

## Submission to the Infrastructure SA 20-Year State Infrastructure Strategy Discussion Paper

November 2023



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## Introduction

The South Australian Chamber of Mines and Energy (SACOME) is the leading industry association representing the resources and energy sector in South Australia; the powerhouse of the State's economy.

SACOME welcomes the opportunity to provide this submission to the 20-Year State Infrastructure Strategy Discussion Paper.

SACOME recognises the importance of InfrastructureSA's (ISA) work and commends ISA on its development and implementation of the inaugural 20-Year State Infrastructure Strategy (the Strategy).

ISA's focus on long-term infrastructure planning since implementation of the Strategy in 2020 has facilitated informed policy development to address a range of long-standing infrastructure hurdles that have historically acted as impediments to the development of the resources sector in South Australia.

Noting that resources projects can often take decades to reach production, we strongly support a policy rationale that embeds continuity and persistence, recognising that long-term outcomes can only be realised through dedicated effort.

As detailed in SACOME's 2024 Vision, road, rail, water, and power infrastructure are critical for the development of resources projects. SACOME's 2024 Vision highlights the need for a long-term strategic focus underpinned by industry and government collaboration.

Noting the progress made since implementation of the Strategy in 2020, SACOME strongly supports the ISA's ongoing work in scoping and subsequently progressing infrastructure requirements to support the State's economic growth over the long-term.

SACOME's submission to the original 20-Year Infrastructure Strategy prioritised support for the following projects:

- The development of a Resources Sector Heatmap to enable the Government to quantify and understand the economic value of respective resources provinces;
- Resources Infrastructure Corridors, to unlock shared user infrastructure and facilitate project development through economies of scale; and
- Maintenance and upgrade of regional and remote roads.

SACOME is pleased to acknowledge that these policy priorities set out in its first submission are now materially advanced.



In addition, SACOME has continued to advocate for development of the Northern Water Project. This initiative was submitted to the South Australian Government by SACOME as a post-COVID economic stimulus project in 2020.

SACOME acknowledges the support of Infrastructure SA in advancing this major state economic development initiative which was included on the Infrastructure Australia Priority List in February 2021. Crucially, the Northern Water Project has benefited from bipartisan support and continuity across electoral cycles and a change of government as a result of ISA's rigorous assessment processes.

Following a favourable business case, the project is progressing toward a Final Investment Decision in Q4 202 and has also attracted \$100 million in equity funding from the State Government in the State Budget.

SACOME's sustained advocacy for the Northern Water Project offers demonstrable benefit to the resources sector while also enabling the Malinauskas Government to meet the objectives of its Hydrogen Jobs Plan, and support the economic and civic growth of Upper Spencer Gulf communities.

SACOME notes that the revised Strategy will be guided by the South Australian Government's vision of 'an economy that is smart, sustainable and inclusive' and by the following six objectives:

- 1. Enabling infrastructure
- 2. Liveable and well-planned spaces
- 3. Accessible and inclusive infrastructure
- 4. A decarbonised, sustainable economy
- 5. Improved resilience
- 6. A stronger infrastructure industry

While SACOME strongly supports all these objectives, our submission focuses on three of these given their relevance to the resources sector, namely: Objective 1 - Enabling infrastructure, Objective 4 - A decarbonised, sustainable economy, and Objective 6 - A stronger infrastructure industry.

SACOME also supports the use of the megatrends identified in the Discussion Paper as a backdrop for strategic planning – principally 'climate change adaptation and mitigation'; and 'accelerated digital transformation'.

Given the breadth of issues contained in the Discussion Paper, SACOME's responses are guided by the questions and themes relevant to the resources sector rather than providing specific answers to each question.



SACOME's submission is informed by consultation with its member companies to identify emerging priorities; and resubmits existing policy priorities of continuing relevance, recognising that delivery of major infrastructure projects will carry across successive iterations of the 20-Year State Infrastructure Strategy.

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 in South Australia and achieve the South Australian Government's economic growth ambitions.

## 1.0 Enabling Infrastructure

The first objective of the Discussion Paper is:

'Enabling infrastructure unlocks higher productivity and economic growth to improve our living standards'.

The Discussion Paper posits that the 'right' enabling infrastructure must be in place for South Australia to capitalise on any economic opportunities arising from the energy transition, whether from the development of existing infrastructure, building new infrastructure, or developing new capabilities and skills.

Accordingly, SACOME proposes the following new initiatives:

- Development of new, priority transmission infrastructure to meet current and emerging needs;
- Building water supply capacity to service industry and communities on the Eyre Peninsula;
- Supporting the development of a CO<sub>2</sub> industry to meet the current and future needs of the food, beverage and building industries, as well as the development of biofuels;
- Investigating the potential for a rail freight incentive scheme; and
- Development of a Critical Minerals to Metals Strategy.

SACOME also reiterates the importance of previous initiatives for which we have advocated, namely the:

- Northern Water Project;
- Resources Sector Heatmap; and
- Infrastructure Corridors.

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.



The purpose of the Heatmap was to provide Government with a consolidate understanding of the value of South Australia's resources provinces to enable the identification of regions of priority economic development.

SACOME's intent was for the Heatmap to inform infrastructure decisions, such as the location of multi-user corridors, and thereby grow resources exports from historically underdeveloped provinces.

As industry was not intended to be the direct recipient of the Heatmap, SACOME has only recently become aware that the Heatmap is considered 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.

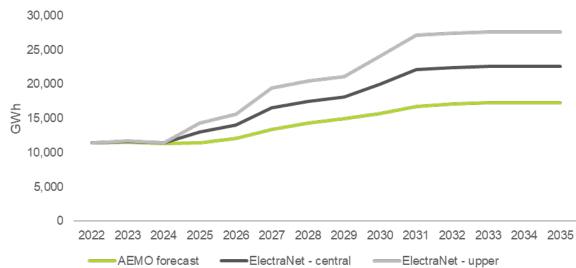
### **1.1 Transmission Infrastructure**

As identified in the Discussion Paper, South Australia's electricity transmission network is an essential enabler in the transition to a net zero emissions future and in supporting the South Australian Government's economic development strategy.

South Australia is experiencing a rapid and significant uplift in its electricity demand. Key drivers include:

- 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 keeping 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 Australia Government's hydrogen ambitions.

On present indications, it is predicted that around 1,000 MW of additional load will connect to the transmission network by 2030. This is illustrated in Figure 1 below (in energy terms) set against AEMO's current forecast. The upper forecast shows the outlook if all loads currently in connection discussions were to proceed. Importantly, this does not include a range of known loads that have not yet started connection discussions.



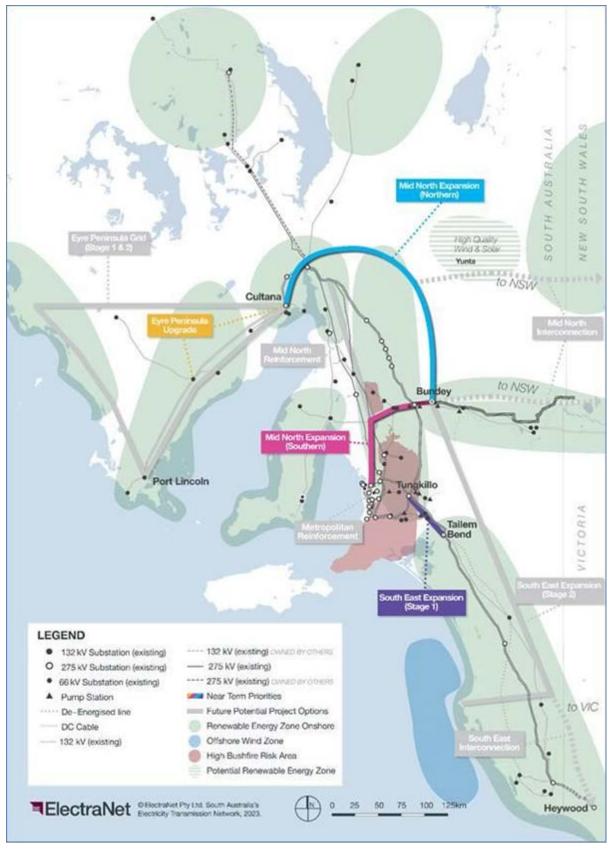
#### Figure 1. South Australian Electricity Demand Outlook

The development of major transmission assets requires at least 5 years from initial planning to delivery.

Recent analysis by ElectraNet shows that building multiple transmission lines with lower capacity can be considerably more expensive than building the right-sized infrastructure, at a ratio of up to 6 to 1.

The following near-term network development priorities have been identified as requiring priority action:

- Mid-North Expansion (Southern) following preparatory activities completed in 2022-23 this project should be progressed as an 'actionable' project in AEMO's 2024 ISP
- Mid-North Expansion (Northern) this project should be progressed as an 'actionable' project in AEMO's 2024 ISP
- Eyre Peninsula upgrade following the completion of the Eyre Peninsula Link line rebuild in February 2023, based on new load interest the Regulatory Investment Test for Transmission will shortly commence to investigate options to increase the capacity of the line and service the growing needs of the region
- South-East Expansion following preparatory activities completed in 2022-23 this project should be progressed as an actionable project in AEMO's 2024 ISP



The Mid-North Expansion (Southern) 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 as local gas generators retire. It is recommended this commence as an 'actionable' project as soon as possible.

The Mid-North Expansion (Northern) also forms part of the 'network backbone' and is central to achieving the Government's economic policy objectives in meeting demand growth and unlocking renewable energy resources. This should commence as an 'actionable' project as soon as possible to support emerging loads and deliver full benefits to customers.

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

SACOME submits that the Strategy should identify the Mid-North Expansion (Southern) and Mid-North Expansion (Northern) as priority strategic infrastructure priorities for the State to progress to ensure major network development timing is aligned with the growth of South Australia's economy as a major enabler for industrial, mining, and hydrogen development.

#### 1.1.1 Recommendation:

The timely and efficient development of the transmission network, with particular attention to the Mid-North Expansion projects, should form a key component of South Australia's 20 Year State Infrastructure Strategy to meet the State's ongoing and emerging needs, support the Government's economic priorities and deliver a least-cost energy transition to Net Zero.

### 1.2 Water

#### Northern Water Project

SACOME again acknowledges ISA's dedicated efforts in progressing the Northern Water Project to its current stage, with final project decision expected in 2025.

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.

Infrastructure Australia identified water supply as one of the three most frequently cited infrastructure gaps in South Australia's regions. Water capacity is crucial to thriving



manufacturing, mining, agricultural and hydrogen industries, as well as supporting the needs of residents in regional communities.

SACOME reiterates its support for the Northern Water Project in the strongest terms.

#### Eyre Peninsula

Recent economic analysis by RDA puts the Eyre Peninsula's Gross Regional Product at approximately \$4 billion, representing over 3% of the State's economy.

Construction of civic and industrial infrastructure will significantly assist in supporting regional development and unlocking economic growth on the Eyre Peninsula.

SA Water is examining measures to rapidly address supply on Eyre Peninsula given the current system is not capable of supporting the present or future needs of either communities or industry.

Communities earmarked to support industry and population growth across the Eyre Peninsula cannot presently secure the water supplies they currently require. SACOME submits that greater focus is required to facilitate a water solution for the Eyre Peninsula.

Andromeda Metals' Great White Project south of Poochera near Streaky Bay is a case in point.

In order to start the Great White project, water will need to be trucked into the site at a high operating cost. A 17km pipeline is planned for installation facilitating water to the site, however, this will be limited by the capacity (volume and pressure) currently available in the Tod main at 3.6 litres per second. To support the future growth of the project, up to 20 litres per second is required.

To provide this supply, the proposed desalination plant will need to be built, commissioned, and supplying into the system, noting that this will not provide additional water to the community despite the need for increased supplies to support growth.

SA Water is currently completing its investigations into the Billy Lights desalination plant at Port Lincoln and is in the Early Contractor Indication phase, with the intention to supply potable water from 2025.

SACOME submits that this work should be prioritised to support regional economic and civic development on the Eyre Peninsula.



#### 1.2.1 Recommendations

#### Northern Water Project

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

#### Eyre Peninsula

To support future project growth on the Eyre Peninsula, SACOME recommends development of the Billy Lights Point Desalination Plant Port Lincoln desalination plant be prioritised and commissioned as an intermediate solution while the Northern Water Project continues to be evaluated.

### **1.3 Rail Incentives**

Consistent with the objectives of the Discussion Paper, a stronger rail freight network would have the effect of reducing road congestion and generating savings in road maintenance. Moreover, the transportation of freight by rail reduces carbon emissions by approximately two-thirds.

SACOME notes that other Australian jurisdictions have taken the lead in the development of rail freight incentive schemes.

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. Queensland is trialling rail incentives for bulk freight.

Importantly, in the South Australian context, 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.

#### 1.3.1 Recommendation

SACOME recommends that Infrastructure SA, with the assistance of suitable bodies, such as the Freight and Supply Chain Consultative Committee, be tasked with developing policies that strengthen South Australia's rail network, including the consideration of rail freight incentives.



### **1.4 Critical Minerals to Metals**

Consistent with long-term calls, SACOME recommends the development and prioritisation of a South Australian Critical Minerals to Metals Strategy to capture the full value of South Australia's resources and embed a pathway for value-adding.

This is in addition to <u>advocacy</u> to the Commonwealth Government recommending the inclusion of copper and zinc to the Commonwealth's Critical Minerals List. As part of this submission, SACOME supported a broadening of criteria to encompass processing capability and ensure sovereign capability issues are fully considered. As noted by Tesla Chair, Robyn Denham, Australia should aspire to more than "dig and ship", but rather become a "processing powerhouse".

South Australia is uniquely placed in this regard and therefore should be looking to the development of processing hubs as part of its economic transition agenda.

Nyrstar is an international producer and refiner of critical minerals and metals necessary for decarbonisation. With the appropriate investment, its existing smelters at Port Pirie and Hobart could be upgraded to allow for greater processing and refining opportunities. This includes the further release of critical metals such as indium and germanium as a by-product of zinc, as well as opportunities for antimony, bismuth, and manganese.

BHP is investigating two-stage smelting at Olympic Dam to grow copper cathode production from its present level of 200,000 tonnes to more than 500,000 tonnes per annum. Further processing of the ore would also produce opportunities for antimony and bismuth.

Global demand for critical minerals will continue to increase. Recently, China has been implementing further trade controls on its critical minerals and rare earths. This presents huge untapped economic opportunities for South Australia which has an abundance of critical mineral wealth, including 80% of Australia's battery-grade graphite resources and large quantities of lithium, cobalt, manganese, and nickel.

The national impetus for the development of critical mineral projects is evident in the Federal Government's Critical Minerals Strategy and funding of rare earths and battery projects as part of its \$4 billion Critical Minerals Facility Funding. SACOME submits that South Australia is well-placed to capitalise on this Commonwealth investment.

#### 1.4.1 Recommendation

SACOME submits that South Australia develop a Critical Minerals to Metals Strategy to capture the full value of our resources, with Government to consider supports for the development of processing hubs.

## 2.0 A Stronger Infrastructure Industry

The sixth objective of the Discussion Paper is:

'A stronger infrastructure industry optimises our infrastructure investment through better planning and prioritisation.'

The Discussion Paper further highlights that 'good infrastructure planning... [requires] a robust evidence base'.

Although digital infrastructure is undoubtedly enabling infrastructure, it is SACOME's view that cyber-physical systems and other digital capabilities, as outlined below, are key to capturing the data necessary to make informed infrastructure decisions.

### 2.1 Digital Infrastructure

The principal impediment to the uptake of future-facing digital technology 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.

The South Australian 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 focussing on cyber security challenges. While crucial, overlooking the former comes at an economic cost to South Australia.

General constructions of what this digital capability could be tend 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, 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 AI. 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.

https://sacom.sharepoint.com/Team Data/S2 - Submissions/2023/2023\_11\_SACOME\_ISA 20 Year Strategy\_November 2023\_FINAL.docx



By way of example, CPS already supports precision agriculture, the use of smart grids, and traffic management systems.

SACOME submits that strategic adaptation of CPS aligns with industry and government's vision of a smart, sustainable economy.

Government has a leadership role to play in uptake of CPS. Some 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 and a report on its economic potential by PwC, in addition to the formation of an industry-supported IoT alliance.

2.1.1 Recommendation:

SACOME recommends that a Taskforce in South Australia be established, comprising representation of business experts, universities and other suitable persons, to provide highlevel and holistic advice to Government as to how to support CPS, the potential value to the South Australian economy, and how it could be used across Government and the private sector to drive green growth.

## 3.0 A Decarbonised, Sustainable Economy

The fourth objective of the Discussion Paper is:

'Infrastructure supports a decarbonised, sustainable economy that capitalises on our competitive advantages and opportunities.'

SACOME's longstanding policy position is one of technological neutrality, and we submit that all power sources, including nuclear power, should be considered as part of the energy generation mix to meet the State's future energy needs and as a means of decarbonising the economy.

SACOME provided detailed comment on energy policy in its submission to the Department of Energy & Mining's *Green Paper on the Energy Transition* in August 2023.<sup>1</sup>

The energy transition challenge is defined not only by the need to retrofit the South Australian electricity network to accommodate the influx of renewables-based power, nor in meeting our Net Zero commitments, but to do so in a manner that preserves and expands the State's industrial base.

As a broad statement of future policy development, the energy transition must be considered in conjunction with industry and economic growth policy so as to better mitigate adverse impacts for entities that have made major capital investment in South Australia; and to enable future investment by industrial operators.

Past energy policy decisions across the last twenty years have resulted in higher electricity prices, lower system security and far greater risk and uncertainty for industry.

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.<sup>2</sup>

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

<sup>&</sup>lt;sup>1</sup><u>https://www.sacome.org.au/uploads/1/1/3/2/113283509/sacome\_ordering\_the\_disorderly\_transition\_august\_2023.pdf</u>

<sup>&</sup>lt;sup>2</sup> <u>https://www.sacome.org.au/uploads/1/1/3/2/113283509/sacome media release -</u> <u>unplanned energy transition costing industry final - 18 september 2023.pdf</u>

https://sacom.sharepoint.com/Team Data/S2 - Submissions/2023/2023\_11\_SACOME\_ISA 20 Year Strategy\_November 2023\_FINAL.docx



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.

## 3.1 CO<sub>2</sub> Supply

Disruptions to food and industrial-grade CO<sub>2</sub> supplies are impacting the South Australian food and beverage industries, including major wineries, breweries and soft drink suppliers.

This situation will be exacerbated over the next three years with the planned progressive shutdown of Torrens Island Power Station through to June 2026, which has been the main source of food-grade  $CO_2$  in SA since 2019, processed from its waste gas stream.  $CO_2$  users are currently experiencing shortages due to plant shutdowns, as well as exposure to high import prices.

South Australian company Vintage Energy, along with Otway Energy, have discovered a natural source of high-quality  $CO_2$  at Nangwarry in the southeast of South Australia that can be processed on-site to food and industrial grade. 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, as well as support South Australia's green industries.

The project also strongly supports improved resilience to shocks and events to help avoid or respond to disruptions that impact our economy, services, and supply chains, in alignment with the objectives of InfrastructureSA. SACOME submits that consideration should be given to appropriate supports.

To date, this joint venture has invested approximately \$20 million in the exploration, drilling, discovery, and testing of the CO<sub>2</sub> field which is estimated to hold about 1.3 million tonnes of gross on-block recoverable CO<sub>2</sub>. To develop this site, an investment of approximately \$30-\$40 million is required in the design and construction of a fit-for-purpose 175-tonne-per-day processing plant. This would more than meet the 100-150 tonne per day requirement for CO<sub>2</sub> in South Australia, with the ability to service future needs.

The project will also investigate the potential to reinvigorate the transport industry in the southeast region, following the closure of Scott's Transport, and is considering opportunities to attract industry to the area to be close to the CO<sub>2</sub> source, such as greenhouse food production and building product manufacturing.

In addition to these industrial uses, CO<sub>2</sub> is used to cultivate algae, which can be used for biofuel production, which has significant applications in transport, heating, industrial processes and electricity generation to reduce emissions and diversify our energy mix. Algae can also be used for carbon sequestration.



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 the desalination plant. Interest has also been shown in a new supply of  $CO_2$  by OTR, Bickfords, and the Coonawarra Vignerons Association (CGWI) in SA, as well as Bundaberg soft drinks in Queensland.

#### 3.1.1 Recommendation

SACOME recommends that the South Australian Government offer appropriate support for the development of the Nangwarry CO2 project to facilitate the growth in the food, beverage, and building industries; and the development of biofuels to reduce emissions in line with this project's potential to help avoid or respond to disruptions that impact our economy, services, and supply chains.

### 3.2 Pipeline from Port Bonython to Moomba

The International Energy Agency has forecasted that a hundredfold increase in Carbon Capture and Storage (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<sub>2</sub> currently stored each year to 5.6 billion tonnes in 30 years.

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.

This notwithstanding, the Petroleum and Geothermal Energy Amendment Bill proposes to levy a rent on CCS from international jurisdictions. Countries such as Japan and South Korea have made clear their interest in CCS opportunities given the limited opportunities for decarbonisation.

Given the significant growth opportunity from the economic and environmental imperative to decarbonise, and the State Government's ongoing interest in growing royalty income, consideration should be given to appropriate funding supports for the construction of a dedicated CO<sub>2</sub> pipeline from Port Bonython to Moomba to facilitate the storage of international carbon.

#### 3.2.1 Recommendation:

Consideration should be to appropriate funding supports for the construction of a CO<sub>2</sub> pipeline from Port Bonython to Moomba to facilitate the storage of international carbon.

### 3.3 Industrial Transition & Decarbonisation

SACOME acknowledges the South Australian Government's objectives of industrial transformation and decarbonisation.

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 & 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 & 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 investment in infrastructure to achieve decarbonisation of its operations and facilitate a 'green transition' of its industrial activities consistent with the State's policy agenda.

Central to this industrial transformation is sustainable production of GREENIRON and GREENSTEEL in Whyalla, informed by its 'carbon neutral by 2030' (CN30) objective.

SIMEC's investment in direct reduction iron (DRI) plant and electric arc furnaces capable of being fed by hydrogen fuel allow for the carbon neutral production of iron and steel.

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 sufficient to meet industrial needs and to do so at 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 reductions 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.

SACOME notes that SIMEC has also made a detailed submission to ISA as part of this consultation process and lends its support to the recommendations made therein.

3.3.1 Recommendation:

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



## **Summary of Recommendations**

SACOME's list of projects and recommendations submitted for consideration by InfrastructureSA are informed by member feedback and are in strong alignment with the South Australian Government's vision of a smart and sustainable economy, with a particular focus on enabling infrastructure, decarbonising the economy and supporting the green industry transition.

- The timely and efficient development of the transmission network, with particular attention to the Mid-North Expansion projects should form a key component of South Australia's 20 Year State Infrastructure Strategy so as to meet the State's current and emerging energy needs, support the Government's economic priorities and deliver a least-cost energy transition to Net Zero.
- 2. SACOME reiterates its strong support for the Northern Water Project and calls for continued effort by InfrastructureSA and the South Australian Government to bring it to development.
- 3. To support future project growth on the Eyre Peninsula, SACOME recommends that development of the Billy Lights Point Desalination Plant Port Lincoln desalination plant be prioritised and commissioned as an intermediate solution while the Northern Water Project continues to be evaluated.
- 4. SACOME recommends that the South Australian Government offer appropriate support for the development of the Nangwarry CO<sub>2</sub> project to facilitate the growth in the food, beverage, and building industries; and the development of biofuels to reduce emissions in line with this project's potential to help avoid or respond to disruptions that impact our economy, services, and supply chains.
- 5. SACOME recommends that InfrastructureSA, with the assistance of suitable bodies, such as the Freight and Supply Chain Consultative Committee, be tasked with developing policies that strengthen South Australia's rail network, including the consideration of rail freight incentives.
- 6. SACOME recommends that the South Australian Government develop a Critical Minerals to Metals Strategy to capture the full value of our resources, with Government to consider supports for the development of processing hubs.
- 7. SACOME recommends the establishment of a Taskforce comprising representation from business experts, universities and other suitable persons to provide high-level and holistic advice to Government as to how to support CPS, define its potential value to the South Australian economy, and assess how it could be used across Government and the private sector to drive green industry growth.



- 8. Consideration should be given to appropriate funding supports for the construction of a CO<sub>2</sub> pipeline from Port Bonython to Moomba to facilitate the storage of international carbon.
- 9. SACOME recommends that consideration is given to the broader civic infrastructure requirements of the green industrial transformation to inform 'whole of supply chain' infrastructure planning.