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

August 2019

**South Australian Chamber of Mines & Energy**

*The leading industry body representing the resources sector in South Australia*

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## 1. Introduction

SACOME welcomes the opportunity to make this submission to the Infrastructure SA (ISA) 20-Year Infrastructure Strategy Discussion Paper.

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

SACOME member companies are a cornerstone of the South Australian economy, with their combined activity generating the following key economic outcomes:

- \$6.1 billion in production value;
- 33% of exports from South Australia worth almost \$4 billion, making it the highest value export sector in the State;
- \$1.6 billion in Capital Expenditure investment in new mines and petroleum projects;
- Direct and indirect employment of 26,800 South Australians; and
- \$1.2 billion in royalties to the South Australian Government over the next five years.<sup>1</sup>

### 1.1 Context

The establishment of Infrastructure SA (ISA) and the South Australian 20-Year Infrastructure Strategy provide an important context for linking the development of South Australian resources projects to the infrastructure requirements necessary to develop them.

SACOME recognises that the 20-Year Infrastructure Strategy is being developed in parallel with a number of other strategic planning initiatives including the South Australian Growth Agenda and the PIRSA Regional Development Strategy. This coordinated approach to strategic planning across key economic portfolio areas is strongly supported.

As referenced in SACOME's 2024 Vision document road, rail, port and power infrastructure are critical for the development of resources projects, particularly greenfield resource provinces.

The 2024 Vision emphasises the need for a long-term strategic focus underpinned by industry-government collaboration. Infrastructure will continue to play a critical role in

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<sup>1</sup> SACOME 2024 Vision p.12 (<https://www.sacome.org.au/2024-vision.html>)

connecting the resources sector to the world, and the world to regional and remote communities.

The South Australian Growth Agenda has identified the resources sector as one of the sectors with the ability to contribute to a sustainable 3% annual rate of economic growth over the next 5-8 years. This equates to a twice the average growth rate for the State over the last decade and places significant expectation upon the resources sector.

In making this submission, SACOME has consulted with and considered both the immediate and future needs of its member companies to better map the infrastructure requirements of the sector against the State's economic growth targets.

## **1.2 Challenge and Opportunity**

Existing South Australian mineral and petroleum projects are well-understood by both industry and government and provide a baseline for strategic planning.

Significant work has been undertaken by industry and government to define the location of economic resources across the State. This has produced a sound knowledge of demonstrated mineral and petroleum reserves; and a high-quality collection of geoscientific data showing prospective areas of the State.

South Australia's jurisdictional challenges continue to operate as a deterrent to investment.

In contemplating ways to drive new economic growth, the key challenge is in bringing identified but stranded resources to market, which is fundamentally a problem of infrastructure.

These challenges include deep cover, remoteness of project locations, the cyclical nature of commodity prices and a lack of existing infrastructure which has meant that investors are unwilling to fund projects that are marginal compared to other Australian/global prospects.

The South Australian Government has historically taken a facilitative approach to attracting investment in 'economic infrastructure', relying on operators/investors to fund infrastructure necessary for project development.

This approach has also meant that when commodity prices have entered an upswing, the lack of available infrastructure to bring product to market has resulted in a lost economic opportunity as the infrastructure necessary to take advantage of price cycles has not been in place.

It is reasonable to ask whether continuation of the facilitative approach is sufficient to meet the 3% growth target.

The 20-Year State Infrastructure Strategy must give serious consideration to resolving the 'chicken and egg' dilemma of resources project development in South Australia as developing the State's 'stranded' resource wealth provides a realistic means of achieving the Marshall Government's 3% growth target.

In doing so, it must also consider the near-and long-term economic returns for planning and investment in infrastructure development mapped against the 20-year timeframe of ISA's Infrastructure Strategy.

This will better allow for prioritisation of project development and coordination with key stakeholders like the Commonwealth Government and Infrastructure Australia. A focus on developing 'enabling' infrastructure also fits neatly with the Commonwealth Government's objective of opening up new resources provinces as detailed in the National Resources Statement and provides a strong basis for collaboration between governments.

SACOME submits that the 20-Year State Infrastructure Strategy should focus on developing infrastructure that assists the development of South Australian resources projects.

This encompasses critical infrastructure like power and water; and transport infrastructure like rail and roads. Port infrastructure is an important consideration when mineral exports reach and exceed available export capacity, though this is predicated on 'higher-order' infrastructure like power and water necessary to achieve that growth.

SACOME also emphasises the importance of maintaining 'economic infrastructure' so that existing resources projects can continue to operate efficiently.

Regional and remote roads are of critical importance to major operators and these roads have continued to degrade in recent times. This has resulted in vehicle damage, increased travel times and safety concerns for the transport of sensitive commodities.

Ensuring that this infrastructure is appropriately maintained is a of direct relevance to both the strategic planning objectives of ISA and the economic growth imperatives of the South Australian Government.

## **2. Strategic Development of new South Australian Resource Projects – Building the Path to Market**

For South Australia to realise economic growth from the resources sector, it is necessary for the State to develop a strategic plan that identifies resources and moves them from the exploration phase to the production phase.

This is fundamentally a problem of attracting investment in the infrastructure necessary to provide a path to market for new projects.

Through consultation with our member companies, it is apparent that the infrastructure requirements of mineral projects are most relevant to the objectives of the 20-Year State Infrastructure Plan.

While development of mineral resource 'provinces' requires major infrastructure investment to build their path to market, the infrastructure requirements of petroleum operators differ in that member companies have advised SACOME that they are largely concerned with maintenance and upgrade of existing road infrastructure in the Cooper Basin. Those issues are addressed in section 3 below.

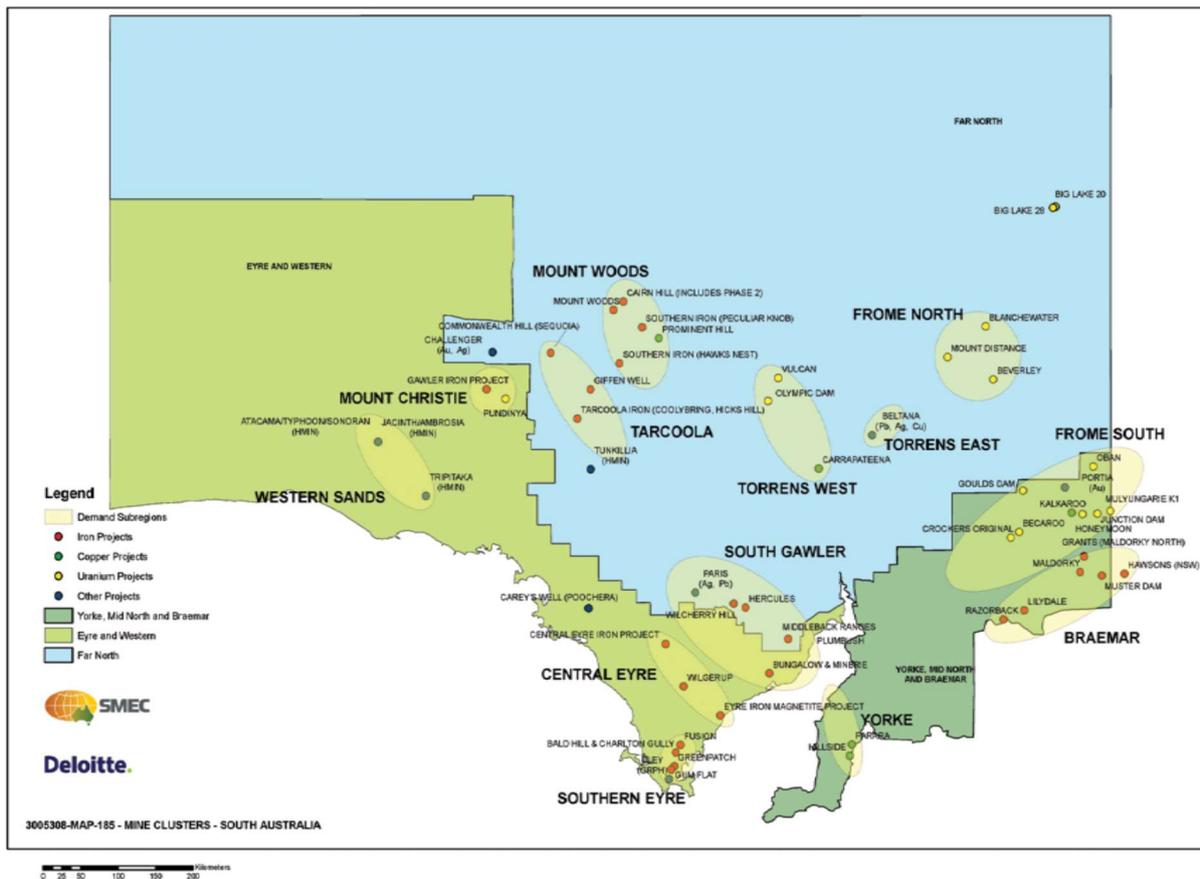
### **2.1 Context for Planning**

The Regional Mining Infrastructure Plan (RMIP) was a significant strategic planning initiative undertaken by the former Department of State Development in 2014 and sought to map infrastructure requirements to transition known mineral deposits into operating mines.

This work demonstrated that major mineral opportunities for the State were consolidated in three regional areas of the State:

- Far North & Yorke;
- Mid-North/Braemar; and
- Eyre and Western;

A map of these regional provinces is extracted from the RMIP and reproduced below:



These 'resources provinces' exemplify a key structural issue encountered in South Australia whereby exploration activity has quantified a resource, but the project remains stranded due to a lack of requisite infrastructure to move it to the production phase.

These areas comprise 'clusters' with the potential to utilise shared infrastructure thus resolving the issues of time, cost and duplication that multiple operators each building infrastructure for their projects would encounter. It was hoped that, through collaboration, shared use and shared cost, this would provide the momentum needed to attract investment.

The RMIP also identified the infrastructure necessary for project development, namely:

- Supply of electricity;
- Supply of water (groundwater, piped desalination or piped river water);
- Land links to a high capacity port;
- Access to a high capacity port.

The feedback provided by SACOME members is that these infrastructure issues remain largely unchanged since they were defined in 2014. SACOME directs ISA to the RMIP for reference.

SACOME notes that resolving the issue of port infrastructure has been a priority for government for at least a decade, however, SACOME has been advised that electricity and water are higher order priorities for project development in these regions.

In 2018 SACOME produced a paper entitled *Ports, Power & Pipes: Infrastructure Requirements for South Australian Iron Ore Operators* ([link](#)). This paper summarised consultation with member companies on the issue of a deepwater port and showed that on current and projected production volumes, there would be no need until 2030.

SACOME has been further advised that access to a high capacity port becomes a priority when production volumes of 15-18mtpa are reached, as transshipping options are no longer efficient at this point.

This is not to downplay the importance of a deepwater port, rather it is to emphasise that there are a number of major infrastructure considerations that come into play earlier in the strategic planning process.

Understanding when each infrastructure component across the supply chain needs to be prioritised should be a key consideration for ISA in developing the 20-Year Strategy.

## **2.2 The First Mover Problem**

Any first mover looking to develop a new project faces a prohibitive infrastructure cost, however, this first mover will provide advantage to other operators who have resources in the same regional cluster. To date there has been no first mover willing to make the necessary investment in the power, water, transport or port infrastructure that would open up a new regional cluster/province for further development.

In discussions with member companies, the concept of infrastructure 'dominoes' have proved a useful guide for strategic thinking about how to resolve the vicious circle of securing investment capital to develop infrastructure necessary for a project but requiring infrastructure in place to make a project an attractive investment option.

Some operators have suggested that resolving any one of the infrastructure 'dominoes' (power, water, land links, port) would reduce the barrier to investment and assist in moving subsequent projects to production.

## **2.3 Role of Government**

The South Australian Government has historically adopted a facilitative role focused on microeconomic activity with regard to resources sector infrastructure development. The

government has sought to reduce barriers to investment by contributing to a regulatory and market investment climate conducive to the private delivery of infrastructure.

The South Australian Government has stated that it will take action to catalyse private investment or to overcome economic barriers and market distortions in the private sector only where necessary.

The 20-Year Infrastructure Plan provides an opportunity to transition South Australia to greater levels of resources production through strategic investment in 'economic' infrastructure and SACOME submits that this requires resolution of the key impediments to private investment in South Australian resources projects.

The facilitative approach favoured by government has not resolved the structural issues that continue to operate as a barrier to investment. It is reasonable to argue that more direct action on the part of government is now necessary to resolve structural barriers to infrastructure investment by the private sector.

SACOME proposes an approach that scopes the 'minimum investment' that could be made by government to catalyse infrastructure development. Further, the South Australian Government is uniquely placed to pursue a range of funding opportunities presented by:

- The Liberal Party holding government at the Commonwealth and State level;
- The province development objectives of the Commonwealth's National Resources Statement;
- Strategic alignment between Infrastructure SA and Infrastructure Australia processes;
- Recent Reserve Bank statements urging Australian governments to drive economic growth through infrastructure investment.

In developing infrastructure for South Australian resources projects, SACOME strongly supports doing so in a manner that also provides benefit to other industry sectors and local communities wherever feasible.

## **2.4 Export Pathways out of SA – Understanding the Opportunity Cost**

As a matter of operational principle, resources companies will generally take the most economically competitive path to market. South Australia's major resources provinces are proximate to other State borders (i.e. Queensland, New South Wales, Victoria and Western Australia). In many cases the expedient option is for companies to export product via other Australian States. A notable example is the servicing of the Cooper Basin from Queensland.

This comes at an opportunity cost for South Australia. While the South Australian Government may retain the royalties stemming from production, projects will be serviced

from other jurisdictions resulting in a loss of engineering and technical services (METS) opportunities.

Analysis of the potential economic benefit from securing South Australian export pathways for the resources sector should be considered by ISA as part of its planning process.

## **2.5 A Roadmap to 3% Growth**

SACOME suggests that a 3% economic growth target for the resources sector will remain aspirational without reconsidering the role government has to play in realising it.

This rate of growth implies the State's average growth rate increasing to slightly more than double its post-GFC average, or about an extra \$1.7 billion in output growth each year. Further, this growth cannot come from domestic demand as that will only accelerate once interstate or international exports increase.

Achieving this growth rate will require a combination of increased inward investment and increased exports. Minerals, gas and renewable electricity present viable options to significantly increase exports in a sustained way but require that the barriers to investment and growth are removed.

In undertaking its 20-year planning exercise, SACOME encourages ISA and the South Australian Government to scope growth opportunities of the resources sector through development of a 'Roadmap to 3% Growth' which aligns requisite infrastructure against South Australian resources projects capable of delivering the State's growth targets.

SACOME suggests that this Roadmap prioritises:

- The potential economic value of a province/cluster to the State;
- The infrastructure investment required to build a path to market for identified provinces;
- What action(s) the State can take to resolve infrastructure-related barriers to investment;
- Opportunities to leverage Commonwealth funding/prioritisation;
- The timeframes necessary for implementing a solution;
- The opportunity cost of doing nothing.

### 3. Maintenance and Improvement of Existing Resources Infrastructure

In mapping the strategic infrastructure investment requirements of the State across a 20-year timeframe, the importance of maintaining and improving existing resources infrastructure is also critically important.

SACOME notes that the *Australian Infrastructure Audit 2019* has identified a mounting national infrastructure maintenance backlog and called for 'reform and investment to ensure quality of life and economic productivity are enhanced over the next 15 years'.

#### 3.1 Maintenance of Regional "Resources Roads"

South Australia has a road network comprising some 10,000km of road. Maintenance of these roads, and particularly regional roads with economic significance to the State, is not undertaken in a strategic manner that reflects their importance.

SACOME has been advised by member companies that maintenance of existing resources infrastructure should be prioritised for the continued efficient operation of oil and gas projects in places like the Cooper Basin and for projects elsewhere in the State.

Access roads in the Cooper have continued to degrade since responsibility for their maintenance reverted from SANTOS to the South Australian Government for public liability reasons.

In addition, roads like the Gidgealpa Road, Yunta Track and Borefield Road have been described as degraded to the point where reconstruction (rather than maintenance) is required. SACOME submits these roads as near-term infrastructure priorities.

Common to all these roads is the damage caused to vehicles and the slow speeds which must be travelled on degraded sections that result in additional efficiency and repair costs for operators. Operators have advised that trucks must slow down to ~20km in places due to road conditions.

While this is a safety and efficiency issue for the petroleum industry and its service industries, it also impacts others looking to use these roads as an agricultural industry corridor or for tourism.

In addition, installation of mobile phone towers along these roads would assist in managing safety in the area for all users, particularly if the industry and/or tourist numbers increase. At present Santos, Beach and Senex provide many medical facilities for the community and tourists through medivac helicopter and ambulance services. Better communications along these key regional roads would assist in their provision.

SACOME suggests consideration of maintenance arrangements whereby operators undertake the maintenance of these roads via their own work crews, but public liability remains with government. Maintenance and/or reconstruction of these roads may be an appropriate use of Royalty for Regions funds.

As an alternative, SACOME suggests creating a 'Resources Road' maintenance category as designated by the South Australian Government that recognises the importance of these roads as part of the economic supply chain and prioritises their maintenance accordingly.

### **3.2 Upgrade of Gas Pipeline Infrastructure**

Increased gas production arising from the PACE Gas programs in 2016 and 2017 has resulted in the discovery of ~50TJpd of new gas, with 10TJpd of this for local use and 40TJpd for export. Export of this gas is dependent on reconfiguration of the South Eastern South Australia (SESA) spur from Victoria to Adelaide so that the flow from the South East to the Adelaide gas line is bidirectional. SACOME is supportive of this upgrade to better assist in moving new gas discoveries in the Otway Basin to market.

In addition, broad consideration should be given to how additional gas spur lines could be extended throughout the State to facilitate new commercial and industrial processes. While SACOME recognises that construction of new pipelines is heavily dependent on having an end user, from a strategic planning perspective there is value in mapping the opportunities that could arise from additional gas supply to regional industrial hubs like Whyalla and the Upper Spencer Gulf, the Mid-North or the Eyre Peninsula.

### **3.3 Channel Dredging – Improving Port Access**

Dredging of shipping channels is a necessary maintenance activity, particularly with the emergence of Post-Panamax size vessels which require wider channels for access to South Australian ports.

The Outer Harbor Channel Widening project is an example of 'capital' dredging being undertaken to meet the access needs of these vessels. The identified risk for not undertaking this project was that the containerised trade and cruise shipping might skip Adelaide in favour of alternative ports that could operate without restrictions and hence greater efficiency.

Ensuring that all aspects of port infrastructure is sufficient to meet existing and future operational needs is an important consideration in the strategic planning process. While capital dredging programs are less common than maintenance dredging, the approvals and

licensing components of both activities are complex given the environmental, community and operational concerns that must be addressed.

Given the economic importance of port infrastructure to the State's economy and the critical role they play in the supply chain, channel maintenance and upgrade should be given strategic consideration across the 20-year timeframe of the State Infrastructure Strategy.

Operators have suggested that better codifying dredging guidelines to provide a clear, consistent and streamlined approvals process coordinated across relevant government departments would improve transparency for all stakeholders.

### **3.4 Rail**

SACOME members have emphasised the importance of rail networks as part of the strategic planning process, noting that South Australia has a very basic interstate rail network comprising the Adelaide – Victoria; Adelaide-Port Augusta-Kalgoorlie, Port Augusta-Darwin via Tarcoola; and the Broken Hill lines.

The recent closure of the Eyre Peninsula and Mallee grain lines further reduces the State's rail network.

Intermodal opportunities linked to ports and markets should be given priority in developing the 20-Year Strategic Infrastructure Plan, particularly where they can provide flexible rail delivery supply chains for South Australian resources projects. Improvement of rail lines and construction of rail spurs in the Upper Spencer Gulf and Far North to facilitate bulk ore movement should also be given consideration.

## 4. Regulatory Considerations

The 20-Year Infrastructure Strategy also provides an opportunity to implement regulatory measures that strategically coordinate the costly and time-consuming aspects of the infrastructure development process.

South Australia could implement regulatory settings that act as a key infrastructure investment attraction tool and allow for faster project development times compared to other national or international jurisdictions.

Building on the work undertaken through the RMIP, SACOME suggests creation of dedicated 'Resources Infrastructure Corridors' within which the Government has mapped optimal infrastructure pathways to major resources projects; resolved land access issues through dedicated zoning; and established an expedited approvals process.

### 4.1 Government as 'First Mover'

ISA's Discussion Paper references the 'oft-cited' example of parallel railways in the Pilbara region of Western Australia linking iron ore mines with Port Hedland.

While the value and size of projects and the desire by operators to have total control over their supply chains meant that building multiple railways was a viable commercial decision, this is not the case in South Australia.

The RMIP rightly recognised that a collaborative effort to develop shared infrastructure would create the economies of scale necessary to justify the associated expense, however, the South Australian Government looked to the private sector to resolve the detail of that collaboration.

When SACOME undertook an examination of deepwater port requirements and infrastructure requirements for development of the Braemar province in 2018, it was clear that the 'collaboration versus competition' tension remained a live issue.

SACOME submits that the South Australian Government could play the role of first mover in developing common user infrastructure and by doing so break the investment deadlock that has stymied the development of the State's resources provinces.

This could be done through creation and permitting of 'Resources Infrastructure Corridors' to create a regulatory structure that incentivises investment; or via a more direct path by establishing a statutory corporation which develops enabling infrastructure that companies can access on a 'take or pay' basis.

Land access must also be considered in the context of strategic infrastructure planning and the State's 3% growth target. SACOME was advised by member companies that land access issues operate as a barrier to investment in South Australia. Advice from member companies is that the South Australian Government should look to find resolution on land access issues in a holistic sense across the entire logistics chain to make it easier for the market to work.

#### 4.2 Investment Attraction

SACOME submits that investment attraction should be an overarching consideration in the strategic planning exercise.

As a jurisdiction, SA has sent conflicting messages in recent times to investors across a range of regulatory issues. These include:

- A moratorium on unconventional gas activity in the Limestone Coast;
- A \$7 million increase in extractive mineral industry licence fees in the 2019-20 State Budget via an increase to exploration fees and charges of up to 70%;
- Increased fees for environmental approvals and the removal of rental discounts for mining companies who own freehold land in the 2019-20 State Budget;
- Retirement of the new mine royalty incentive in the 2018-19 State Budget;
- Ongoing political debate about the land access provisions of the *Mining Act 1971*;
- Continuing high energy costs in South Australia.

These issues operate against achievement of the South Australian Government's 3% growth target.

Further, while these issues may be outside of the direct purview of the 20-Year Infrastructure Strategy, policy settings are relied upon by investors as a gauge of jurisdictional attractiveness. SACOME submits that a holistic policy review would be an opportunity to identify conflicts in the South Australian Government's policy suite, particularly where policy issues directly relate to infrastructure development.

SACOME continues to call for modernisation of the *Mining Act 1971* and supports its harmonisation with the *Development Act 1993* as a means of improving the South Australian regulatory framework and improving South Australia's standing as a jurisdiction for investment.

### **4.3 Geographical Constraints to Infrastructure Development**

The South Australian resources sector must operate within the paradigm of the Woomera Prohibited Area (WPA) and the Olympic Dam electricity transmission line corridor which restricts access to significant parts of the State.

While the WPA has been made more accessible to operators since development of the Coexistence Framework, the Commonwealth Department of Defence has primacy over all other operators. As such, operating in the WPA brings with it a range of complexities not encountered elsewhere in Australia. The WPA is also situated in the State's most highly prospective minerals province, meaning a large section of South Australia is subject to a complex operational environment, particularly where foreign investment is concerned.

SACOME submits that these limiting factors should be considered by ISA as part of its strategic planning process.

### **4.4 Research & Development**

The role that research and development can play in resolving infrastructure bottlenecks should also be given consideration as part of the strategic planning process.

An example of this can be found in dry beneficiation technologies as a substitute for water-intensive wet beneficiation. Recognising that accessing groundwater or piped water in major South Australian resources provinces is both difficult and expensive, dry beneficiation technology could present a solution for resolving one of the key infrastructure 'dominoes' to better attract investment. The University of South Australia continues to progress this technology toward commercialisation.

### **4.5 Civic Infrastructure**

Civic infrastructure is an important component in attracting and retaining employees to the regional areas where many resources projects are based. Ensuring that regional centres have the necessary housing, medical, educational, sporting, community and hospitality infrastructure necessary to make regional centres an attractive place to live and work is a necessary consideration in long-term strategic planning.

Similarly, ensuring that regional communities have access to well-resourced schools at the primary, secondary, tertiary and vocational education levels, with a focus on Science, Technology, Engineering and Mathematics (STEM) will assist the development of regional workforces with skills relevant to the needs of the resources sector.

## 5. Conclusion & Recommendations

In making this submission, SACOME has sought to demonstrate the importance of infrastructure to resources projects.

The 20-Year State Infrastructure Strategy presents an opportunity for the Marshall Liberal Government to build on the economic growth legacy left to South Australia by Sir Thomas Playford through undertaking the difficult work of state development.

The South Australian resources sector was born in 1840 when silver and copper were discovered in South Australia and since then, the State has benefited from the resources sector's long history of investment and technological development. Our sector now employs over 26,000 people directly and indirectly in highly paid, highly skilled jobs and is the highest value export sector in the State.

As the South Australian Growth Agenda has identified, the resources sector has even greater potential for expansion and infrastructure is central to this outcome.

The resources sector is a cornerstone of the South Australian economy and stands well-placed to deliver upon the ambitious growth targets adopted by the South Australian Government.

Growth of the resources sector is dependent on overcoming South Australia's structural challenges and finding ways to de-risk projects for investors and operators.

SACOME remains committed to working with Infrastructure SA to identify and progress strategic infrastructure solutions that will facilitate the growth of our sector and of the State.

SACOME makes the following recommendations for consideration by ISA:

- Develop a 'Resources Sector Roadmap' informed by the objectives of the South Australian Growth Agenda mapping the economic value to the State of 'resources provinces' against requisite infrastructure for their development.
- Develop a 'Resources Infrastructure Corridor' framework to facilitate infrastructure investment by holistically resolving land access, approvals and logistics issues; and provide operators with a de-risked and expedited path to project development.
- Consider creation of a statutory corporation that acts as a 'first mover' and de-risks investment in resources project through construction of requisite infrastructure which can be accessed by operators on a 'take or pay' basis.

- As a near-term objective prioritise repair, maintenance and upgrade of existing resources infrastructure to improve efficiency, reduce cost for operators and deliver known resources to market.
- Create a category of 'Resources Roads' which reflects the economic importance of this infrastructure to major resources projects and prioritises it for maintenance.
- Scope opportunities for Commonwealth-State partnerships through initiatives like the National Resources Statement and bodies like Infrastructure Australia.
- Understand the opportunity cost of companies exporting product out of other jurisdictions instead of South Australia;
- Scope opportunities for shared benefit between the resources sector, other industry sectors and local communities.