Post 2025 Market Design Consultation Paper

Submission to the Energy Security Board

October, 2020

South Australian Chamber of Mines & Energy

The leading industry body representing the resources sector in South Australia

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1. Introduction

The South Australian Chamber of Mines and Energy (SACOME) is the peak industry body representing companies with interests in the South Australian minerals, energy, extractive, oil and gas sectors and associated service providers.

SACOME acknowledges that the Energy Security Board (ESB) has been tasked with the important work of developing a fit-for-purpose Post-2025 Market Design for the National Electricity Market (NEM) that delivers secure and reliable power at least cost to consumers.

South Australia has been front and centre of the energy transition occurring within the NEM experiencing first-hand increasing gas costs; unprecedented volumes of renewable energy generation; and the high energy costs associated with the lack of cohesive national energy policy in this space.

SACOME welcomes the opportunity to provide input into the ESB's Post 2025 Market Design Consultation Paper (the Paper) recognising that this is the next step in a multi-step consultation process.

Energy affordability and reliability are areas of major concern for SACOME member companies, in particular our large Commercial and Industrial (C&I) members who have borne a large proportion of increased system costs due to the energy transition.

SACOME's submission provides high level commentary on the seven market design initiatives set out in the Paper that have been put forward as potential solutions to delivering the future energy market. In particular, SACOME's submission focuses on energy affordability and reliability for the resources sector, reflecting the importance of this issue to SACOME member companies.

Energy affordability and reliability has a direct impact on business viability, new project development and investment decisions for resources sector operators.

While the need for affordable and reliable energy is common to all users, the energy needs of the resources sector are distinct given the scale of operations; the quantity of energy required to power them; the consequences of an interruption to supply; and access to energy as a pre-requisite to project development.

To further highlight its importance SACOME developed the *SACOME Energy Policy 2019*[1] which closely aligns with our *2024 Vision*[2] in articulating strategic investments in energy affordability and reliability.

SACOME takes a technology neutral position with regard to energy generation and emissions reduction and extends this position with respect to how the ESB achieves its objectives.

[1] https://www.sacome.org.au/uploads/1/1/3/2/113283509/sacome_energy_policy_2019_final.pdf
[2] https://www.yumpu.com/en/document/read/62660131/2024-vision-your-life-your-future

SACOME remains committed to working collaboratively with the ESB, relevant market bodies and other stakeholders throughout the Post 2025 Market Design consultation process to develop a NEM that delivers secure and reliable energy at least cost.

2. Resource Adequacy Mechanisms

SACOME submits that as the NEM continues to transition it is unlikely the current Resource Adequacy Mechanisms (RAMs) within it will be sufficient to drive the investment required to deliver reliable and affordable energy in the future.

The NEM relies upon scarcity pricing to drive future investment, however, concerns surrounding Commonwealth and State Government's willingness to tolerate scarcity pricing; the impact of renewable energy and rooftop solar on future price curves; and the absence of long-term price signals all have the potential to deter this investment.

As a result, the Paper has put forward the following RAM options for stakeholders' consideration:

- Introducing an operating reserve mechanism (ORM) or market as a means to enhance the real time price to better reflect the cost of reliable, secure supply.

- Expanding the Retailer Reliability Obligation (RRO) or introducing a price for reliability through a decentralised capacity market.

- Consequential adjustments to the Reliability and Emergency Reserve Trader (RERT) or interim reliability reserve depending on the other RAMS implemented.

The ORM and RRO options may be viable RAM alternatives that will increase the reliability of energy supply, however, SACOME member companies have raised that these options do not provide the long-term price signals required by industry to invest in new plant and equipment.

The ORM option also requires optimisation of energy and reserves; and the handling of new dispatch bids, constraint equations and other software changes within the Australian Energy Market Operator (AEMO). Like all reserve markets this represents significant administrative overheads and a centralised process or body to determine the price schedule.

SACOME observes that the RRO option seeks to shift the procurement of reliability measures onto retailers and large loads, such as SACOME's C&I members.

Ultimately both options and the provision of their respective services to the NEM will increase overall energy costs as affected market participants seek to recover their investment.

SACOME broadly supports any consequential adjustments to the RERT or interim reliability reserves if the adjustments remove unnecessary backstops and reduce energy prices for consumers.

SACOME submits that the options outlined in the Paper will only act as a stop gap solution in the absence of cohesive national energy policy. SACOME draws the ESB's attention to its

own table[3] which outlines missing elements of markets; structural changes in markets; and external factors influencing market outcomes all as elements that operate to deter investment.

SACOME submits that the key to driving future NEM investments is to resolve external factors such as policy uncertainty; government intervention, including financial support for some projects; and global emissions policy.

Australian energy policy has been subject to more than a decade of politicisation, particularly in the space where climate change and energy policy has overlapped.

The 2017 Independent Review into the Future Security of the National Electricity Market (the 'Finkel Review') argued that years of policy inconsistency on energy and climate change has hampered investment, with financiers wary of backing energy assets where policy settings have been uncertain and politicised.

This paradigm remains largely unchanged.

SACOME reiterates that the key to unlocking the required NEM investment to deliver affordable and reliable energy in the future is a uniform, bipartisan Commonwealth and State position on energy policy.

[3] Pg. 32 Table 2
http://www.coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/P2025%20Market%20Design%20Consultation%20paper.Final_.pdf

3. Ageing Thermal Generation Strategy

SACOME acknowledges that with 61% of existing thermal generation likely to exit the market over the next 20 years, the orderly exit of this generation is critical to ensuring reliability of supply and low energy prices.

The premature or uncertain timing of thermal generation plants exiting the NEM increases the risk to security, reliability and affordability of supply. SACOME submits that the Paper has appropriately identified the risks associated with thermal generation plants exiting the NEM primarily being increased costs to consumers.

SACOME recognises that there are several regulatory measures already in place that help attempt to coordinate the entry and exit of generation and minimise the risk of an inefficient outcome (such as *notice of closure* requirements). SACOME submits, however, that more needs to be done to protect NEM regions like South Australia where the supply/demand balance from unexpected exits is tight.

SACOME member companies have suggested that "capacity contracting" by AEMO or by Federal/State Governments could be an option to allow for the orderly exit of ageing thermal generation over a nominated period of time, enabling the market to respond appropriately and avoid unnecessary disruption to wholesale markets.

SACOME recognises that on the basis of stakeholder feedback, the ESB will form a view on whether there are significant residual risks relating to the exit of ageing thermal generators requiring additional measures to address those risks outside of the options proposed in the concurrent workstreams.

If additional measures are required, SACOME submits that the ESB should prioritise an approach that addresses energy affordability and reliability and the impact of increased energy costs on industry.

Further, SACOME notes that the Paper has placed an emphasis on managing the exit of coal power plants rather than gas plants in its Ageing Thermal Generation Strategy.

SACOME submits that given the uncertainty and unpredictability of the energy transition, equal regard should be given to all thermal generation, noting South Australia's heavy reliance on gas-fired generation to provide the majority of the State's electricity.

4. Essential System Services

The Essential System Services (ESS) workstream aims to develop a reform path for ESS to maintain the NEM in a secure, resilient state as it transitions to a low emissions future.

SACOME notes the ESB's preferred approach to this reform path is to develop a roadmap for the December 2020 options paper showing reform options that are available now and how the provision of system services may evolve over time.

SACOME understands the importance of maintaining network supply, reliability and security and the provision of key system services (inertia; system strength; provision of reserves; FCAS) that are no longer available at the same level or in the same way as they were in the past and are being replaced or made available through different arrangements.

However, SACOME member companies continue to raise concerns about the escalating costs of AEMO's increasing market interventions in key system services areas; and that AEMO is only required to procure such services at least cost given the prevailing market conditions, and are not required to lower the cost of their market interventions over the long-term.

Large SACOME C&I members through no fault of their own have had to bear a large proportion of these system costs that are unknown, unbudgeted and place pressure on large energy users at the time of receipt.

Some SACOME member companies have raised that the design aspect of the Paper's preferred approach of a market-based design for system services is a key issue. Furthermore, they have raised the parallel development of a liquid derivatives market to support these system services markets as desirable.

SACOME submits future market designs need to carefully examine how these system services costs are allocated and passed on. Historically, these key system services have been provided by generators, therefore it would be most efficient that generators continue to have an obligation to provide and/or procure these system services from the market. Any additional costs to generators can be factored into their bid price, resulting in recovery of costs "smeared" evenly across all market users in a more predictable and efficient manner.

On this basis, SACOME broadly supports ESS options that recognise the historical context of these services and allow for the equitable distribution of costs across all energy market consumers.

5. Scheduling and Ahead Mechanisms

SACOME acknowledges that, as energy generation in the NEM continues to transition to a complex mix of resources, this also increases the uncertainty and variability of energy demand and supply.

The increase in variability and uncertainty has resulted in AEMO increasing the amount of times it intervenes in the market to support outcomes that maintain network supply, reliability, and security.

SACOME notes the Paper highlights that these interventions to manage synchronous resources have occurred mainly in South Australia to date.

SACOME has previously written to AEMO to express member companies' concerns about the cost implications of their market interventions. In particular, SACOME member companies cited FCAS price increases in South Australia as a key concern.

SACOME member companies have experienced substantial FCAS price increases in South Australia. In Q1 2020 total NEM system costs increased to a record $310 million, consisting mainly of FCAS costs increasing to a quarterly record high of $227 million and the cost of directing units to maintain system strength increasing to $33 million, the highest quarter on record.

The main drivers of these record NEM system costs were three major power system events, the most notable being the 18-day separation of the Victorian and South Australian power systems. These events alone contributed $229 million of the system costs for the quarter.

These are significant increased costs to business and compound an unsustainable operating environment for industry.

SACOME member companies have cited the following recent Australian Energy Market Commission (AEMC) Rule changes as a positive step toward managing the power system efficiently, flexibly and in a manner that lowers costs for consumers:

- Removal of the current hierarchy for the use of mechanisms for managing supply scarcity;
- Removal of the mandatory restrictions' framework;
- Removal of the obligation for AEMO to counteract during an intervention;
- Clarifying the basis for affected participant compensation cost recovery following activation of emergency reserves under the RERT.

SACOME member companies also broadly support Scheduling or Ahead mechanisms that will reduce energy prices while maintaining energy reliability.

6. Two-sided Markets

SACOME notes the energy transition is creating opportunities and challenges across the NEM and welcomes the Paper's recognition that development of two-sided markets needs to dovetail with the Distributed Energy Resources (DER) workstream.

The growth of decentralised sources of supply is a contributing source of variability and uncertainty in the system; it also presents an opportunity to change the current NEM arrangements to make it easier for new types of participation in the market or for consumers with flexible demand to participate.

As large energy consumers, resources sector operators can support the delivery of affordable and reliable power for the whole community through major energy investments and energy infrastructure.

SACOME member companies have flagged that changes to the NEM through the Wholesale Demand Mechanism (WDM) presents resources sector operators with the opportunity to provide grid stability through demand side responses that save energy use at critical peak times.

SACOME member companies have stated it is critical that two-sided markets are moderated and barriers to entry removed to allow new entrants to participate.

SACOME broadly supports the development of two-sided markets incorporating DER integration that promotes energy affordability and reliability and does not increase costs to industry.

7. Valuing Demand Flexibility and Integrating Distributed Energy Resources

SACOME supports the integration of Distribution Energy Resources (DER) within the development of two-sided markets as a means to holistically resolve the opportunities and challenges that DER presents.

The proliferation of solar PV in South Australia and as its lack of integration within the NEM has led to both distribution companies and AEMO facing a challenge to keep generation and demand in balance and system stability in check.

AEMO's '2020 Power System Frequency Risk Review Stage 1' Final Report (the Report) has found that the net load interrupted by the Under-Frequency Load Shedding (UFLS) scheme is no longer sufficient for South Australia and has recommended that this be increased as much as possible.

The deep penetration of solar PV has increased the risk of low frequency, with the potential for system frequency to drop as low as 46-49Hz. Clear, sunny days where system demand is low due to moderate temperature and uncontrolled roof-top solar generation is high have been identified as periods of highest concern requiring additional UFLS.

SACOME is in discussions with the South Australian Government, AEMO and other stakeholders to find a solution for the under-frequency issue as a whole, and on behalf of SACOME member companies who have been forced onto the UFLS Scheme and now face increased operational risk and costs due to the potential of increased low frequency and instantaneous load shedding events.

SACOME supports the State Government bringing forward $10 million of investment in voltage management in the network to improve the performance of appliances and solar generation, and to provide emergency backstop capabilities in case of extreme conditions.

SACOME has called for the development of a "roadmap" that provides SACOME member companies with a timeline on how and when their load will be removed from the UFLS Scheme, noting Project EnergyConnect will not fully resolve these voltage management issues; and is not scheduled for completion until 2024.

SACOME reiterates the importance of proper integration of DER into the NEM; and recommends that the impacts DER can have on large C&I customers are fully considered as part of the future market design.

8. Transmission Access and the Coordination of Generation and Transmission

SACOME recognises that transition of the NEM will necessitate large quantities of renewable generation and energy storage to connect to the power system.

SACOME broadly supports the ESB developing interim arrangements to support development of Renewable Energy Zones (REZs).

SACOME reiterates its call to consolidate the development of renewable energy projects in line with REZs and industrial hub concepts as a means of better developing economies of scale for supply of renewable energy to industry.

SACOME member companies also broadly support transmission access reforms that support the efficient and timely capital investment, efficient system operation and reduce costs to consumers.

9. Conclusion

SACOME is committed to working in partnership with the ESB, relevant market bodies and all stakeholders in progressing the ESB's Post 2025 Market Design to deliver a NEM that provides secure and reliable energy at low cost to consumers. We commend the ESB for taking on this critically important task.

SACOME has sought to provide high-level commentary on the identified workstreams with a clear focus on the importance of energy affordability and reliability to the resources sector.

While the need for affordable, reliable energy is common to all users, the energy needs of the resources sector are distinct given the scale of operations; the quantity of energy required to power them; the consequences of an interruption to supply; and access to energy as a pre-requisite to project development.

South Australia has been at the vanguard of the energy transition occurring within the NEM and as a result continues to experience some of the highest electricity and gas prices in the world.

This is an unsustainable operating environment for industry requiring urgent resolution.