



**Energy & Mining Strategy Annual Report
2021**

Submission to the Department of Energy &
Mining

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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 association representing resource and energy companies, including those who provide services to them.

SACOME welcomes the opportunity to provide feedback on the Department of Energy & Mining's (DEM) Energy & Mining Strategy Annual Report 2021 ('Annual Report 2021').

In line with the 3% year on year economic growth target set by the South Australian Government's *Growth State* agenda, the Energy & Mining Strategy 2020 consolidated industry suggestions on the policies and actions to underpin long-term sustainable growth of the South Australian resources sector.

SACOME's 2019 submission to the Energy & Mining Strategy consultation paper highlighted that the key challenges to growth of the South Australian resources sector were well understood given significant work had been undertaken by government and industry to define them. These challenges include being trade-exposed, with energy and mining activities sensitive to international headwinds such as commodity price cycles; and constrained capital markets.

SACOME also noted that South Australia's jurisdictional challenges include deep cover; remoteness of project location; a lack of existing infrastructure, operating as an investment deterrent; and a historic preference by the South Australian Government for non-interventionist micro economic policies.

The South Australian Government has demonstrated a willingness to support measures that address these jurisdictional barriers and there has been encouraging progress on initiatives that move the sector and the State toward the objective of transformational economic growth.

SACOME acknowledges that the Annual Report 2021 provides an update on progress and advice on new initiatives initiated by DEM in 2021. SACOME also acknowledges that DEM seeks further stakeholder feedback on opportunities to build upon the energy and mining sector's contribution to State economic growth.

In framing consultation and feedback on the Annual Report 2021, DEM has asked stakeholders to consider the following questions:

- *Are the strategic targets of the Energy and Mining Strategy still valid?*
- *What feedback can you offer on the Energy and Mining Strategy actions already underway?*
- *What other growth opportunities should DEM be pursuing? Are there any other opportunities for leveraging South Australia's clean energy transformation to grow jobs and investment?*

- *Are all the key challenges to strong sustained growth in the energy and mining sector captured in the Strategy?*
- *Are there any other priority areas that should be the focus of the updated Energy and Mining Strategy?*

Given the breadth of initiatives set out in the Annual Report 2021, SACOME provides comment by exception.

2. Comment on Annual Report 2021 Initiatives

SACOME acknowledges that an array of initiatives for which it has advocated have been incorporated into the Energy & Mining Strategy framework.

SACOME reiterates its support for these Energy & Mining Strategy initiatives recognising their potential to drive structural change, provide a stable regulatory environment and lend material assistance to the South Australian resources sector:

- **Northern South Australia Productive Water Security Project (Northern Water Project).**
 - A secure, sustainable, and efficient water supply is key to unlocking mining activity in the Gawler Craton and the Far North of the State. It also has potential to reduce reliance on the Great Artesian Basin and the Murray River.
 - Similarly, the South Australian Government’s Copper Strategy aims to triple the State’s copper production to 1 million tonnes per annum by 2030 with water being critical to realising this ambition.
 - The ‘Northern Water Project’ creates opportunity for supply of water as an input to industrial process in the Far North with potential to support development of green steel and hydrogen production in the Upper Spencer Gulf, diversifying economic opportunities in the region and facilitating opportunities for upstream processing of commodities.
 - SACOME acknowledges the substantial cross-departmental support from the South Australian Government and Infrastructure SA in advancing this major state economic development initiative, including its listing on the Infrastructure Australia Priority List in February 2021.
 - Recognising the significant support and momentum this project has attracted at the highest levels of government and industry, SACOME unequivocally supports progress of this initiative.

- **Mining Act Reforms**

- SACOME acknowledges the significant effort required to progress amendment of the Mining Act and Mining Regulations over the course of 2019 and 2020, noting that several reform initiatives remain incomplete. SACOME submits that finalisation of outstanding Mining Act reform initiatives should be given priority in the 2022 Energy & Mining Strategy, namely:
 - Scoping;
 - Mining Rehabilitation Fund;
 - Full implementation of the digital Mining Register;
 - Finalisation of Ministerial Determinations and Policies.
- Members have also expressed their desire to see further red-tape reduction and simplification of administrative and reporting obligations into the future.

- **Water & Infrastructure Corridors Study**

- SACOME acknowledges the South Australian Government's funding of this initiative in the 2020-21 State Budget to progress business case development, recognising it aims to quantify groundwater resources available for industrial use; and facilitate infrastructure development by creating a regulatory mechanism that resolves land access, approvals and logistic issues.
- Once complete, the Resources Infrastructure Corridor mechanism will operate as a State investment attraction tool by providing a de-risked and expedited pathway for project development.

- **Playford Trust Scholarships**

- The partnership between the SACOME, South Australian resources companies, the South Australian Government and the Playford Trust continues to provide outstanding scholarship opportunities for school leavers enrolling in mining or petroleum engineering.
- This joint initiative has resulted in an increase in domestic enrolments in both Mining & Petroleum Engineering courses and has improved linkages between industry and students. SACOME continues to promote the scholarships and to work with industry to secure funding.

- **Accelerated Discovery Initiative**

- SACOME has continued to advocate for funding of this important initiative and welcomes the South Australian Government's recent announcement of an additional \$11.5 million for the ADI.

- **PACE Gas**
 - Gas generation continues to comprise more than half of all electricity generation in South Australia, with this generation relying upon a secure, economic supply. Gas extracted through the grant scheme was offered to the SA electricity generators first with the aim of improving supply and putting downward pressure on power prices. Reintroduction of PACE Gas would encourage increased supply of competitively priced gas which is crucial to moderating electricity prices.

- **Strzelecki Track**
 - The Strzelecki Track is a vital supply link for South Australia's major oil and gas operators in the Cooper Basin and SACOME strongly supports efforts made by the South Australian Government in improving this critical transport route.

- **Carbon Capture & Storage (notably the Moomba CCS project)**
 - SACOME is highly supportive of the Moomba CCS project, operated by joint venture partners and SACOME member companies Santos and Beach Energy. The resources sector is actively pursuing net-zero targets.
 - The ability to permanently store 1.7 million tonnes of CO₂ a year in the depleted oil and gas fields of the Cooper Basin will contribute to the State's decarbonisation efforts while also creating new economic and employment opportunities.

- **Port Bonython/Upper Spencer Gulf hydrogen/multi-use export hub.**
 - SACOME recognises the importance of Port Bonython to the State's nascent hydrogen industry, with a number of SACOME member companies having an active interest in its development.

- **Continued funding for road construction and maintenance, including duplication of the Augusta Highway.**
 - SACOME acknowledges the extensive efforts of the Marshall Government in relation to regional and remote road maintenance. Duplication of the Augusta Highway is of economic importance to the State and a priority supported by many South Australian peak industry bodies including the SA Freight Council, the RAA and Business SA.

- **Landowner Information Service**
 - SACOME continues to support the Landowner Information Service, recognising the role it plays in aiding best practice land access outcomes.

SACOME also acknowledges DEM's support of the following member company initiatives:

- **Kanmantoo-Komatsu Continuous Miner (Hillgrove Resources).**
- **National Test Mine & Innovation Centre (OZ Minerals).**

3. Additional Priorities for Inclusion

While the Annual Report 2021 sets out a comprehensive list of initiatives across the mining, oil and gas, energy, extractives and equipment technology and services sectors, SACOME suggests the following additional priorities for inclusion in the 2022 Energy & Mining Strategy:

3.1 Energy Transition Roadmap

- The energy transition currently underway is governed by reactive policy, an uncertain operating environment and ongoing regulatory intervention. This is due to the simple fact that a fundamental reengineering of the entire electricity grid has never occurred before, presenting an unprecedented public policy challenge.
- The South Australian energy network must now accommodate more dynamic and technologically diverse plant and meet varying energy usage patterns that are vastly different to previous requirements. Notably, the mass deployment of domestic solar photovoltaic generation continues to create major challenges for grid management.
- Regulator intervention and changes to emergency management mechanisms are now routinely used as risk mitigation tools, and new infrastructure required to manage the transitioning energy system has created additional, unbudgeted expense for commercial and industrial customers.
- Commercial and industrial operators are now regularly subject to a range of frequency control costs, system security charges, emergency management measures and increased risk of load shedding.
- Work undertaken by SACOME puts the total cost of market interventions in South Australia since 2018 is just over \$1 billion. These costs can be attributed as follows:

Intervention	Cost (millions)
National Electricity Market (NEM) Interventions	
Frequency Control Ancillary Services (FCAS)	\$177.2m
System Security Directions	\$150.2m
State Government NEM Interventions	
Electricity (General)(Technical Standards) Variation Regulations 2021	\$50.1m
State Government Initiatives	
Home Battery Scheme	\$218m
Retailer Energy Productivity Scheme (REPS)	\$82m
Project EnergyConnect (underwriting)	\$75m
Grid Scale Storage Fund	\$50m
Trial Demand Management Program	\$11m
Other Grid Investments	
ElectraNet's Synchronous Condensers	\$190m
Total Cost	\$1,003.5m

- While greater interconnection between South Australia and other jurisdictions is expected to resolve grid stability issues, Project EnergyConnect is not scheduled for completion until 2024-25 at the earliest.
- SACOME advocates for enactment of interim measures to better shield South Australian commercial and industrial operators from the combined cost of market interventions and associated pass-through costs resulting from the energy transition process.
- SACOME's observation is that the energy transition process to date has been focused on resolving operational and system issues in relative isolation. This has resulted in circumstances where solutions proposed by regulators have failed to understand operational reality for industry. SACOME is confident that this disconnect can be resolved through improved consultation between government, regulatory bodies and industry.
- SACOME advocates for establishment of a South Australian Energy Advisory Board with representation from industry, government and regulatory bodies for the purpose of developing holistic energy policy that considers the impacts of energy policy across the whole of the South Australian economy.
- A key objective of the Energy Advisory Board would be development of a South Australian Energy Transition Roadmap that consolidates energy transition challenges across the whole of the South Australian economy and sets out measures to mitigate cost and operational risk for heavy industry while assisting the shift toward net-zero.
- Recognising that industrial operators hold shared economic and decarbonisation objectives with the South Australian Government, the Energy Transition Roadmap should examine and incorporate pathways for implementation of a full suite of

energy measures that progress this outcome including nuclear, hydrogen and carbon capture and storage.

3.2 Workforce & Skills Shortages

- Workforce and skills shortages present an imminent economy-wide challenge made more acute by the global pandemic and restricted international movement. Economic growth in South Australia cannot occur without an appropriately skilled workforce that anticipates both immediate and future requirements.
- In response to member concerns about this issue SACOME commissioned a report to better quantify resources sector workforce needs in South Australia, the outcome of which, provides a comprehensive overview of the skills required to meet operational demand between 2021 and 2025.
- Headline findings are as follows:
 - Total SA resources sector workforce demand is forecast to increase from 19,500 in mid-2021 to a peak of 27,500 in late 2023.
 - Based on a combination of projects currently under construction requiring operations workforces, new projects reaching final investment decision and commencing construction, and a consistent demand for shutdown resources, it is likely the SA resources sector will require up to an additional 8,000 workers between Q3 2021 and Q3 2023.
 - In this situation a peak shortage of 5,100 resources sector workers is anticipated in Q3 2023.
 - South Australia faces competition for labour from both the eastern states and Western Australia which are experiencing the same labour shortfall issues at a much larger scale, with internal competition between South Australian projects, operations and shutdowns for labour is likely to result in workforce poaching.
- SACOME advocates for the urgent development of a South Australian Future Workforce & Skills Framework to map workforce requirements across the nine Growth State industry sectors, recognising that a supply of appropriately skilled labour is critical to realising economic growth objectives.

3.3 Operation of the Aboriginal Heritage Act

- SACOME members continue to raise the operation of the Aboriginal Heritage Act as an area where reform is needed, noting its misalignment with the Mining and Petroleum & Geothermal Energy (PGE) Acts. SACOME's submission to the Aboriginal

Lands Parliamentary Standing Committee's Aboriginal Heritage Inquiry sets out a range of issues relevant to resources sector operations.¹

- The Department of Premier & Cabinet's Aboriginal heritage guidelines for resources projects in South Australia, highlights that:

*There is no formal regulatory connection between native title and Aboriginal heritage, however, in practice, the Aboriginal Heritage Act plays a large role in influencing the interactions between you and the Aboriginal community when negotiating access to land. For example, where native title mining agreements or ILUAs are negotiated for your project, it is standard practice for the native title party to require you to undertake Aboriginal heritage clearances or surveys over the land.*²

- Protection of Aboriginal heritage in South Australia is complicated by a lack of clarity in the Aboriginal Heritage Act and its misalignment with other legislation, including the Mining and PGE Act. Cultural heritage surveys and Work Area Clearances are the accepted mechanisms for protecting Aboriginal heritage and facilitating land access agreements between operators and Native Title Organisations (NTOs):

*These surveys or clearances are usually required as part of the negotiations for a Native Title Mining Agreement, Indigenous Land Use Agreement (ILUA), or a Right to Negotiate (RTN) Agreement. Surveys and clearances, while not described in the Act, are the standard process used to identify whether on-ground works may impact on sites, objects or remains. They have no separate legal status other than as a contractual undertaking in the agreement.*³

- The disconnect between accepted practice and legal requirement is a notable flaw in the AHA. This raises reasonable concerns about the adequacy of the Act as it relates to both preservation of Aboriginal heritage and in providing legal protection for proponents who often incur significant costs in undertaking this activity.
- One junior explorer advised of a drill program for which a heritage clearance had been completed with the determined Traditional Owners, but the clearance area within which they intend to undertake the program also contained a heritage site registered by a neighbouring group.
- The Aboriginal Affairs & Reconciliation Division (AARD) would not provide details of the relevant anthropologist for the neighbouring group without that group's approval. The company was able to obtain advice that their proposed drill holes were

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https://www.sacome.org.au/uploads/1/1/3/2/113283509/sacome_aboriginal_lands_parliamentary_standing_committee_aboriginal_heritage_inquiry_submission_amended_29.06.21.pdf

² Department of the Premier and Cabinet 2017. *Aboriginal heritage guidelines for resource projects in South Australia*, Report Book 2017, p.7

<https://sarigbasis.pir.sa.gov.au/WebtopEw/ws/samref/sarig1/image/DDD/RB201700035.pdf>

³ *ibid.*

outside of the buffer area for this sacred site, however, company personnel still have not been informed of the official buffer area further embedding operational uncertainty.

- The company advises that this is the second such instance they have experience where registered sites have been lodged by groups outside of the determination area, adding complexity and delay to the heritage clearance program. Junior explorers further advise that they are observing a trend of large buffer areas being implemented by AARD, adding further complexity to exploration programs, and having potential to render significant parts of the State unavailable for exploration if not resolved.
- Operators continue to observe that the Aboriginal Heritage Act's lack of alignment and procedural clarity means that heritage issues have become key land access concerns impacting on project timeframes and costs. SACOME submits that Work Area Clearances and Cultural Heritage Surveys should be given formal legal status to provide greater certainty in accessing and operating on Aboriginal land.

3.4 Streamlining Resources Project Development

- SACOME members have suggested that the project development process could be expedited through DEM providing a package of information to a company upon the grant of an Exploration License. This would notionally comprise a map of the tenement area incorporating:
 - contour information;
 - identified water courses and catchment areas;
 - borehole locations with core data;
 - location of water wells with flowrate and water quality;
 - location of all heritage sites (both Aboriginal and European) with any restrictions for development;
 - location of all roads and tracks; any infrastructure that may help/hinder a development;
 - previous hydrogeological studies;
 - mineralogical information;
 - previous flora and fauna studies;
 - previous soil surveys;

- previous archaeological reports;
 - meteorological data such as temperature, wind speed and direction, rainfall and flooding events.
- SACOME members suggest that up-front access to this information would allow an explorer to spend their capital on proving a resource and reserve rather than duplicating the study/survey work of previous owners, shortening the time taken before an investment decision is made by several years.
 - The need to undertake new studies on tenements which have already been explored has a significant money and time cost and often necessitates a change of plans once studies have been completed.
 - It has been further suggested that this would expedite the process of government approval as government is providing the data to a licence holder, ensuring its provenance.

3.5 Development of a South Australian Nuclear Industry

- SACOME continues to advocate for greater development of uranium projects, nuclear energy options and a South Australian nuclear industry.
- Nuclear energy continues to be disregarded as source of zero-emissions energy in Australia, reflecting the long-held antipathy toward it despite it providing a logical and proven solution to many of the problems relevant to the energy transition process and the additional economic benefits that a South Australian nuclear industry could provide.
- The development of our abundant uranium resources could allow us to utilise small modular reactors (SMRs) in our energy mix to provide low-cost, zero emission power for industry. SMRs, coupled with South Australia's abundant renewable energy sources would also assist us to rapidly decarbonise our economy and provide efficient, reliable power as an input to development of nascent technologies like hydrogen.
- South Australia is a world class uranium province, hosting 25% of the world's uranium resources and 80% of Australia's uranium; the home of the Australian Radioactive Waste Agency and soon to be home to the National Radioactive Waste Management Facility.
- Further, South Australia has one of the only ports in the nation approved for export of uranium products and a well-developed regulatory regime governing the uranium supply chain. These are nationally and internationally competitive advantages awaiting capitalisation.

- Despite these significant advantages, South Australia is yet to fully realise the benefits of a nuclear industry and this can only come from concerted, bipartisan efforts to advance the public policy debate. The outcome of the Nuclear Fuel Cycle Royal Commission has left political representatives reluctant to pursue the nuclear argument.
- With the Commonwealth Government's recent announcement of the AUKUS trilateral security partnership and its decision to acquire nuclear-powered submarine technology, a genuine conversation about nuclear options should now be progressed as the supply chain must be built to support this decision.
- Without political support Federal and State laws prohibiting nuclear power and uranium processing cannot be altered and new technologies like SMRs continue to be excluded as an option in the broader energy policy debate.
- SACOME notes that:

A net-zero emissions economy will require a vastly different and far larger electricity system compared to today. Electrification of industry alongside large scale production of hydrogen from electricity is expected to require three to four times as much electricity generation than is presently available.

If Australia was to realise the opportunity of being a major exporter of hydrogen as outline in the most optimistic scenarios of the National Hydrogen Strategy, it would require a total electricity load five times greater than the current size of the National Electricity Market.⁴

- Given the scale of the energy transition challenge, nuclear provides a ready solution to the problem of decarbonising while preserving key industrial sectors, subject to the exercise of necessary political will.
- While South Australia has set a renewable energy target of 500%, this has not been accompanied by a conversation about land use and land access, recognising that solar and wind farms will require significant land mass, compared to the much smaller footprint, greater and more reliable energy output, and longer lifespan of Small Modular Reactor technology.
- Advice from industry experts is that SMR technology is estimated to be 8-10 years away from commercialisation, which is a similar timeline to that that of hydrogen. Were nuclear to receive the same levels of regulatory support and government subsidy as has been provided to renewables and hydrogen development, this timeframe could be expedited.

⁴ Australian Industry Energy Transitions Initiative 'Setting up Industry for Net Zero Phase 1 Highlights Report: current state and future possibilities', June 2021 p.13

- Noting the array of legislative amendments that must be made to enable development of a South Australian nuclear industry and further development of uranium projects, SACOME submits that a South Australian Nuclear Industry White Paper provides a vehicle to collate, analyse and make recommendations on how these objectives can be realised. The White Paper could also be used as a locus for the political and policy debate necessary to progress this process.

4. Conclusion

In providing comment on the Annual Report 2021, SACOME reiterates the importance of resolving the barriers to investment that operate against resources project development in South Australia.

While 2020-21 has seen welcome high commodity prices contributing to a 3.9% rise in Gross State Product, this should not distract from initiatives that have the potential to grow the South Australian resources sector at scale.

SACOME is broadly supportive of the initiatives set out in the Annual Report 2021.

In preparing the 2022 Energy & Mining Strategy, SACOME calls upon DEM to incorporate more robust energy transition measures; and to work with other government and industry stakeholders to rapidly develop measures that will address imminent labour shortages for all *Growth State* industry sectors.

SACOME remains committed to working collaboratively with DEM and the South Australian Government to progress transformational economic growth outcomes for the resources sector and the State.