compare and optimise contracts effectively.⁵

⁴ ESB, ESB, *Post 2025 Market Design Options – A paper for consultation Part B*, April 2021, p.9

⁵ ESB, ESB, *Post 2025 Market Design Options – A paper for consultation Part B*, April 2021, p.32

We recognise that the UCS and SSM are still being considered by the ESB and further work is required to develop these mechanisms. In order to provide businesses with the confidence to invest and provide system security services, contractual arrangements will need to provide certainty and be of sufficient length to support investment. In the long run, this will lead to lower overall costs for consumers.

3. Transmission and access

As the ESB outlines in the Options Paper, substantial transmission capacity is required to accommodate between 26 and 50GW of new large-scale renewable generation expected by 2040.⁶ This is a significant undertaking that will require industry, governments and stakeholders to find solutions that ensure the required infrastructure is built.

The development of Renewable Energy Zones (REZs) across several jurisdictions will deliver additional transmission capacity and encourage generators to invest within the REZs. Regulatory arrangements that increase contestability in the provision of regulated assets will result in more timely and efficient delivery of the transmission capacity required to build the REZs and connect them to the national transmission system.

Given the delays associated with actioning Integrated System Plan (ISP) projects such as the NSW – SA interconnector, the ESB is right to question whether the Regulatory Investment Test – Transmission (RIT-T) continues to be fit for purpose. The RIT-T process can take up to one year to complete, adding significant time for actionable ISP projects to get underway.

That said, there remains an important role for a robust cost benefit analysis for all regulated infrastructure investment. Such analysis can incorporate the inputs, assumptions and scenarios of the ISP as well as other economic benefits.

⁶ ESB, ESB, *Post 2025 Market Design Options – A paper for consultation Part A*, April 2021, p.75



always
powering
ahead