2024-2025 Pre-Budget Priorities

Submission to the Hon. Stephen Mullighan MP
Treasurer of South Australia

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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 leading industry association representing the resources and energy sector; the powerhouse of the State's economy.

SACOME's 2024-25 Pre-Budget submission continues to advocate for projects that will advance economic and strategic infrastructure development for the resources sector and the State.

SACOME's member companies underpin the strength of the South Australian economy.

SACOME has quantified the resources sector's contribution to the South Australian economy, through its Economic Contribution Study which analysed the expenditure patterns of 15 major operating member companies throughout 2021/22.

The 15 participating companies are some of the most significant industrial entities in South Australia, namely: Adbri, Adchem, Beach Energy, BHP, Boss Energy, Cooper Energy, FMG Resources, Nyrstar Port Pirie, OZ Minerals, Rex Minerals, Santos, and SIMEC Mining.

The Study found that these companies contributed $10.7 billion in direct and indirect spending to South Australia, equivalent to 8.3% of Gross State Product, or one dollar in every twelve.

Furthermore, these member companies are responsible for the following economic contribution to the State:

- Directly employed 7,825 full-time jobs and supported the employment of 42,832 full-time jobs in total; or 1 in every 14 jobs are supported by the resources sector.
- Paid $1 billion in wages and salaries to direct full-time employees, representing an average salary of $133,672 per annum; significantly higher than the average South Australian salary of $77,800 per annum.
- Direct spending amounted to $5.3 billion, which included $3.75 billion in purchases of goods and services from over 2,851 local businesses.
- Paid $431 million to the State Government in royalties, stamp duty, payroll tax, and land tax.
- Provided $14.7 million to 197 different community organisations, funding health, education, arts, sporting groups, and Indigenous communities.

Our continuing calls for these 'State development' initiatives reflect the fact that resources projects can often take decades to reach production. As such, SACOME strongly supports a budgetary and policy rationale that embeds continuity and persistence, recognising that long-term outcomes can only be realised through sustained effort.

Additionally, SACOME calls for funding of policies and programs that bring order and mitigate the significant and ongoing cost to industry of South Australia's energy transition process.

SACOME reiterates that the energy transition must be considered in conjunction with industry and economic growth policy to better mitigate adverse impacts for entities that have made major capital investment in South Australia; and to enable future investment by industrial operators.

Our 2022-23 pre-Budget submission also featured calls for the funding of a STEM Digital Pilot in Schools and a statewide Future Workforce Framework. While the South Australian Government is progressing a workforce framework, we note that its application is narrow rather than holistic in nature. Government declined the opportunity to work with industry to implement a digital education pilot in schools which has been successfully rolled out across Western Australia.

SACOME reiterates the importance of these calls and again invites the State Government to provide funding support.

In the interim, SACOME continues to progress solutions to future workforce and skilling issues through:

- The 'Resources. But not as you know it' careers campaign targeting school leavers during their SATAC applications;
- The Resourceful SA education campaign regarding South Australia's natural resources;
- Commissioning our own reporting regarding the resources sector's labour force requirements in South Australia;
- The provision of ongoing support for the Playford Trust scholarships; and
- Responding to State and Commonwealth Skills bodies as to priorities.

SACOME and its member companies are committed to working collaboratively with the Malinauskas Government in realising our shared ambitions for the growth of the South Australian resources sector and the State's economy.

2. Summary of SACOME's Pre-Budget Calls

A summary of SACOME's eight 2023-24 pre-Budget calls is provided below.

SACOME also resubmits two of its 2022-23 pre-Budget calls and seeks their finalisation.

These calls are detailed in subsequent sections.

State Economic Development

1. **Critical Minerals to Metals Strategy and Critical Minerals Development Fund**

   SACOME calls for the completion of a Critical Minerals to Metals Strategy and the provisioning of $50 million as an initial investment in the proposed Critical Minerals Development Fund.

2. **Development of a Local CO_2 Industry**

   SACOME calls on the Government to investigate appropriate financial supports for the development of a local CO2 industry.

3. **Industrial Transition and Decarbonisation**

   SACOME recommends that consideration be given to the broader civic infrastructure requirements of the green industrial transformation to inform 'whole of supply chain' infrastructure planning.

Energy

4. **Energy Transition White Paper/Roadmap**

   SACOME calls for the swift development of the South Australian Government's Energy Transition White Paper; the abolition of the Retailer Energy Productivity Scheme for large industrial users; and the inclusion of a resources sector representative on the Premier's Climate Change Council.

5. **Carbon Abatement Technologies**

   SACOME calls on the State Government to implement policies that incentivise the development of carbon abatement technologies such as commercial Carbon Capture and Storage (CCS), including appropriate financial supports for the construction of a pipeline from Moomba to Port Bonython to facilitate international carbon storage.

6. Nuclear Readiness

SACOME recommends that relevant State authorities such as Infrastructure SA and the South Australian Productivity Commission are funded to undertake an analysis of the International Atomic Energy Agency's Milestones Approach and supporting guidance to ensure South Australia's readiness as part of a national nuclear program.

Infrastructure

7. Rail Incentives

SACOME calls on the State Government to allocate funding to investigate rail freight incentive schemes analogous to those introduced in other Australian jurisdictions.

8. Regional and Remote Roads – Upgrades and Maintenance

SACOME calls on the State Government to continue to prioritise funding for the upgrade and maintenance of regional and remote roads critical to the operation of South Australian resource projects.

9. Digital Infrastructure Taskforce

SACOME calls for the establishment of a South Australian Digital Infrastructure Taskforce, including representation from businesses and universities, to provide holistic advice to Government on the value and utility of Digital Infrastructure as a driver of economic and green growth across public and private sectors.

10. Priority Transmission Infrastructure

SACOME calls on the Government to identify priority transmission infrastructure for the State, such as the Mid-North Expansion projects, to meet future industrial electricity demand.

Resubmission of previous priorities

11. Northern Water Project

SACOME reiterates its strong support for the Northern Water Project and calls for continued effort by the South Australian Government to bring it to development.

12. Resources Sector Economic Heatmap and Infrastructure Corridors

SACOME calls for the completion and integration of the South Australian Resources Sector Economic Heatmap within the Government, to better inform the Government's infrastructure decision-making.

3. State Economic Development

SACOME calls for funding commitments in the 2024-25 State Budget that will drive state economic development and unlock growth in line with the State Government's vision for the State's economy to be 'smart, sustainable, and inclusive'.

As identified in SACOME's 2024 Vision, road, rail, water, and power infrastructure are critical for the development of South Australia's resource provinces. To that end, and in alignment with SACOME's submission to InfrastructureSA 20-Year State Infrastructure Strategy (**Attachment A**), SACOME recommends several new capital projects for priority development, in addition to previous asks that remain ongoing or are unfinished.

3.1 Critical Minerals to Metals Strategy and Critical Minerals Development Fund

SACOME calls for the completion of a Critical Minerals to Metals Strategy and investment of $50 million for a new Critical Minerals Development Fund.

- Consistent with our long-term calls, SACOME recommends the completion of a South Australian Critical Minerals to Metals Strategy to capture the full value chain of South Australia's resources and act as a competitive advantage versus other jurisdictions for the development of critical minerals projects.

- SACOME also calls for an initial investment of $50 for a Critical Minerals Development Fund to better leverage South Australia's existing minerals processing capacity. SACOME submits that this investment could catalyse projects necessary to support the energy transition and decarbonisation of the State's heavy industry.

- SACOME supported the broadening of criteria for the Commonwealth Critical Minerals List to encompass processing capability to ensure sovereign capability issues are fully considered. SACOME also called for the addition of copper and zinc to the List consistent with representations made by the South Australian Government.

- In line with our previous comments regarding the development of a South Australian Critical Minerals Strategy, SACOME supports the establishment of the Critical Minerals Development Fund and the development of processing hubs in strategic locations across the State areas (i.e. Port Pirie, Olympic Dam, and Whyalla).

- Companies in these locations have identified projects that can further develop identified ore bodies for the purpose of critical minerals recovery.

- Global demand for critical minerals will continue to increase. SACOME notes further trade controls on critical minerals and rare earths enacted by China alongside increased demand from Australia's AUKUS partners.

- With its abundance of critical mineral wealth, including 80% of Australia's battery-grade graphite resources and large quantities of lithium, cobalt, manganese, and nickel, this represents a significant untapped opportunity for South Australia.

- The Federal Government's Critical Minerals Strategy and the funding of rare earths and battery projects as part of its $4 billion Critical Minerals Facility Funding provides an opportunity for South Australia to capitalise on national impetus.

3.2 Development of a Local CO_2 Industry

SACOME calls on the Government to investigate appropriate financial supports for the development of a local CO_2 industry in South Australia.

- Disruptions to food and industrial-grade CO_2 supplies are impacting food and beverage industries, including major wineries, breweries, and soft drink suppliers. Shortages are currently being experienced due to plant shutdowns and exposure to high import prices.

- This situation will be exacerbated over the next three years with the planned progressive shutdown of Torrens Island Power Station through to June 2026, the main source of food-grade CO_2 in South Australia since 2019 which is processed from its waste gas stream.

- Natural sources of high-quality CO_2 at Nangwarry have been discovered in the southeast of South Australia, which can be processed to food and industrial grade on-site. With the potential to provide over 20 years of continuous supply, the Nangwarry CO_2 project would provide a long-term and stable source of CO_2 for the South Australian food, beverage, and building industries.

- In addition to industrial uses, CO_2 is also used to cultivate algae, which can be used for biofuel production, carbon sequestration, applications in transport, heating, industrial processes, and electricity generation to reduce emissions and diversify our energy mix.

- It is estimated that an investment of approximately $30 to 40 million is required in the design and construction of a fit-for-purpose 175-tonne-per-day processing plant. This would exceed the 100-150 tonne per day requirement for CO_2 in South Australia and accommodate future needs.

- Current major users of CO_2 in South Australia include Sundrop Farms, Ingham's Chickens, Treasury Wines (including Penfolds, Wolf Blass and Wynns), Coopers Brewery, Holla-Fresh, and desalination plants. It is understood that interest has also been shown in a new supply of CO_2 by OTR, Bickfords, and the Coonawarra Vignerons Association (CGWI) in South Australia, as well as Bundaberg soft drinks in Queensland.

3.3 Industrial Transition and Decarbonisation

SACOME recommends that consideration be given to the broader civic infrastructure requirements of the green industrial transformation to inform 'whole of supply chain' infrastructure planning.

- SACOME acknowledges the South Australian Government's objectives of industrial transformation and decarbonisation. We note that the *South Australian Economic Statement* released by the Malinauskas Government in March 2023 aims to 'capitalise on the green energy transition'.

- Additionally, the Department of Energy and Mining's (DEM) *Magnetite Strategy*; *Green Paper on the Energy Transition*; the Office for Hydrogen Power's (OHPSA) *Hydrogen Jobs Plan*; and the Department for Industry, Innovation and Science's (DIIS) *South Australia's Advanced Manufacturing Strategy* set a consistent policy agenda for the State in support of this vision.

- SACOME member company, SIMEC Mining, has made significant investments in infrastructure to achieve decarbonisation of its operations and facilitate a 'green transition' of its industrial activities consistent with the State's policy agenda.

- This major investment in new plant and equipment demonstrates the capital-intensive nature of transitioning heavy industry away from its traditional use of fossil fuels and toward renewable power and greater process efficiency.

- An immediate challenge is to scale up green hydrogen production sufficiently to meet industrial needs and to do so at a competitive 'dollar per kilogram' price. In doing so, the question of hydrogen's cost as an energy source must be settled.

- Timeframe is a critical consideration as the sooner green hydrogen is available for wide-scale use by industry, the sooner emissions reduction targets can be achieved. As such, the timely implementation of policy measures, planning and investment decisions relevant to the hydrogen supply chain is critical.

- Development of civic infrastructure in Whyalla and the Upper Spencer Gulf remains an issue of importance, noting that SIMEC intends to increase its workforce by 500-600 people in the short term; and the Hydrogen Jobs Plan estimates workforce growth of an additional 5000-6000 people over a similar timeframe.

- Regional growth of this scale necessitates investment in a broad range of infrastructure to support increased population.

- In addition to power, water and transport infrastructure to underpin civic growth, investment in sporting, community, hospitality, tourism, housing and educational infrastructure is required to ensure that Whyalla is an attractive place to live and work.

- SACOME supports SIMEC's industrial transformation and decarbonisation efforts noting that they provide a template for transition of heavy industry consistent with the South Australian Government's policy agenda.

4. Energy

SACOME's pre-Budget calls focus on measures that provide certainty to industry, increase system stability, and lower costs while assisting industry in the process of decarbonisation.

Recent independent analysis commissioned by SACOME has confirmed South Australia's energy transition has cost hundreds of millions in system security costs, market interventions, infrastructure upgrades and energy transition measures since 2016, with costs continuing to escalate.[1]

Acknowledging the deeply complex nature of the energy market, coupled with the need to rapidly decarbonise the economy, SACOME continues to advocate for an Energy Transition Roadmap that accounts for the whole cost of the energy system and minimises costs for South Australian businesses.

Affordable and reliable power remains critical to the economic viability of commercial and industrial operations and SACOME submits that it must continue to be observed as a central policy tenet and calls for the funding of Budget measures that assist this outcome.

4.1 Energy Transition White Paper/Roadmap

SACOME calls for the swift development of the South Australian Government's Energy Transition White Paper; the abolition of the Retailer Energy Productivity Scheme for large industrial users; and the inclusion of a resources sector representative on the Premier's Climate Change Council.

- Previous iterations of this Budget call have included SACOME advocating for an Energy Transition Advisory Board to advise the Government, holistically considering the energy trilemma of cost, reliability, and sustainability; and, subsequently, the development of an Energy Transition Roadmap.

- The Malinauskas Government convened the Energy Transition Roundtable and released the *Green Paper on the Energy Transition* in 2023, both of which were welcomed by SACOME.

- SACOME continues to highlight the true cost of the energy transition to commercial and industrial operators and commissioned a peer-reviewed analysis regarding the cumulative costs of market interventions as part of its comprehensive response to the Government's *Green Paper on the Energy Transition*:

    - Frequency Control Ancillary Service (FCAS) costs for commercial and industrial users from Q1 2012 to Q4 2022 were $467 million. Over the ten years, the moving average

[1] https://www.sacome.org.au/uploads/1/1/3/2/113283509/sacome_media_release_-_unplanned_energy_transition_costing_industry_final_-_18_september_2023.pdf

cost per quarter has increased by 278%.

- SACOME understands the costs of market intervention now represent 20-30% of industrial electricity bills. It is SACOME's view that these market intervention costs, alongside other Government interventions, are rapidly becoming a 'cost of business crisis' for many manufacturers.

- SACOME further reiterates its repeated calls for the abolition of the Retailer Energy Productivity Scheme (REPS) for large industrial customers, which has largely been subsidising the REPS initiatives of residential customers.

- Consistent also with our submission to the Green Paper, SACOME calls for the inclusion of a resources sector representative on the Premier's Climate Change Council to ensure the PCCC has full representation from industry and subject-matter expertise across the energy transition, industry decarbonisation and climate change, given these policy areas are strongly interlinked.

4.2 Carbon Abatement Technologies

SACOME calls on the State Government to implement policies that incentivise the development of carbon abatement technologies such as commercial Carbon Capture and Storage (CCS), including appropriate financial supports for the construction of a pipeline from Moomba to Port Bonython to facilitate carbon storage.

- Commercial CCS is a viable pathway to reducing emissions and positions Australia to continue as a leading energy exporter and manufacturer of energy-intensive materials.

- The International Energy Agency has forecast that a hundredfold increase in CCS is required between now and 2050 to achieve the world's climate goals pursuant to their Sustainable Development Scenario – from approximately 40 million tonnes of CO_2 currently stored each year to 5.6 billion tonnes in 30 years. The use of CCS will be a critical tool for hard-to-abate sectors in offsetting their emissions, including cement and steel manufacturing, which the country has a long-term strategic interest in maintaining.

- Santos, with its Joint Venture partner Beach Energy, is constructing the $200 million Moomba CCS facility; one of Australia's largest infrastructure investments in reducing carbon emissions. At full operation, the Moomba CCS facility will store 1.7 million tonnes of CO_2 per year and is expected to be online by early 2024.

- Consistent with our previous pre-Budget submissions, SACOME calls for CCS incentives to be afforded the same priority as hydrogen initiatives. This includes consideration of the impact of CCS royalties as a disincentive to investment in CCS per SACOME's submission to the Petroleum and Geothermal Energy (Energy Resources) Amendment Bill 2022 consultation process.

- The Petroleum and Geothermal Energy Amendment Bill proposes to levy a 'rent' on CCS from international jurisdictions. This suggests the Government is confident of a market for the same and for which they aspire to derive income. Countries such as Japan and South Korea have made clear their interest in CCS opportunities, given their limited opportunities for decarbonisation.

- Given the significant growth prospects from the economic and environmental imperative to decarbonise as well as interest in CCS/decarbonisation opportunities from trading partners including Japan and South Korea, SACOME submits that consideration should be given to appropriate funding supports for the construction of a dedicated CO_2 pipeline from Moomba to Port Bonython to facilitate international carbon storage.

4.3 Nuclear Readiness

SACOME recommends that relevant State authorities such as Infrastructure SA and the South Australian Productivity Commission are funded to undertake an analysis of the International Atomic Energy Agency's Milestones Approach and supporting guidance to ensure South Australia's readiness as part of a national nuclear program.

- South Australia has been at the forefront of the energy transition nationally, with over 70% of our energy generation coming from renewable sources. However, this leadership has come at a price to the State's commercial and industrial base, with recent SACOME analysis identifying that system security costs charged by AEMO have escalated by over 200% since 2016, with no signs of this trend abating. Whereas previously system security costs were barely a feature, commercial and industrial customers have reported these costs now represent 20-30% of their electricity bills.

- While gas has, and will continue to have, a role in providing a measure of baseload power, nuclear represents an emissions-free alternative and would both complement the existing renewable resources and mitigate *some* of the pressures for new transmission infrastructure that renewable power demands.

- SACOME has previously made submissions to the Commonwealth regarding the need to lift the country's nuclear prohibition, which has no clear rationale, and to provide optionality to Governments in the next decade if the transition falters.

- Countries looking to introduce civil nuclear power are guided by the IAEA Milestones publication (*Milestones in the Development of a National Infrastructure for Nuclear Power*), which requires approximately ten years of preparatory work prior to the first reactor coming online.

- The IAEA Milestones Approach is an internationally accepted methodology that supports a sound process for countries considering the development of a national infrastructure for nuclear power and enabling countries to "self-assess" the readiness of their programmes to move forward.

- While most of this preparatory work can only be done or commissioned by the Commonwealth Government, there are several discrete roles that subnational jurisdictions can undertake.

- In 2023, SACOME undertook a gap analysis against the IAEA Milestones Approach to determine which aspects could be progressed by the State. It is SACOME's view that InfrastructureSA and SAPC are well placed to undertake a site identification and preliminary assessment study and economic and workforce analysis respectively, such that a reactor's impact would benefit multiple economic sectors.

- Recognising the complexity of these scopes, SACOME recommends that Infrastructure SA and the South Australian Productivity Commission undertake a review of the IAEA Milestones Approach and supporting guidance to ensure that the State is well informed about the process should the Federal prohibition on nuclear energy be removed.

- SACOME submits that this activity would provide a broader and more holistic review of the economic potential of nuclear, given:

    - Its benefits in stabilising the South Australian grid and providing emissions-free baseload power;

    - The creation of well-paying jobs during the life of the asset, likely to be in regional communities;

    - Reducing the need for more transmission lines than would otherwise be the case and promoting land use efficiency;

    - South Australia's vast uranium reserves; and

    - The geological stability of South Australia to safely store nuclear waste.

- Such work would not only advance Australia's progress against the IAEA Milestones Framework but would be entirely consistent with the findings of the 2016 Royal Commission that "*it would be wise to facilitate a technology-neutral policy for Australia's electricity generation mix*" and that to ensure that this is the case, "*action is required now*".

5. Infrastructure

As detailed in SACOME's 2024 Vision, road, rail, water, and power infrastructure are critical for the development of resources projects.

SACOME continues to advocate for initiatives that resolve structural impediments to the development of the State's resources provinces, recognising that access to water, power and suitable transport and logistics routes are required to underpin greater levels of investment and achieve the South Australian Government's economic growth ambitions.

SACOME's Pre-Budget calls reflect the need for safer and more efficient supply chain routes, the use of digital capabilities to boost productivity and drive green growth; and the commissioning of transmission infrastructure to meet electricity demand into the future.

5.1 Rail Incentives

SACOME calls on the State Government to allocate funding to investigate rail freight incentive schemes, as has been introduced in other Australian jurisdictions.

- SACOME submits that a stronger rail freight network reduces road congestion and the cost of road maintenance. Moreover, the transportation of freight by rail reduces carbon emissions by approximately two-thirds.

- Importantly, bulk freight by rail may result in exporters having more options in the consideration of suitable ports. Consistent with long-term SACOME calls, it would maximise the prospects of South Australia securing a part of the valuable supply chain, rather than seeing exports travel to ports in other states.

- Victoria has implemented a Mode Shift Incentive Scheme, which involves the government providing incentives for the transport of containerised freight by rail instead of by road. Other jurisdictions, such as Queensland, are trialling rail incentives for bulk freight.

- SACOME calls for funding to be made available to an appropriate body such as the Freight and Supply Chain Consultative Committee to undertake a study, incorporating inter-jurisdictional analysis, as to how rail freight may benefit South Australian exporters.

5.2 Regional and Remote Roads – Upgrades and Maintenance

SACOME calls on the State Government to continue to prioritise maintenance funding for regional and remote roads which are critical to the operation of South Australian resource projects.

- South Australia has a road network comprising some 10,000 km of road. SACOME submits that the maintenance and upgrade of these roads must be assessed in such a

manner that considers their economic value to the State, rather than the use of a simple metric that quantifies vehicle movements.

- While this is a safety and efficiency issue for the resources sector, it also affects freight operators, pastoralists and tourists using regional and remote roads.

- InfrastructureSA's inaugural 20-Year State Infrastructure Strategy published in 2020 stated that the estimated road maintenance backlog was $780 million and growing by $100 million per year. It also found that South Australia spends proportionately less on road maintenance compared to New South Wales and Western Australia.

- In 2023, the RAA forecasted the maintenance backlog to be $2 billion.

- SACOME continues to call for the implementation of a 4-year road maintenance fund of at least $600 million to reduce the backlog of road maintenance across South Australia's road network. By contrast, the 2023 State Budget allocated $350 million over 4 years.

- In line with these comments and SACOME's previous pre-Budget submission, SACOME calls for the upgrade of the following two 'resources sector' roads:

Yunta Road

- This 220 km road is a vital supply line for the expanding Four Mile uranium mine, operated by Heathgate Resources, which is the second largest producer and exporter of uranium in Australia. This road is also used by explorers, livestock transport, and tourists, but has long been in poor condition.

- In 2021 the South Australian Government completed a $4 million pilot to test single lane sealing of a 20 km portion of the Yunta Road on the section north of Yunta to the Epic Energy Right-of-Way turn-off.

- While the pilot has been successful other sections of the road have continued to deteriorate, highlighting the need for comprehensive maintenance work.

- SACOME calls on the Government to undertake a comprehensive program of road maintenance for this economically important corridor.

Mulyungarie Road

- SACOME continues to advise the Department for Infrastructure and Transport of the poor condition and continual maintenance required for Mulyungarie Road near Broken Hill.

- This is a shared road for both pastoralists and multiple resource companies, including Boss Energy, Consolidated Mining and Civil, and Havilah Resources.

- The road is a critical access route for the Honeymoon mine and remains unsealed preventing adequate water drainage. Boss Energy has advised that the road continues to degrade, with only minor remedial work being undertaken on an ad hoc basis.

- The road is used for the transport of chemical reagents and uranium and is inaccessible in wet weather. Safety is a paramount concern given the commodities being transported.

- Boss Energy has advised that its condition could affect recently resumed mining operations at its Honeymoon site.

- SACOME calls for funding to upgrade the Mulyungarie Road to improve road drainage and enable all-weather access.

5.3 Digital Infrastructure Taskforce

SACOME calls for the establishment of a South Australian Digital Infrastructure Taskforce, including representation from businesses and universities, to provide holistic advice to Government on the value and utility of Digital Infrastructure as a driver of economic and green growth across public and private sectors.

- The State Government's *ICT, Cyber Security and Digital Government Strategy - Update for 2022* makes no reference to cyber-physical systems (CPS) or the Internet of Things (IoT); instead, it focuses on cyber security challenges. While crucial, overlooking the former results in missed economic opportunity for South Australia.

- The principal impediment to the uptake of and implementation of digital infrastructure is a lack of understanding as to what it is needed, what it involves, or how transformative embedding it within Government or the private sector could be.

- General constructions of what this digital infrastructure could be have tended to relate to technologies that involve a significant level of user input or involvement to simplify or streamline existing processes that largely mirror analogue ones.

- In contrast, technology such as CPS integrates computation, networking, and physical processes and can be characterised as the most advanced form of digital twins. By embedding computing and communication capabilities into physical devices and infrastructure, CPS can dramatically transform how we interact with the environment and built systems. In essence, it is what is often described as "smart technology" and can be regarded as a more advanced and larger-scale iteration of IoT.

- The data generated from CPS can be fed into decision-support systems that use advanced analytics and artificial intelligence. This can help policymakers and

businesses make informed decisions that align with their policy goals.

- CPS has a particular role to play in addressing climate change and improving public infrastructure. SACOME members are particularly interested in its applications for supporting the real-time collection of temperature, emissions, and other environmental data, and informing ways these can be mitigated or improved. CPS already supports precision agriculture, the use of smart grids, and traffic management systems.

- Strategic adaptation of CPS aligns precisely with the South Australian Government's vision of a smart, sustainable economy and supporting decarbonisation that fuels green growth.

- Some policy work to date has already been undertaken by the Commonwealth Government in respect of "Industry 4.0" test labs and there has been an IoT strategy developed by the Western Australian Government; in addition to a report on its potential by PwC and the formation of an industry-supported IoT alliance.

- SACOME recommends the establishment of a Taskforce to assess its benefits and potential to the South Australian economy, with a focus on driving decarbonisation efforts.

5.4 Priority Transmission Infrastructure

SACOME calls on the Government to identify priority transmission infrastructure for the State, such as the Mid-North Expansion projects, to meet future industrial electricity demand.

- South Australia is experiencing a rapid and significant uplift in its electricity demand, with key drivers including:

    - The potential connection of large new customer loads such as new or expanded mining operations, new industrial loads, and other energy-intensive projects such as data centres.

    - The development of large iron ore mining operations and the production of green steel in line with the South Australian Government's Magnetite Strategy.

    - The development of hydrogen facilities near Whyalla and other large hydrogen hubs in accordance with the South Australian Government's hydrogen ambitions.

- It is predicted that around 1,000 MW of additional load will connect to the transmission network by 2030 and the development of major transmission assets requires at least five years from initial planning to delivery.

- The Mid-North Expansion (Southern) project is an essential part of the 'network backbone' and is required to enable higher transfers of renewable energy to meet load growth and ensure the security of supply through a diverse transmission path to Adelaide, as South Australia becomes increasingly dependent on more distant renewable sources with the retirement of local gas generators.

- The Mid-North Expansion (Northern) project also forms part of the 'network backbone' and is central to meeting demand growth and unlocking further renewable energy resources.

- Together, the Mid-North Expansion (Southern) and Mid-North Expansion (Northern) projects will unlock substantial benefits for the State by enabling industry growth and supporting additional local renewable energy development.

- SACOME recommends that the South Australian Government identify these projects as strategic infrastructure priorities, ensuring that the timing of major network development is aligned with the development of energy projects and increased energy demand across industrial, mining, and hydrogen production activity.

6. Finalisation of previous policy priorities

6.1 Northern Water Project

SACOME reiterates its strong support for the Northern Water Project and calls for continued effort by the South Australian Government to bring it to development.

- SACOME has long advocated for the Northern Water Project, which involves the construction of a new desalination plant and the delivery of sustainable water via a high-capacity pipeline to the Gawler Craton.

- The Northern Water Project:

    - Supports the State Government's hydrogen ambitions and aligns with the State Government's Copper, Green Steel and Green Iron strategies;

    - Is forecast to create 8000 construction jobs and 6000 jobs once operational;[2]

    - Will supply the Department of Defence's water needs at the Woomera Prohibited Area; and

    - Will address the domestic needs and industrial water constraints of the Upper Spencer Gulf region.

- SACOME welcomes the strong support shown to date by the Commonwealth and State Governments, including the $100 million in equity contribution funding that formed part of the 2023 State Budget.

- SACOME notes that the final decision to proceed with construction of the Northern Water Project will rely on gaining required project approvals and agreements, encompassing extended consultations with traditional owners, landholders, and the community; comprehensive evaluations of environmental, engineering, and economic aspects of the project; and commercial negotiations for project delivery and water purchase.

- The Northern Water Project remains a critical enabler to growth of the South Australian resources sector and the South Australian Government's hydrogen and green industry transition goals.

- Completion of the Northern Water Project achieves the supply of water as an input to industrial process in the Far North, facilitates development of the Gawler Craton and plays a critical role in production of green steel and hydrogen in the Upper Spencer Gulf.

[2] https://www.energymining.sa.gov.au/home/news/latest/delivering-a-secure-and-sustainable-water-future-for-south-australia

- Given the importance of the Northern Water Project to a broad range of stakeholders, SACOME regards project certainty and momentum as crucial.

6.2 Resources Sector Economic Heatmap and Resources Infrastructure Corridors

SACOME calls for the completion and integration of the South Australian Resources Sector Economic Heatmap within the Government, to better inform the Government's infrastructure decision-making.

- South Australia has significant known mineral and petroleum reserves that represent yet-unrealised wealth for South Australia.

- SACOME previously called for development of a Resources Sector Economic Heatmap to provide Government with a consolidated understanding of the value of South Australia's resources provinces and enable the identification of regions of priority economic development.

- SACOME's intent was for the Heatmap to identify:

    - The potential economic value of a province to the State;

    - The investment required to build a path to market for identified provinces;

    - What actions the State could take to resolve infrastructure-related barriers to investment;

    - Opportunities to leverage Commonwealth funding and prioritisation;

    - The timeframes necessary for implementing a solution; and

    - The opportunity cost of doing nothing.

- SACOME has only recently become aware that the Heatmap is considered to be of limited utility as it only considers the present-day value of provinces and has been mapped at an SA-2 level, rather than at provinces level.

- SACOME submits that the Heatmap should be finalised in line with its original intent for use as a vehicle to inform Government decision-making and as an investment attraction tool to enable province development.