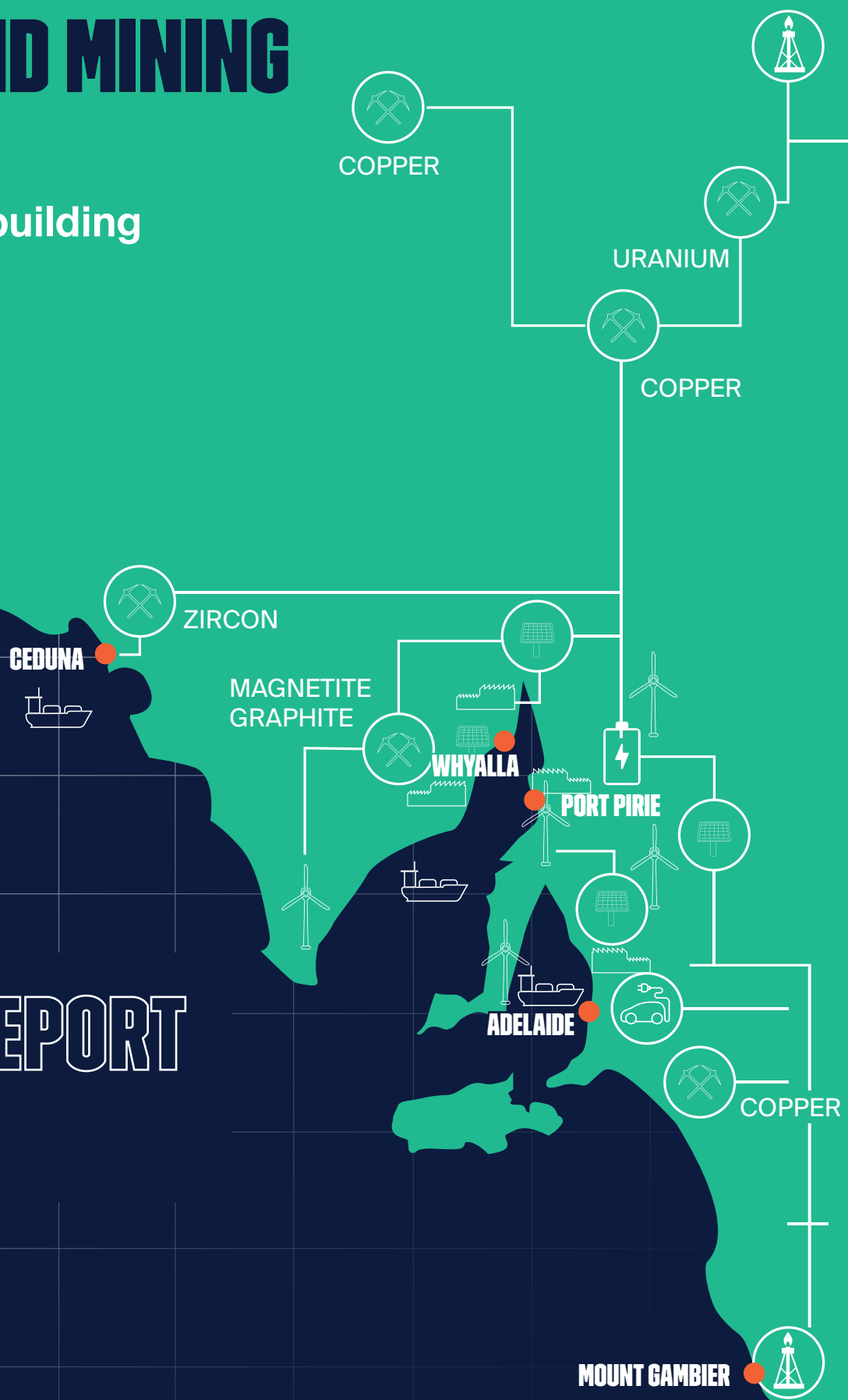


ENERGY AND MINING STRATEGY

South Australia building
on our strengths



ANNUAL REPORT
2021

Transforming South Australia is a driving focus for this Government. Through close partnerships with industry, we can create more jobs, investment and economic opportunity – and show our state is well and truly open for business.

– Premier Steven Marshall

Acknowledgment of Country

The Department for Energy and Mining acknowledges Aboriginal people as the First Nations Peoples of South Australia. We recognise and respect the cultural connections as the traditional owners and occupants of the land and waters of South Australia, and that they continue to make a unique and irreplaceable contribution to the state.

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FROM THE MEAC CHAIR

This first annual report of South Australia's Energy and Mining Strategy is an opportunity to reflect on progress and put forward suggestions to policymakers to sustain growth and build on the sector's capacity for innovation.

Performing strongly through the global pandemic, South Australia's energy and mining industries are a mainstay of the state's economy and provide essential services.

Through 2020-21, resource operators delivered record resource production and royalties. Energy innovators set new benchmarks for renewables in the state's electricity mix while market reforms contributed to competitive electricity supplies for industry.

South Australia's Energy and Mining Strategy, launched in 2020, captured industry's suggestions on the policies and actions to underpin long-term sustainable growth of the sector, refined in the aftermath of the COVID-19. The Energy and Mining Strategy outlined existing government initiatives while identifying future opportunities to leverage growth.

This first annual report of the Energy and Mining Strategy delivers on government's commitment to openly measure and monitor performance. This report presents evidence-based indicators and commentary to track the visible progress of the Strategy's targets and nominated projects. It lays out the actions and initiatives underway and potential opportunities.

The Minerals and Energy Advisory Council helped shape the Energy and Mining Strategy by highlighting areas to accelerate economic activity.

As a dynamic strategy, we invite you to join us in providing feedback to government as you take stock of programs delivered and envisage new possibilities. Your input will continue to shape and refine measures to seize emerging opportunities, responsive to the times.

Your shared comments, experience and insight are valuable to accelerating growth across our energy and mining sectors, ensuring their continued vitality to drive opportunities.

You can provide your views either directly to the Department for Energy and Mining or through yourSAy.



Pauline Carr
Chair

**MINERALS AND ENERGY
ADVISORY COUNCIL**

EMERGING STRONGER – SHIFTING THE DIAL ON GROWTH

South Australia's energy and mining sectors have always been forward-thinking – dreaming big about what can be accomplished and boasting an impressive track record.

Unstoppable through the COVID-19 pandemic and ready for growth, the energy and mining sector accounted for 43 per cent of the state's goods exported to the world in 2020-21. Energy innovators continued to stay at the forefront of the global energy transition and the state achieved the lowest wholesale electricity prices in six years.

The South Australian Government has set an objective to lift the state's sustainable economic growth rate to an average of three per cent a year, identifying energy and mining as one of nine sectors key to fulfilling its ambitions aligned to Growth State: our plan for prosperity.

[South Australia's Energy and Mining Strategy](#), developed with industry and community input and launched in 2020, is a confident projection of this sector's potential to build on its enduring strengths and capacity for innovation as a platform for growth.

The opportunity is compelling: the state is a resource-rich, renewable energy dynamo with a remarkable portfolio.

South Australia has an excellent growth span across the mining and energy value chain supported by a strong equipment,

technology and services industry. Collaboration is in our DNA and hi-tech hubs and innovation districts are where high-profile businesses, academia, industry bodies and government work together.

With a highly skilled workforce, cutting-edge research and development, and labour costs below the Australian average, South Australia is a place where business can innovate and grow.

To accelerate growth across energy and mining, the state government has invested more than \$111.3 million for targeted programs from its Jobs and Economic Growth Fund since 2018. This complements major policy and programs delivered by the Department for Energy and Mining and efforts across government's related portfolios - trade and investment, skills and innovation, infrastructure and land, water and environment.

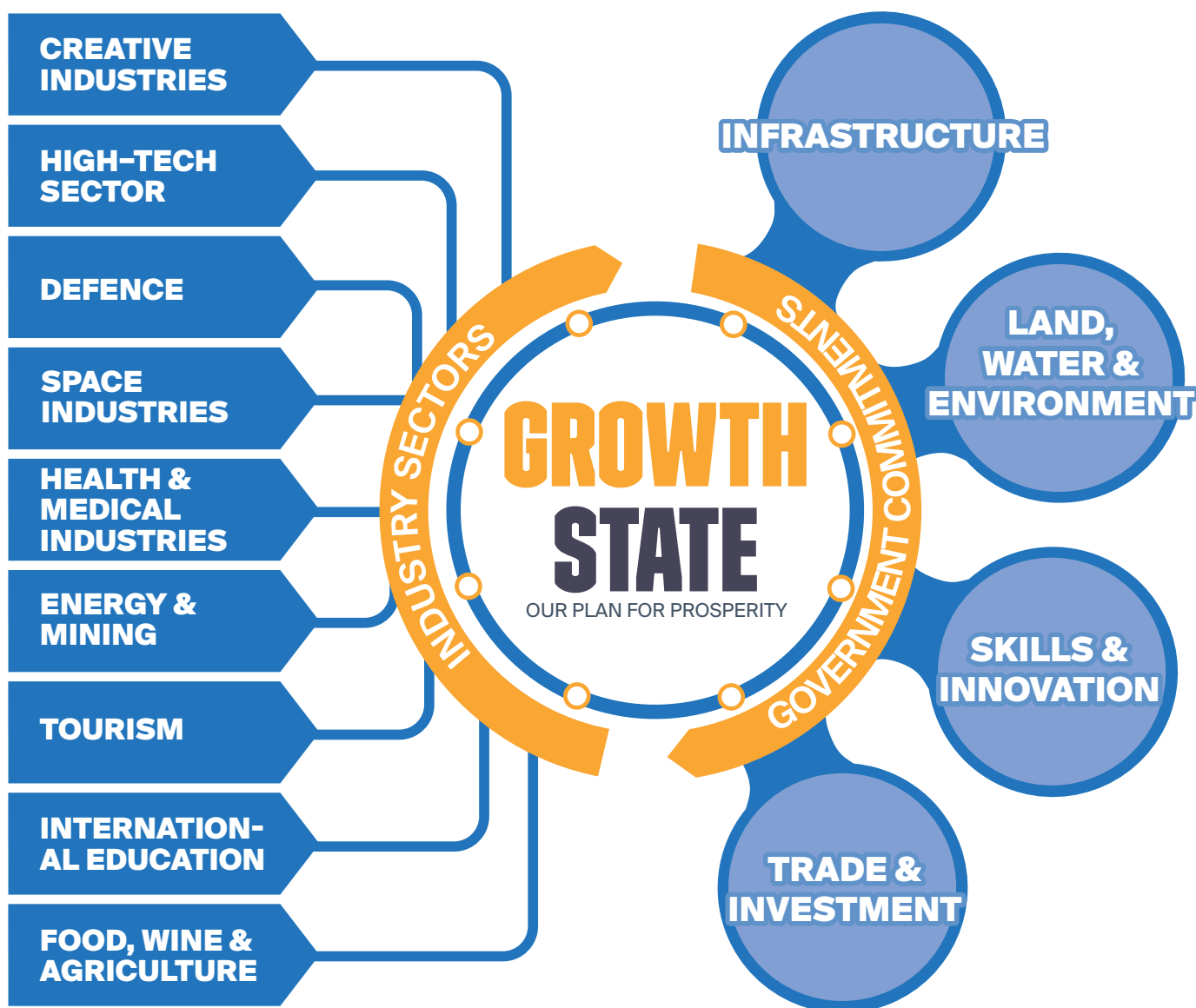
This first annual report of the Energy and Mining Strategy sets out the substantial achievements realised through government and industry collaboration and co-investment to date.

It is a dynamic strategy and, as it evolves, government and policy makers are keen to respond to suggestions on how we can collectively leverage the state's competitive advantages.

Looking to the future, opportunities abound. Investor choices are shaping board rooms and influencing decisions driving the embrace of strong environmental, social and governance leadership.

With sound policy settings and one of the world's greenest energy systems, the opportunity to produce green metals, fuels and materials is ours to realise. The transformation economy is here – where mining and energy converge in a world of constant digital innovation.

Your feedback is welcomed and encouraged as we consider what more we can do to continue to guide the state to a bright future.



3% target annual South Australian sustainable economic growth rate across **9 key sectors**

2025 nationally competitive energy supplies

2030 internationally competitive energy supplies

\$300 million annual exploration expenditure by **2025**

\$13 billion annual growth in exports by the energy and mining sectors by **2030**

Achieving these objectives is forecast to deliver an additional:

39% to annual state goods exports

0.55 percentage points to the state's growth rate of three per cent a year by 2030 - a significant advance from the 10-year average of 1.1 per cent state economic growth.



OUR GROWTH STATE

The government's stimulatory measures to achieve growth, outlined in Growth State and the Energy and Mining Strategy, are well-timed to make the most of a positive commodity outlook, progress a world-leading modern energy system and emerge strongly from the pandemic.

Government established a framework for assisting industry to address fundamental issues such as the cost of taxation imposed on business, reducing red tape and improving infrastructure, supplemented by targeted initiatives supported through a new streamlined set of industry funds.

The Jobs and Economic Growth Fund supports initiatives that create long-term sustainable jobs and economic growth. A total of \$111.3 million has been invested in the energy and mining sector through this fund to date.

The Research and Innovation Fund supports researchers, entrepreneurs and businesses to accelerate their progress with funding from the South Australian Government for initiatives such as the Heavy Industry Low-carbon Transition (HILT) CRC with the University of Adelaide.

The Regional Growth Fund has been established to unlock new economic activity in our regions, deliver critical economic infrastructure to create direct benefit across regional industries and strengthen regional communities.

A total of \$4 million has been invested in regional steel production facilities through this fund.

Growth State is key to achieving the government's priorities of keeping South Australia safe and strong with a focus on maximising recovery and economic rebuilding efforts after the COVID-19 pandemic:

- Responding to the economic impact: stimulating the economy to secure local jobs and keep businesses' doors open.
- Re-opening the economy: protecting the community while getting South Australia back to business.
- Re-activating the economy: rebuilding and supporting business and industry to employ, grow and prosper, delivering better services and investing in the strengths that set us apart.

Additionally, the government delivers programs through the Department for Energy and Mining combined with efforts across government's related portfolios.

GOT AN IDEA?

WE'RE OPEN FOR BUSINESS

Businesses, researchers and influencers are invited to share their ideas and thoughts on how best to enhance the energy and mining sector for growth. Register your interest with Growth State, and start tapping into new collaborative funding and partnerships.

Hillgrove Resources wanted to pursue leading technology to improve the success rate of its deep exploration. Having identified new underground mining technology by global manufacturer Komatsu that has the potential to make hard rock mining safer and productive, the copper miner approached the South Australian Government. They secured a \$2 million grant from the Jobs and Economic Growth Fund and

embarked on a \$7.3 million underground mining trial using the Komatsu MC51 continuous mining machine to develop a portal and access underground. The trial will test the commercial viability of the revolutionary technology, which aims to make underground rock mining safer, faster and more cost-effective while also reducing emissions at mine sites.





SHINING BRIGHT AS A SAFE, STRONG, DYNAMIC PLACE TO DO BUSINESS

Energy, mining and its growing equipment and services sector is the South Australian economy's largest growth opportunity.

Through the COVID-19 pandemic, the strong and mature working relationship between the government and the energy and mining supply chain enabled the sector to not just survive – but thrive.

The Department for Energy and Mining worked alongside the state's essential energy and mining sector to understand business continuity plans to minimise disruption to the delivery of essential infrastructure and services. Mineral exploration licence fees and annual petroleum and geothermal licence fees were deferred for six months during the initial statewide lockdown, and a 12-month waiver of committed expenditure was introduced for licence holders.

The sector looked after its people and adapted to restore productivity and build momentum.

With effective COVID-19 response measures in place, the sector achieved record sales for resource commodities, launched the new Carrapateena copper-gold mine, maintained record copper production, and supported strong export performances with historically high iron ore and zircon prices. In a difficult

global market, petroleum producers continued to perform strongly. Electricity prices fell for households and industry.

The government's stimulatory measures will help energy and mining to continue its growth trajectory.

To lower energy costs, the Department for Energy and Mining's support for early works enabled the timely assessment of Project EnergyConnect to link the South Australian and New South Wales energy markets. The department led the delivery of dynamic projects to support a modern energy system.

The Jobs and Business Growth Fund (Formerly called Economic and Business Growth Fund) supported programs to achieve the objectives of the Energy and Mining Strategy including the CORE Innovation Hub at Lot Fourteen, Hydrogen Export Modelling Tool, Hydrogen Action Plan, the Accelerated Discovery Initiative, and a world-leading global open-source data competition.

While the pandemic-induced challenges are far from over, the state's operators have created a solid foundation to build a positive post-COVID-19 future.

RANKED AMONG THE WORLD'S BEST

South Australia continues to be recognised as a mineral and energy world leader for public policy and investment attractiveness.

Achieving global top 10 ranking for two years as an attractive place to invest according to the Fraser Institute Annual Survey of Mining Companies

This reflects the positive effects of government policies and programs on attitudes toward mineral exploration investment, including extensive reforms to the *Mining Act 1971*

and regulations, and government actions to stimulate the development and use of innovative exploration technologies and data analysis techniques.

Consistently no. 1 in Oceania and southern hemisphere in the Fraser Institute Global Petroleum Survey

Recent reforms proposed to the *Petroleum and Geothermal Energy Act 2000* see South Australia leading delivery of innovative and industry responsive policy and regulation.

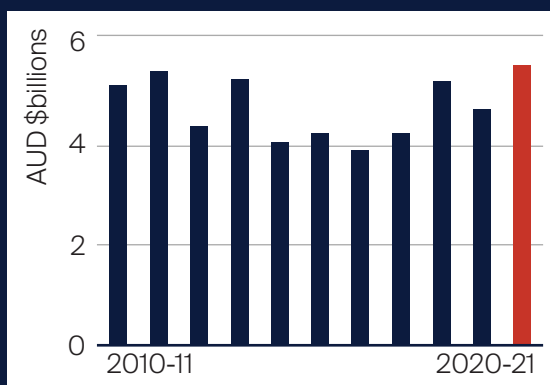
AN ECONOMIC SNAPSHOT



EXPORTS

\$5.5bn

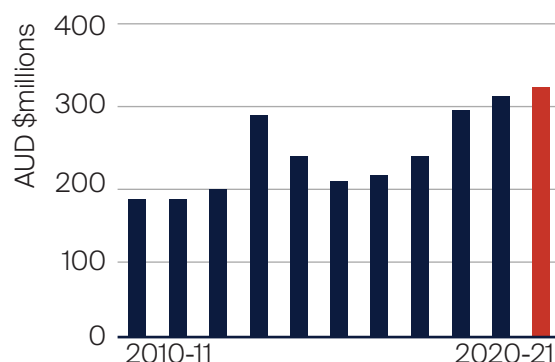
In commodities exported to global trading partners in 2020-21^{1, 2}



ROYALTIES

\$323m

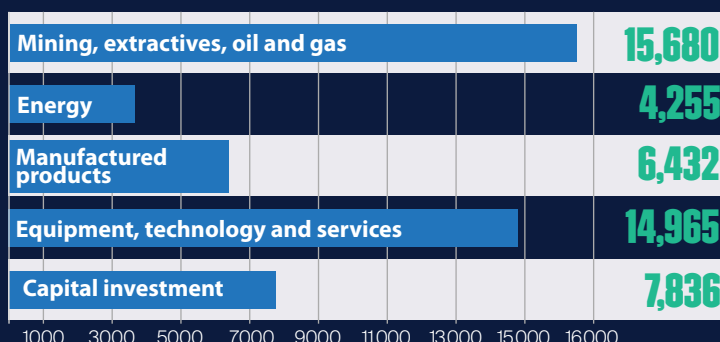
For future state growth in 2020-21³



JOBS

49,169

People employed across South Australia in 2019-20⁴

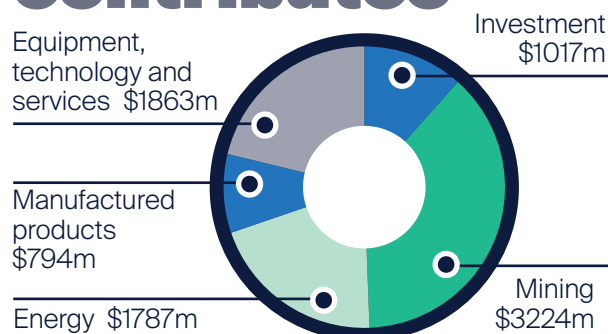


Energy and Mining contributes

\$8.7bn

or 7.9 per cent

Of South Australia's economic output⁴ in 2019-20



Exports

Mineral, oil and gas exports rose from \$4.3 billion in 2019-20 to \$5.5 billion in 2020-21, representing 43 per cent of the state's exported goods.

There was some volumetric increase despite the challenges presented by COVID-19. Record high prices for copper

and iron ore led export growth. Gross sales² for copper increased significantly from \$2.3 billion to \$3.35 billion, and iron ore rose from \$1 billion to \$1.6 billion. Export sales of uranium and heavy mineral concentrates declined marginally year on year but remain at historically high levels.

Royalties

For the third consecutive year, royalties climbed. Record copper production from Olympic Dam, new production from recently opened Carrapateena, buoyant iron ore prices and

sustained output from the world's largest zircon mine at Jacinth Ambrosia contributed to strong sales and royalties.

Jobs

People employed in energy and mining and its associated equipment, technology and services sector rose by more than 5,000 between 2018-19 and 2019-20, on the back of significant mine development and construction. The trend of jobs

growth continued in 2021. The Resources Engineering and Skills Alliance quarterly Hiring Intentions Report⁵ shows record high hiring intentions since RESA began reporting in 2013.

Energy and mining contribution

The contribution of energy and mining to South Australia's economy declined slightly from \$9.2 billion in 2018-19 to \$8.7 billion in industry gross value added in 2019-20, with reduced investment, smelter and energy output.⁴

While economic contribution data for 2020-21 is not yet available*, it is expected to increase in line with the more recent buoyant activity,

including both a record high resources production value and \$2.1 billion in mineral, oil and gas resources⁶ capital investment.

In 2020-21, South Australia's 300-plus mineral and petroleum operators produced record combined sales² for minerals, oil and gas of \$8.5 billion – close to \$1 billion above the previous record. This includes a record \$7.1 billion in mineral commodity sales.

*ABS reported in November 2021 the South Australian economy grew by 3.9% in 2020-21. Detailed energy and mining data is not yet available. Mining (including some METS data) was reported to have maintained its economic contribution at \$3.9 billion in 2020-21.

OUR STRATEGIC TARGETS

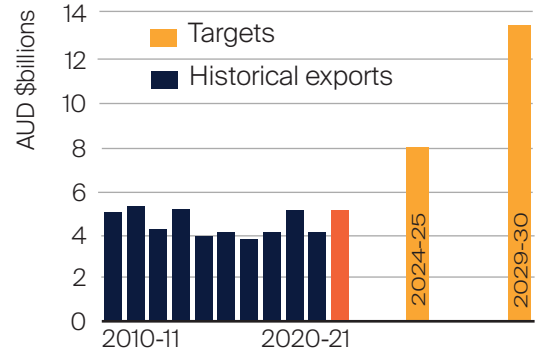


EXPORTS

\$13bn

Export target by 2029-30

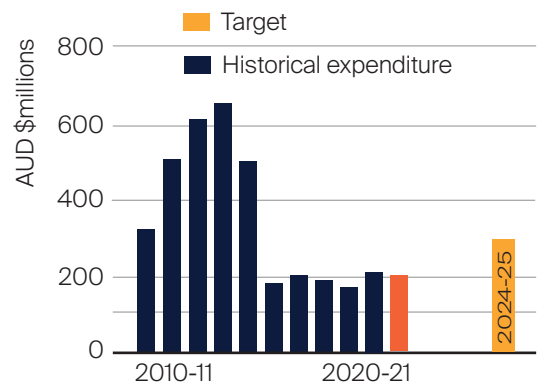
\$8bn export target by 2024-25^{1,2}



EXPLORATION

\$300m

Sustainable exploration target for petroleum and minerals by 2024-25⁷



MODERN ENERGY SYSTEM

Net 100%

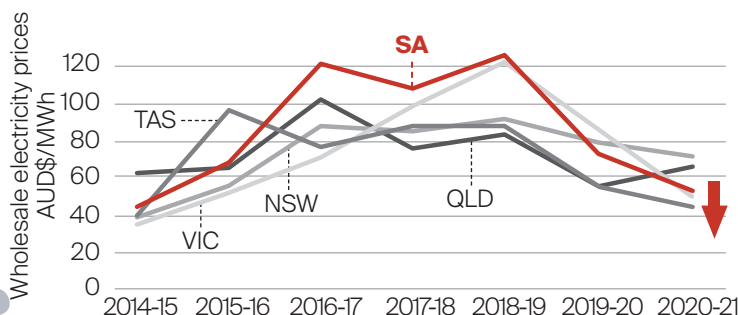
Renewable energy generation by 2030

62.3% Net
2020-21⁸

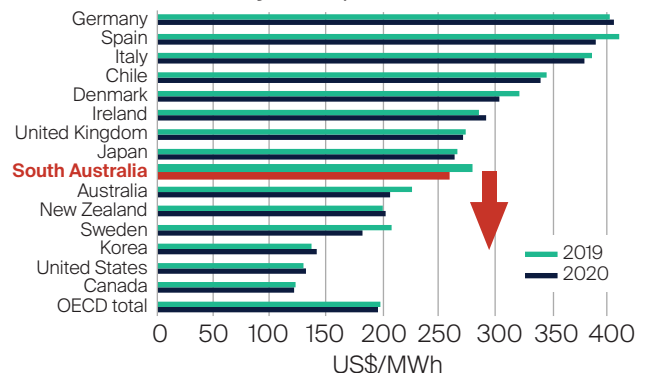


COMPETITIVE ENERGY TARGETS

Nationally competitive before 2025⁹



Internationally competitive in 2030^{10, 11}



Exports

Mineral, oil and gas exports grew by 25 per cent from \$4.3 billion in 2019-20 to \$5.5 billion in 2020-21 to represent 43 per cent of the state's goods exported. Future export growth will come from expanding sustainable copper production. Major projects underway include smelter works at Olympic Dam, shaft expansion at Prominent Hill and Block Cave expansion

of Carrapateena. Projects in the assessment stage with the potential to contribute to export targets include Great White kaolin and Hawks Nest hematite. World demand for critical metals to fuel the switch to renewable technologies is accelerating and will continue to drive demand for South Australia's minerals. Significant export opportunities from Port Bonython, including hydrogen, are being progressed with industry.

Exploration

Exploration expenditure for 2020-21 comprised petroleum expenditure of \$110 million and mineral expenditure \$91.8 million – a seven-year high. During 2020 the South Australian government supported the exploration industry with a deferral of fees to retain companies in the state while COVID inhibited on-ground field activities in the regions. The Accelerated Discovery Initiative (ADI) supported explorers, with co-funding of \$4.5 million for round 2 announced in 2021.

After a pause due to COVID-19 exploration companies returned to the regions, reporting new discoveries, mineral targets, successful capital raisings and new listings in 2021. Securing a future pipeline for copper exports are the globally significant Oak Dam, continuing to progress mineral resource definition and the standout discovery of Emmie Bluff Deeps. The discovery of a new Rare Earth Element mineral resource in the state's southeast was announced to the market.

Net renewable energy generation

South Australia continues to advance towards its target of 100 per cent net renewable energy generation by 2030. In 2020-21, 62.3 per cent of South

Australia's electricity generation was from renewable sources, rising from 56.6 per cent in the previous year. Nearly 40 per cent of dwellings have rooftop PV solar. In time weighted terms, South Australian prices were the lowest in 2020-21

Competitive energy

South Australian electricity users have benefited from two years of significant falls in wholesale electricity prices, falling from a volume-weighted average of \$128 per megawatt hour (MWh) in 2018-19 to \$73/MWh in 2019-20 and to an average \$53/MWh in 2020-21 - the lowest average annual price since 2014-15.

The National Electricity Market average price has also fallen over the last two years, except during the last quarter of the 2020-21 year because of record high spot electricity prices in Queensland and New South Wales.

South Australian international energy competitiveness improved over the last year. South Australian residential prices fell from \$281/MWh to \$260/MWh in the previous year. While South Australia improved its price ranking compared to Organisation for Economic Co-operation and Development (OECD) countries in 2020, average residential prices were above the 2020 OECD residential price average of \$197/MWh.

STRATEGY PROGRESS

The Energy and Mining Strategy is driving discovery and building the productive capacity of resource companies and supply chain businesses, while creating a modern energy system that lowers costs and assists South Australia to reduce its greenhouse gas emissions. These aspirations are underpinned by leading regulatory frameworks.

Government is implementing the strategy's 28 actions to achieve these aims. Other opportunities have progressed and been implemented by government during 2020.

In total, 41 actions were progressed under the Energy and Mining Strategy in 2020-21, 12 more than originally expected. Progress for all these actions is reported against industry sectors in this annual report.

ACTIONS FROM OPPORTUNITIES

2020 opportunities have turned into actions

Water and Infrastructure Corridors study

Northern Water Supply investigation

Thinking Critical South Australia

Enhanced Land Access for Mineral Exploration

Playford Trust Scholarships

Additional industry and government actions

Kanmantoo Continuous Miner

The Gawler Challenge - Next Generation Mineral Systems Mapping

South Australian Discovery Mapping - 'Google Maps' for mineral discovery

National Test Mine and Innovation Centre

Spectral Geoscience - HyLogger 4 & Raman Spectroscopy



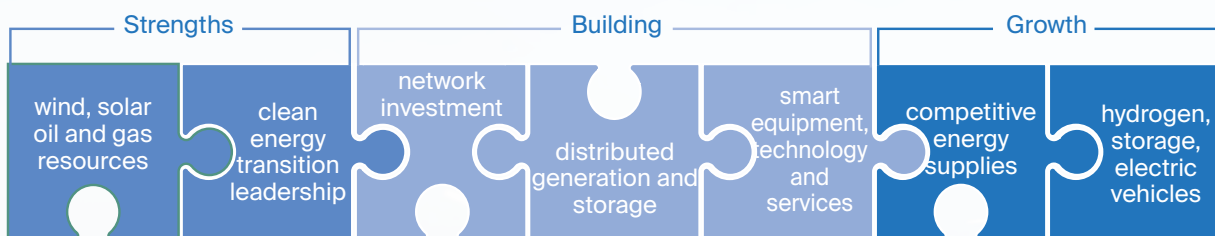
SHARE YOUR **THOUGHTS**

Broad-based collaboration will unlock opportunities for growth. As the strategy evolves, government and policy makers invite industry's suggestions on steps we can take collectively to lift the state's competitiveness and investment attractiveness. The strength of this strategy lies in having a high level of consultation and input from business, researchers, and influencers. We welcome your input.



ENERGY SECURE, RELIABLE & AFFORDABLE

A modern energy system will deliver cleaner and more affordable, reliable and secure energy by transitioning to new generation and storage technologies supported by world-class electricity systems.



KEY CHALLENGES

- SYSTEM RELIABILITY AND SECURITY
- INTEGRATED, INTERCONNECTED SYSTEM
- HIGH ENERGY COSTS

ACTIONS

INTERCONNECTION AND THE INTEGRATED SYSTEM PLAN

Project EnergyConnect

Project EnergyConnect, the SA-NSW Interconnector, will play a key role in energy security and reliability, and support the expansion of the renewable sector by enabling green energy exports.

- Longest high voltage transmission line in Australia (900 kilometres).
- The South Australian Government supported early works to advance the project.
- Final regulatory approval secured from the Australian Energy Regulator.
- Final investment decisions made by key project partners, ElectraNet and TransGrid.
- Construction is expected to take two years, following necessary environmental and development approvals.



Project EnergyConnect benefits

Improved security and reliability in the National Electricity Market requires investment in greater interconnectivity between the states and territories

Save South Australians households a further \$100 a year on their already falling electricity bills

Support hundreds of clean energy jobs

Construction of Australia's longest high voltage transmission line is expected to take two years creating local jobs and opportunities to develop skills

Eyre Peninsula Link

Works are underway to construct a new 270 kilometre, high voltage transmission line and electricity substation. The project will deliver a more secure and reliable supply to Eyre Peninsula residential and business electricity users. The Eyre Peninsula Link will support future mining and renewable energy projects in the regions.

Synchronous condensers

South Australia is a world leader in integrating renewable energy into its power network.

The strength and reliability of the state's electricity network is boosted with the installation of four synchronous condensers operated by ElectraNet.

SOUTH AUSTRALIA: at the global forefront of the clean energy transformation

In little more than 15 years, South Australia has significantly transitioned its energy system from just one per cent renewable energy from wind and solar to 62 per cent, supported by gas generation and innovative battery storage technologies.

South Australia has the world's highest home battery storage penetration. In 2020, 29 per cent of home batteries installed in Australia were installed in this state – and with just 7 per cent of Australia's population, South Australia is punching well above its weight.

South Australia has four grid-scale storage batteries connected. A

fifth and new biggest battery is on the way at Torrens Island. A further 27 storage projects are in the renewable development pipeline.

The Hornsdale Power Reserve capacity was increased by 50 per cent in 2020, providing greater energy storage and giving an ever-faster response to system disturbances.

40%
of households
have a rooftop
solar system
installed

GRID SCALE STORAGE FUND

The fund has advanced the rollout of grid-scale energy storage solutions, targeting projects that address challenges that impact the state's power system now and into the future.

Expansion of Australia's original biggest battery

A \$15 million grant from the Grid Scale Storage Fund enabled expansion of the Hornsdale Power Reserve by Neoen.

- Adds 50 megawatts or 67 megawatt hours of storage and faster response to system disturbances.
- Bolsters an Australian-first system security innovation response capability that has protected the state from outages, such as triggered in response to the Callide coal plant explosion in Queensland.

SA Virtual Power Plant

The government's investment of up to \$10 million is supporting South Australia's Virtual Power Plant (SA VPP) scale up in size and complexity to trial new ways of using technology to help the grid operate more effectively:

- Tesla is expanding the SA VPP to 4,100 solar and battery systems on Housing SA properties, providing dispatchable energy and frequency services to the grid.
- Together with Tesla's private customers, the SA VPP is registered to provide 16MW of frequency services to the grid.
- Capability to provide fast frequency response in a similar way to the Hornsdale Power Reserve responding to major events on the grid and bringing price competition.
- Trial of innovative voltage technologies to assist management of voltage on local network.

A pioneer in virtual power plants

Virtual power plants use smart technology to link hundreds of rooftop panels across the state into single sources of generation, to create more efficient use of power generated from the sun and drive down electricity bills. This pioneering approach in the National Energy Market continues to attract energy innovators. South Australia contributes 87 per cent of total registered capacity with the Australian Energy Market Operator from virtual power plants, keeping South Australia at the forefront of network innovation.

GROWING SOUTH AUSTRALIA'S HYDROGEN ECONOMY

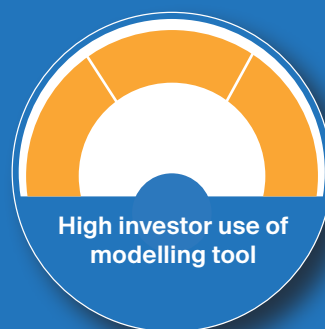
Developing South Australia's hydrogen energy into a commercial scale sector plays to the state's strengths as a global leader in clean energy transformation and our aspiration to become a world-class supplier.

South Australia's Hydrogen Action Plan is giving impetus to build capability and expand the state's hydrogen sector. The plan sets out five areas and 20 actions to help scale up renewable hydrogen for export and domestic consumption.

- \$40 million in grants and loans to develop and advance renewable hydrogen projects.
- \$4.9 million grant for AGIG to develop Australia's largest green hydrogen production plant. The nation's largest electrolyser is producing hydrogen gas at Tonsley, blended into the local gas network.
- Delivered the Hydrogen Export Modelling Tool and Prospectus for South Australia's hydrogen export supply chain, assisting more than 100 prospective developers and investors to model green and blue production exports and make investment decisions.
- First state to regulate hydrogen as a substance that can be sent down pipelines by gazetting changes to the *Petroleum and Geothermal Energy Act 2000*.
- Provided \$100,000 funding to support South Australia's H2H technology Cluster to build on seed funding provided through the National Energy Resources Australia (NERA).
- Close to completing an Expression of Interest process to develop Port Bonython in the Upper Spencer Gulf, one of the state's most prospective hydrogen export hubs, with over 2,000-hectare parcel of land having potential to support hydrogen development, mining, energy and related development. \$37 million allocated in the state budget to upgrade the Port Bonython jetty.
- MOU signed with the Port of Rotterdam, Europe's biggest port, in addition to established collaborative relationships with Japan and South Korea.

JOBS & ECONOMIC GROWTH FUND

\$1.25m



Hydrogen Export Funding



INCREASED EXPORTS

Hydrogen trajectory

Port Bonython in the Upper Spencer Gulf is one of the state's most prospective hydrogen export hubs for blue and green hydrogen.

Already one of the state's major export facilities, Port Bonython is attracting strong global investment interest and has the capacity to transform South Australia into a renewable energy exporter in the next decade, potentially creating hundreds of jobs along all parts of the hydrogen supply chain.

GOVERNMENT POWER SUPPLY

A new energy supply contract signed on 1 November 2020 with South Australian company ZEN Energy was the culmination of a rigorous vetting process to supply power to the state government through to 2030.

The contract will deliver around \$12.8 million in savings a year – a great outcome for consumers, prices and energy security

ELECTRICITY, GAS AND WATER REGULATION

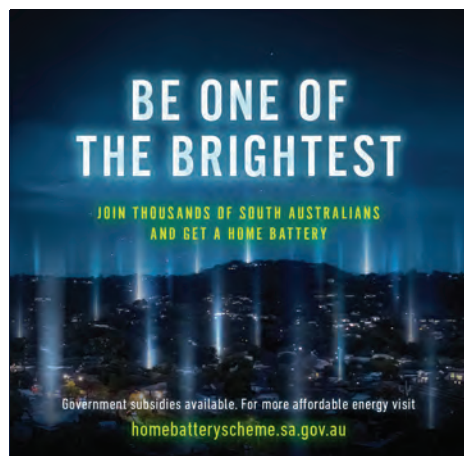
The safe use of electricity, gas and water in homes and business underpins confidence in our utilities.

- The Department for Energy and Mining continues to lead an efficient regulatory regime that monitors industry activities, provides technical advice to stakeholders and effectively enforces compliance with applicable standards.
- The ‘Smarter Homes’ program was implemented in September 2020, requiring new rooftop solar and battery systems to meet modern technical standards and allow for remote control of systems to help manage South Australia’s power system. This will remove the risk of a repeat of the 2016 statewide blackout.

HOME BATTERY SCHEME

The Home Battery Scheme is a prime driver in making South Australia the national capital for home batteries with more than 28,000 batteries installed or committed and nearly 8,000 enrolled in a virtual power plant. The scheme has:

- Delivering more than the original storage target of 280MWh
- reduced the average price of a battery purchased through the scheme by around \$5,000
- attracted 150 qualified system providers - selling and installing battery systems
- sustained jobs - qualified electricians, sales and administration staff
- enhanced grid stability, with many systems enrolled in a virtual power plant.
- In 2020, 29 per cent of all home batteries were installed in South Australia, the highest rate in Australia (SunWiz).



World leaders in home batteries

Picking up on South Australia’s high uptake of home batteries and the opportunity for households to save money, the Home Battery Scheme “Be one of the brightest” campaign ran from August to November 2021. It called on consumers to join the thousands of South Australians already leading the world to store the sun’s renewable energy, reduce emissions, and make power more affordable with a home battery.

ELECTRIC VEHICLE ACTION PLAN

South Australia's Electric Vehicle Action Plan aims to make electric vehicles the common choice for motorists by 2030, and the default choice by 2035, in line with the government's targets to reduce emissions 50% by 2030 and achieve net zero emissions by 2050.

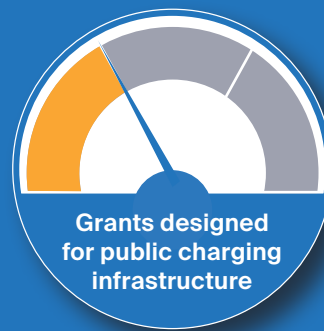
To support the uptake of EVs the government is making the state's biggest ever investment in electric vehicles, committing \$41 million to roll out our Electric Vehicle Action Plan. This includes a \$3,000 subsidy for the first 7,000 battery electric vehicles purchased, capped at \$68,750, including GST. As well as a 3-year registration fee exemption for new EVs.

The government has allocated \$13.4 million to secure private investment in a state-wide rapid-charging network, targeting 53 preferred service locations to deliver approximately 500 rapid and fast charging stations.

Up to \$3.6 million will go towards smart charging trials, helping households and businesses to charge vehicles in periods of high renewable energy generation and low electricity demand to realise further savings.

The South Australian Government is also showing leadership by committing to a program to transition the government fleet to electric vehicles over time – where they are fit for purpose and cost effective. Transitioning the fleet to electric vehicles will help bring more affordable models into South Australia and create a supply of affordable used electric cars.

Accelerating the uptake and smart charging of electric vehicles is predicted to bring forward economic and health benefits of lower motoring and electricity costs, along with reduced air, noise and carbon pollution.



\$41m

South Australia's
Electric Vehicle
Action Plan



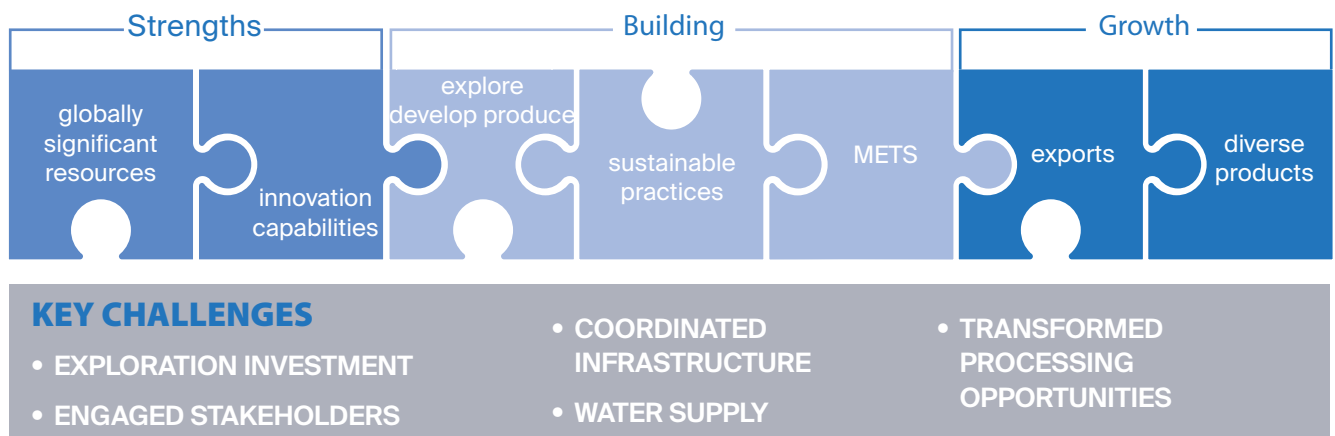
COMPETITIVE
ENERGY

Turbo-charging South Australia's Electric Vehicle Plan

The South Australian Government is investing to create a network of charging stations across the state that will end the range anxiety that deters many prospective EV buyers. The \$13.4 million statewide charging network envisaged in South Australia's Electric Vehicle Action Plan gives people the confidence to make their next vehicle purchase an EV, knowing that from the Eyre Peninsula to the Limestone Coast they are never too far away from a charging point.

MINERALS UNCOVERING NEW DISCOVERIES

Mineral resources support sustained economic growth and initiatives must assist in unlocking their potential value.



ACTIONS

ACCELERATED DISCOVERY INITIATIVE



ACCELERATED DISCOVERY INITIATIVE

The six-year \$21.5 million Accelerated Discovery Initiative (ADI) is among the world's most contemporary and diverse co-funding programs to advance the discovery of new mineral resources. The ADI embraces the application of innovative

approaches, new ideas and collaboration to stimulate exploration activity, and foster economic and social benefits.

- 36 projects awarded in the first two rounds.

- Projects highlight the innovation at play to reinvigorate frontier exploration spanning machine learning, proof of concept and new technologies.
- Several successful recipients are supporting meaningful employment and upskilling Aboriginal businesses during exploration activities.
- Completion of three awarded projects, results published.
- The third round will open for expressions of interest in November 2021.



JOBS & ECONOMIC GROWTH FUND

\$21.5m

Accelerated
Discovery Initiative



INCREASED
EXPLORATION



NEW

ACCELERATED DISCOVERY INITIATIVE EXTENDED TO 2025

The South Australian Government has committed to boost and extend the Accelerated Discovery Initiative (ADI) by \$11.5 million by another three years to 2025. This will build momentum from the commodity price upswing, attracting high investor and mineral exploration industry interest directed towards bringing forward new discoveries.

- Top up funding of \$1.5 million to current ADI round 3 (opening November 2021).
- Extend the initiative with three extra rounds worth \$3.33 million each, from 2022 to 2025.



Accelerating mineral discovery

With a \$300,000 grant to develop ground penetrating radar, round 2 grant recipient, Barton Gold has identified promising new gold targets at Tarcoola, highlighting the significant untapped potential for exploration undercover in the Gawler Craton.

COMPLETE

EXPLORE SA: THE GAWLER CHALLENGE

Open innovation platform Uearthed and the South Australian Government partnered in a worldwide call for geologists and data scientists to uncover new exploration targets in the state's highly prospective Gawler Craton. Competing for the \$250,000 prize pool, innovators delved into the Department for Energy and Mining's open file 'data warehouse' from decades of public geoscience and private exploration efforts, using machine learning to create new ways of prediction new options for mineral discovery.

The first phase showed the enormous power of government's open file data, its potential and the importance of a data-first approach to gathering and curating data.

The competition:

- attracted the interest of 2,300 people from more than 100 countries
- produced 59 quality submissions from teams in 23 countries
- showcased machine learning and artificial intelligence to encourage the uptake of data science
- added an estimated \$350 million worth of new data to the state's publicly available geoscientific data resources
- identified areas of mineral potential to investigate further.

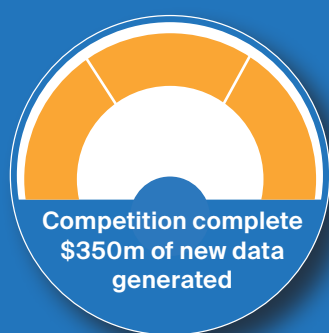
NEW

THE GAWLER CHALLENGE – NEXT GENERATION MINERAL SYSTEMS MAPPING (GAWLER PHASE 2)

The South Australian Government is investing \$5 million in Gawler Phase 2 to make data more accessible, complete and suitable for integrating machine learning with artificial intelligence, making it possible to expand the winning concepts into exploration prospects. Gawler Phase 2 focuses on:

- acquiring new data to fill gaps in the current database
- ensuring that all current and future data is delivered in a way that supports future data science applications
- developing an understanding of mineral systems in underexplored parts of the state.
- Consilium and Solve Geosolutions are reviewing machine learning submissions from the ExploreSA: the Gawler Challenge.

JOBS & ECONOMIC GROWTH FUND



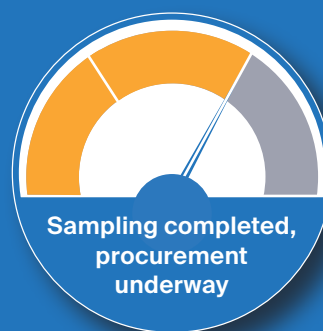
\$1.2m

Gawler Challenge



**INCREASED
EXPLORATION**

JOBS & ECONOMIC GROWTH FUND



\$5m

Gawler Challenge
systems mapping



**INCREASED
EXPLORATION**

ROXplorer changing the face of deep cover exploration

The MinEx CRC ROXplorer Coiled Tubing (CT) Rig promises drilling at a fraction of the cost of conventional diamond drilling and has the potential to drive a drilling revolution. The CT rig is being deployed to the Delamerian region of South Australia as part of the Geological Survey of South Australia's contribution to the National Drilling Initiative. The CT rig provides real-time, down-hole information that allows explorers to make strategic decisions in the field, providing more productive and efficient use of their time on site.

MINEX CRC

The Geological Survey of South Australia is a major collaborator in MinEx CRC's 10-year industry-led research with a major focus on the National Drilling Program in under-explored areas of Australia.

- Delivery of new pre-drilling rich information and data packages to guide exploration in the under-explored Delamerian beneath the Murray Basin.
- Increased uptake of exploration tenements has followed the announcement of the public drilling campaign in the nearby region.
- First phase of the National Drilling campaign underway and successfully retrieving the first new samples from beneath the Murray Basin since the 1990's in this region.
- Supported development of new drilling technology, deploying the MinEx CRC Coiled Tube Rig Technology and new diamond coring applications.
- Employing local contractors and engaging with traditional owners.
- Grew research opportunities with 14 South Australian PhD students at The University of Adelaide and University of South Australia.





DISCOVERY MAPPING – GOOGLE MAPS FOR MINERAL DISCOVERY

Akin to a 'Google Maps' for South Australian geoscience data, the South Australian Discovery Mapping project will modernise the capture, management, delivery and scope of the state's precompetitive geological map datasets. The initiative's aim is to create a modern world-class geoscience data asset and data platform that maintains South Australia's global reputation for easy access to high quality, pre-competitive geoscientific data.



THINKING CRITICAL SOUTH AUSTRALIA

Unearthed and the South Australian government are again partnering in a crowd-sourced open-platform international competition to identify opportunities for technical innovation along the state's critical minerals value chain.

The investment will align with key themes identified in the Commonwealth Government's Critical Minerals Strategy to attract investment and foster innovation and processing.



ENHANCING LAND ACCESS FOR MINERAL EXPLORATION

This initiative will improve pathways for negotiating mineral exploration Indigenous Land Use Agreements over the highly prospective Gawler Craton and Curnamona provinces, representing 50 per cent of the state.

- Released issues paper.
- Preliminary engagement with native title groups, industry bodies and exploration companies to discuss their interest and involvement in the initiative.
- Produced early information resources.

JOBS & ECONOMIC GROWTH FUND

\$5m

SA Discovery Mapping



**INCREASED
EXPLORATION**

JOBS & ECONOMIC GROWTH FUND

\$0.8m

Critical Minerals Challenge



**INCREASED
EXPORTS**

JOBS & ECONOMIC GROWTH FUND

\$1.245m

Enhancing Land Access



**INCREASED
EXPLORATION**



LANDOWNER INFORMATION SERVICE

In 2020, the government successfully piloted a 12-month Landowner Information Service with program partner Rural Business Support to facilitate better understanding between the agricultural and mining sectors.

- Handled more than 700 direct contacts with stakeholders from the agricultural and mining sectors, state MPs, local government organisations, regional community groups and rotary clubs.
- Assisted 57 clients.
- 100 per cent of landowners accessing information reported improvement in their understanding of the requirements and obligations of resource companies requesting access to land.

Expanded and extended service

The government has extended and expanded the Landholder Information Service to 2025, following the strong demand shown by the initial pilot, highlighting the importance of good engagement between the state's two largest sectors.

Rural Business Support is contracted to provide the service, having a broad reach with connections to agricultural groups, councils, industries and the Office of the Small Business Commissioner.

MINING ACT REFORMS: RED TAPE REDUCTION

The amended *Mining Act 1971* and regulations came into effect 1 January 2021.

- The most comprehensive modernisation of the state's regulatory framework for mining and exploration activities in 50 years.
- Continuing engagement with industry and stakeholders to support the transition to new regulatory arrangements, including

reforms to environmental and social impact assessment, financial assurance requirements and comprehensive update of guidance materials.

- Improved information and support for landowners and improving practices by mineral explorers, to deliver practical improvements for all parties.



STRONGER PARTNERS, STRONGER FUTURES

The Stronger Partners, Stronger Futures initiative has built relationships between Aboriginal communities, explorers and the state government to guide mutual understanding of the exploration process and Aboriginal culture and heritage.

- Provided clarity to future priorities of the agreement-making process, and options for forming agreements.

- Final report delivered, setting out the measures to pursue in response to stakeholders' feedback.
- Improvements for early engagement and low-impact exploration process incorporated into the Mining Act reforms that came into effect 1 January 2021.

INFRASTRUCTURE TO UNLOCK MINING GROWTH

Finding new pathways to global markets will assist South Australian resource companies to develop their projects and allow the state to plan for the transport, logistics and utilities corridors needed to support that development.

Various bulk export studies conducted in the past decade indicate the need to firstly improve the efficient use of existing port infrastructure as investors settle on a second generation of port facilities within Spencer Gulf.

- Several candidates for development have been identified linked to potential magnetite projects.
- Planning underway to encourage multiple user access to any proposed facility to ensure the agricultural and mineral resources sector can both benefit from any future investment.

A project has also been established to investigate multi-user infrastructure corridor and water supply options to accelerate mineral project development.

NORTHERN WATER SUPPLY

Providing access to commercially competitive water supplies to the Far North has the potential to radically transform the arid Outback for mining projects as well as for agriculture, manufacturing, tourism and regional development.

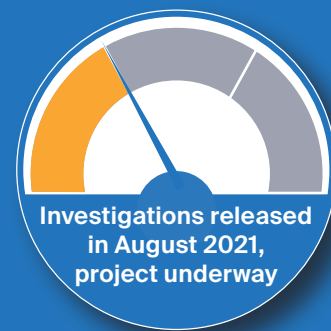
The key to unlocking this economic growth potential is to find existing productive water sources in the area or bring water from the Upper Spencer Gulf - or a combination of both.

- The government has committed \$900,000 to fund a study into options to expand sustainable water supplies in the north of the state.
- The study will examine the most feasible of the potential solutions to unlock investment in the Outback region.

JOBS & ECONOMIC GROWTH FUND

\$5.6m

Water and Infrastructure Corridors



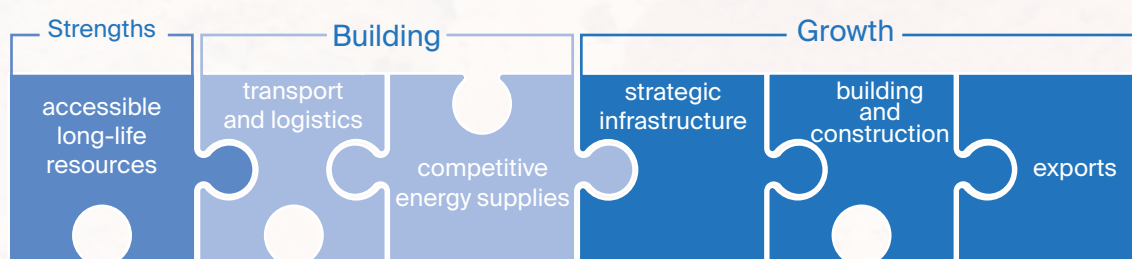
INCREASED EXPORTS

Rare and critical

South Australia has more than **65 per cent** of Australia's **copper** and **graphite** as well as **rare earth elements** needed for **low emission technologies**, supporting the global transformation economy.

EXTRACTIVE INDUSTRIES BUILDING OUR STATE

Extractive industries provide essential materials for construction and infrastructure projects. Growth State provides the opportunity for South Australia to investigate options for growing exports.



KEY CHALLENGES

- SUPPLY CHAIN EFFICIENCIES
- STREAMLINED PLANNING

ACTIONS

INFRASTRUCTURE DRIVING DEMAND

The state government is implementing its 20-year State Infrastructure Study.

- 2021 budget commits a record \$17.9 billion for roads, infrastructure and construction.
- Additional \$80 million extends funding to upgrade the Strzelecki track upgrade, bringing the total funding for the project to \$215 million, with works over five years.
- Australian and state government-funded infrastructure pipeline includes the Truro Bypass, Port Wakefield overpass, the second stage of the duplication of the Augusta Highway, and extension of the road safety package.



PRODUCTIVITY COMMISSION REVIEW

The 2020 South Australian Productivity Commission *Extractives Industry Supply Chain Review Report* reaffirmed the direction of reforms already underway, including the modernisation of our exploration and mining laws, introduction of planning and explosives regulation reforms, and transport initiatives.

The government will maintain the state's competitive advantage of having significant quarries located within the Greater Adelaide area. Key updates to regulatory guidance materials have been prioritised and delivered in 2021.

RESOURCE MANAGEMENT AND PLANNING

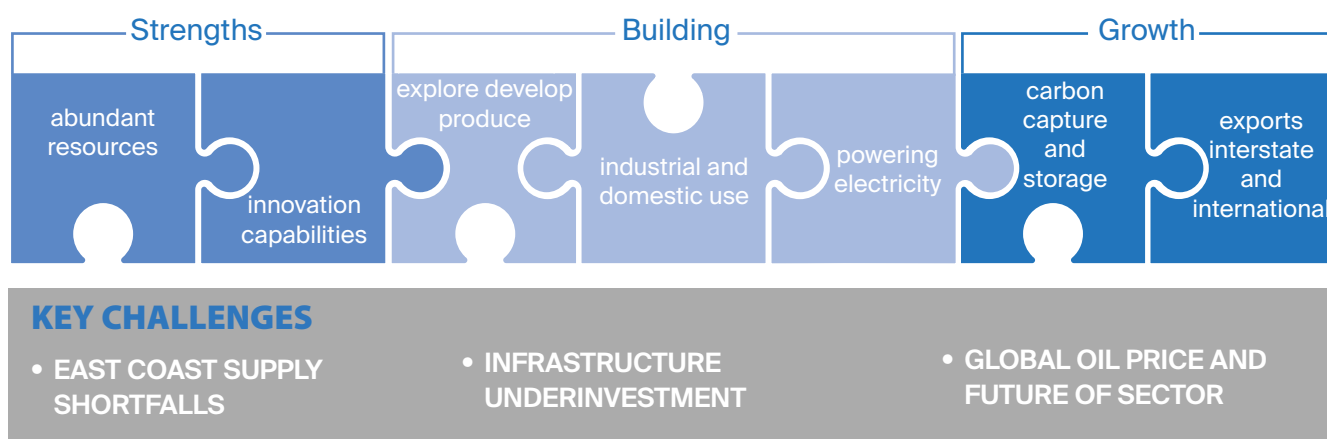
The Resource Area Management Plan aims to balance development and maintain access to strategic extractive resources.

- New planning tools delivered through the Planning and Design Code.
- Continue to integrate strategic resource area and planning overlays to maintain access to strategic extractive resources and manage incompatible land uses.

This ongoing work is supported by the recommendations outlined in the South Australian Productivity Commission's *Extractives Industry Supply Chain Review Report*.

OIL AND GAS EXPORTS, INNOVATION AND AFFORDABILITY

The state's oil and gas sector is responding to the global oil price volatility and market changes affecting global primary energy sources post-COVID-19.



ACTIONS

ROADMAP FOR OIL AND GAS PROJECTS IN SOUTH AUSTRALIA

South Australia's Roadmap for Oil and Gas Projects set the course for sustainable development of the state's large natural gas technologies.

- New website reflects themes of the RoadMap, giving Roundtable for Oil

and Gas members convenient, timely access to sector updates.

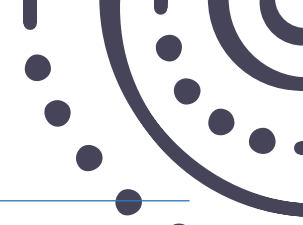
- Basin prospectivity is updated in real time.
- Following COVID-19 interruptions, next annual Oil and Gas Roundtable gathering scheduled for 9 December 2021.

PACE GAS

PACE Gas has expanded gas supplies and increased gas competition, offering new supplies of natural gas on commercial terms to local consumers.

- Ongoing oversight of residual PACE Gas grants paid across two rounds of funding from 2016 to 2018.
- 8 of 9 awarded projects successful.

- From February 2018 to June 2021, 6 of 9 projects yielded 7,000 terajoules of natural gas delivered to market to June 2021, approximately half (~3,500 terajoules) produced in 2020-21.
- 3D seismic survey planned over the PACE-funded discovery at Dombey 1DW1 in the Otway Basin to allow further assessment of the field.
- Discovery of potential food grade CO2 at Nangwarry 1 in the Otway Basin.



GOOD STANDING AGREEMENTS TO DRIVE EXPLORATION

The state government has worked with the Commonwealth to secure terms under the Good Standing Agreement with BP and Chevron that require nearly \$60 million expenditure on projects located in South Australia over a three-year term.

Chevron committed:

- \$35.5 million to reprocessing existing seismic survey data in the Cooper-Eromanga Basins that will assist in locating new oil and gas discoveries. The first tranche

of data is now available for free download from the Department for Energy and Mining website

- nearly \$2.5 million to the Australian School of Petroleum and Energy Resources at the University of Adelaide.

BP entered into a good standing agreement that provides expenditure of at least \$20 million on projects in South Australia.

COOPER-EROMANGA BASIN ABORIGINAL CONFERENCE INITIATIVES

The Cooper Eromanga Basin Aboriginal Conference initiative brings together the Dieri, Wangkangurru/Yarluyandi and Yandruwandha/Yawarrawarrka Aboriginal communities along with energy resource companies operating in the Cooper and Eromanga Basins to explore opportunities to support Aboriginal employment and business in the energy resources sector.

Strategies developed to assist Aboriginal people in accessing pre-employment training and securing employment through close engagement with Aboriginal communities of the Basins (implementation interrupted by COVID-19).

ACREAGE RELEASES

Completed the Competitive Cooper Basin Acreage Release, issued in 2019.

- Two new petroleum exploration licenses were offered to applicants Gidgee Energy Pty Ltd and Leigh Creek Oil & Gas Pty Ltd.

- The remaining three licence applications are currently concluding native title land access negotiations as a precedent to licence grant.

PETROLEUM AND GEOTHERMAL ENERGY ACT REFORM

Responsible management of the state's petroleum, geothermal and gas storage assets are supported through world-class regulation and compliance monitoring. Following a four-week public engagement process, the

Petroleum and Geothermal Energy (Energy Resources) Amendment Bill 2021 has been introduced to Parliament.

JOBS & ECONOMIC GROWTH FUND

\$35m

Sealing the Strzelecki Track



INCREASED EXPORTS

STRZELECKI TRACK

The Strzelecki Track is a 472 kilometre (km) road that provides a vital link for oil, gas and carbon capture facilities located in the Cooper Basin near the Queensland border. It is an essential transport corridor for outback communities, tourism and pastoralists.

- First 98 kilometres of the 472 km road has been sealed and is now open to traffic, following a \$10 million investment from the state government.
- Additional \$80 million state government funding awarded towards the Strzelecki Track upgrade, bringing the total funding for the project over five years to \$215 million, in partnership with the Commonwealth Government.

The 472 km Strzelecki Track in the state's Far North is the most ambitious outback road investment in Australia, delivering benefits to regional communities, businesses and tourists.



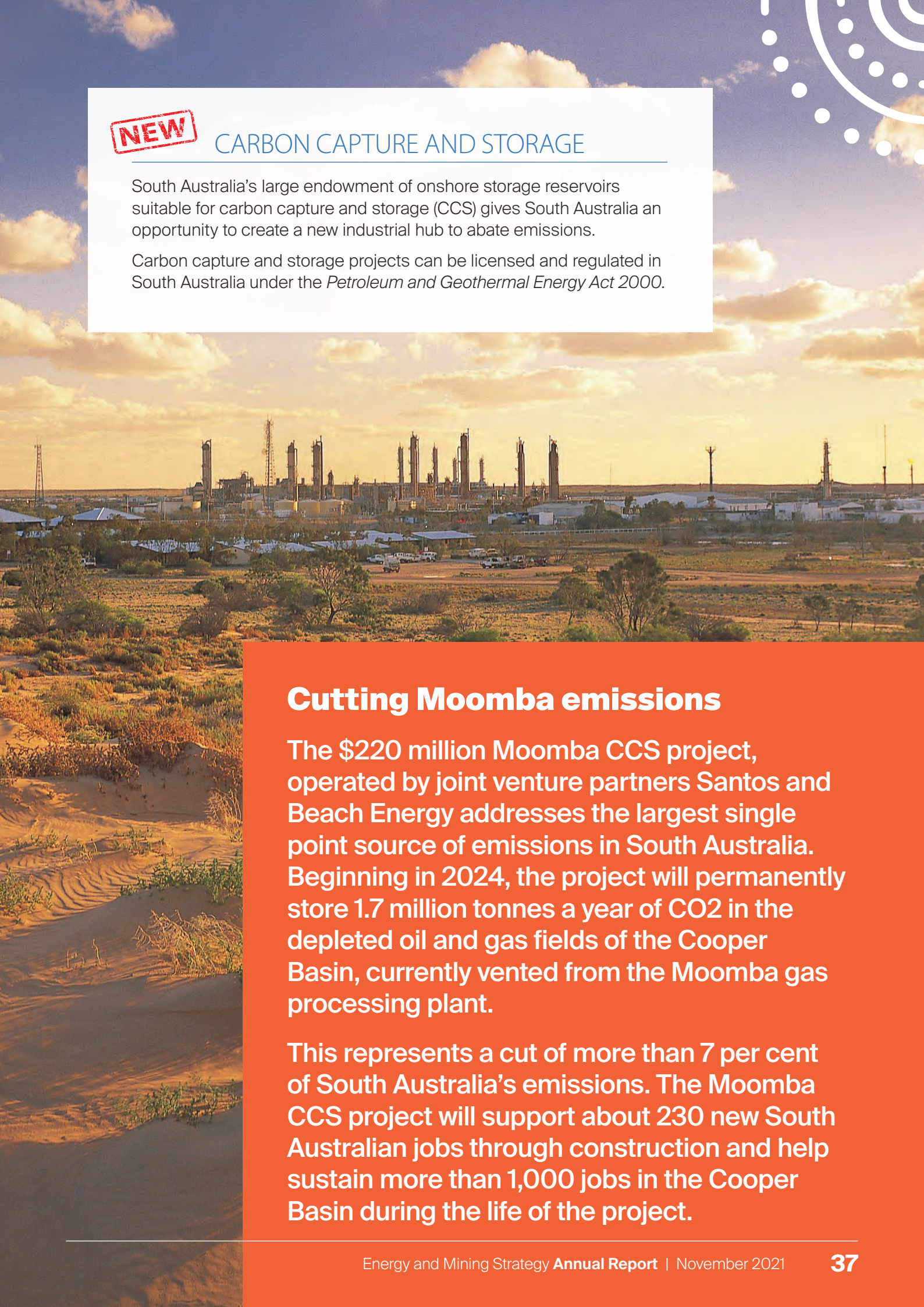


NEW

CARBON CAPTURE AND STORAGE

South Australia's large endowment of onshore storage reservoirs suitable for carbon capture and storage (CCS) gives South Australia an opportunity to create a new industrial hub to abate emissions.

Carbon capture and storage projects can be licensed and regulated in South Australia under the *Petroleum and Geothermal Energy Act 2000*.



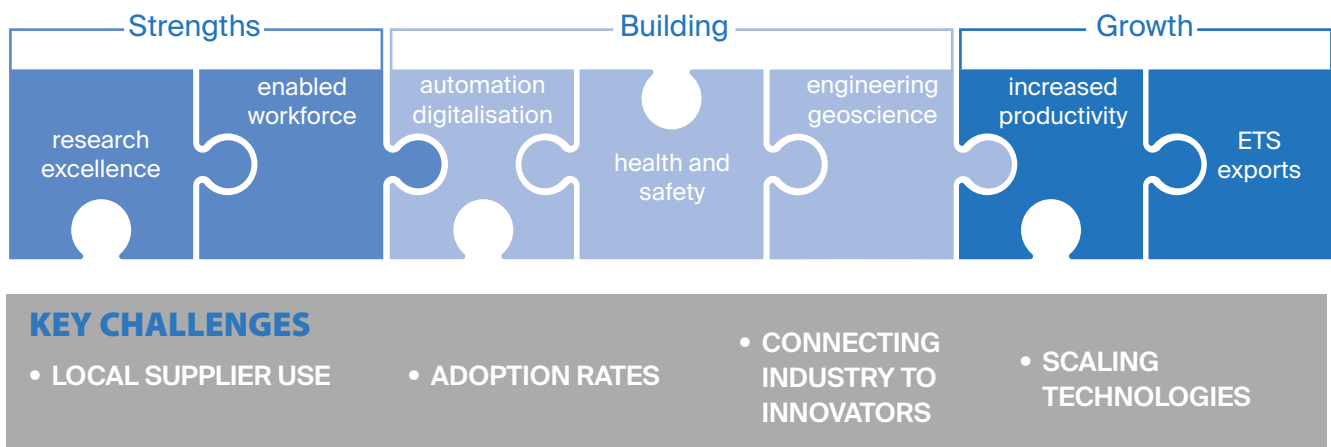
Cutting Moomba emissions

The \$220 million Moomba CCS project, operated by joint venture partners Santos and Beach Energy addresses the largest single point source of emissions in South Australia. Beginning in 2024, the project will permanently store 1.7 million tonnes a year of CO₂ in the depleted oil and gas fields of the Cooper Basin, currently vented from the Moomba gas processing plant.

This represents a cut of more than 7 per cent of South Australia's emissions. The Moomba CCS project will support about 230 new South Australian jobs through construction and help sustain more than 1,000 jobs in the Cooper Basin during the life of the project.

ETS EQUIPMENT TECHNOLOGY & SERVICES

As the energy and mining sectors grow, it is essential that the benefits of the increased economic activity are captured by South Australian equipment, technology and service providers.



ACTIONS

INDUSTRY CAPABILITY NETWORK (ICN) – SOUTH AUSTRALIA

ICN provides powerful procurement and supply chain business tools and platforms to support success of major operating and expanding mines, energy projects and transformation projects. ICN is staffed by professionals with experience in engineering, logistics and procurement.

- Supported OZ Minerals copper mines - Carrapateena and Prominent Hill operations and expansion with dedicated project procurement portals.
- Launched a project portal for Project EnergyConnect to capture general opportunities.
- Listed GFG Alliance projects on ICN gateway offering work pages.
- Provided in-kind support to the H2H Hydrogen Technology Cluster through a project portal that connects potential suppliers to supply this emerging cluster.

SOUTH AUSTRALIAN STEEL INITIATIVE

Government is working with the Office of the Industry Advocate to design initiatives so local steelmakers and fabricators can compete fairly on government contracts. The office administers small grants of up to \$10,000 to develop business capability for steel manufacturing.

- Of 25 businesses awarded grants, 16 have recently employed a total of 70 staff and a further 45 jobs are likely to be created over the next 12 months.
- South Australian government projects are required to use steel that meets Australian standards and certification, putting the local steel industry on a competitive footing.

Regional Growth Fund-supported steel innovators:

- Gadaleta Steel Fabrication awarded \$2 million to purchase and install automated steel processing machinery to increase production capacity
- Feretti awarded \$2 million to enhance its state-of-the-art steel processing facility in Whyalla

Through the pandemic, the Global Maintenance Upper Spencer Gulf supply chain cluster successfully staged its conference and trade expo in Whyalla in 2021 and Port August in 2020

METS IGNITED

METS Ignited continues to implement a \$15.6 million, four-year initiative to support and encourage sector-wide collaboration involving South Australian operators, and to develop a multi-scale, multi-source environmental data platform to monitor, manage and reduce mining's footprint.

State's steel advantage

Australia's steel industry was born in South Australia and it is in the national interest to maintain a thriving steel industry in this state for the long-term. The state government continues to work with GFG on its long-term vision to transform the Whyalla Steelworks into a world-leading carbon neutral steel producer.

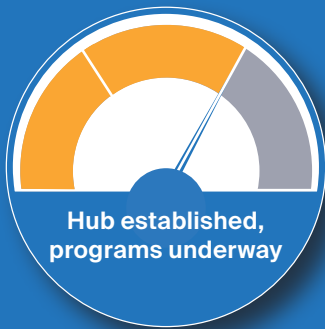
Innovation for growth

Innovation hubs at Lot Fourteen and Tonsley are hives of local, national and international collaboration between automation, hydrogen and renewables, software and advanced manufacturing industries.

JOBS & ECONOMIC GROWTH FUND

\$1.8m

CORE Innovation Hub



INCREASED EXPORTS

CORE INNOVATION HUB

CORE Innovation Hub is a public-private foundation partnership activating skills in big data to drive the next wave of growth for energy and mining. CORE Innovation has established a presence at Lot Fourteen and a satellite site at Tonsley and set up programs to connect people across space, defence, data science, artificial intelligence, machine learning, cybersecurity, hydrogen, and the creative industries to address opportunities and challenges.

- Delivered skill pathways and training packages to equip all tiers of the workforce with data science skills and thinking aligned to machine learning.
- Cultivated entrepreneurial capability and hosted 'challenges' to accelerate learning to grow local industry and export opportunities.
- Mapped an innovation ecosystem to connect the state's energy and resources stakeholders and service providers through an interactive digital directory.
- Hosted events for networking and showcasing solutions to reach new markets.
- Ran seminars, workshops and short courses to build capabilities.
- Raised the profile of leading SA-based innovators – 9 SA-based Innovators made the Core Innovators Hot 30 awards, celebrating and showcasing solutions to reach new markets.
- Assisted Western Air to relocate to the Tonsley Innovation District as a tenant of the South Australia Drill Core Reference Library.





KANMANTOO – KOMATSU CONTINUOUS MINER

South Australia's trailblazing approach to generate deep exploration success continues with a \$2 million grant towards Hillgrove Resources \$7.3 million trial of new underground mining technology – aiming to demonstrate its economic viability.

- Holds potential to make hard rock mining safer, faster and more cost-effective as well as reducing emissions for mine sites.
- Allows for continuous rock cutting, avoiding the stop-start process of the drill and blast cycle.
- Potential to reduce the capital outlay and time to access deep and complex deposits.



NATIONAL TEST MINE AND INNOVATION CENTRE

The Arkani Ngura Underground National Test Mine and Innovation Centre at the Prominent Hill mine site will be a sustainable, independently operated non-profit, open access training facility - the only facility of this type in Australia, supporting productivity growth, new jobs and developing a new market.

The government's initial three-year contribution will support the delivery of upfront infrastructure and logistical requirements as the centre transitions to a fully sustainable self-funding facility.

JOBS & ECONOMIC GROWTH FUND

\$2m

Kanmantoo Continuous Miner



INCREASED EXPORTS

JOBS & ECONOMIC GROWTH FUND

\$8m

Arkani Ngura Innovation and Technology Centre



INCREASED EXPORTS

TONSLEY INNOVATION DISTRICT

Tonsley is a thriving hub for mining and energy innovation – home to a number of businesses leading the way in supporting growth in the sector and capability. The site is home to the SA-H2H Hydrogen Technology Cluster and Hydrogen Park South Australia.

South Australia Drill Core Reference Library

The world-class South Australia Drill Core Reference library operated by the Geological Survey of South Australia provides state-of-the-art sample analysis equipment and a 3D immersive theatre to visualise geological settings and information to stimulate discovery.

- Hosted 180 visits, 1664 clients and over 200,000 metres of drill samples viewed.

- Supported industry capability, hosting 30 functions involving 880 people – hydrogen industry cluster workshops, Department for Environment and Water Basin Workshops, the National Exploration UnderCover School (NExUS).
- Supported application of library resources and representative sample collections from 130 years of exploration.
- Incorporated 20,000 digitised samples from Santos into the collection.

NEW

Spectral geoscience

The government is purchasing two new state-of-the-art spectral geoscience instruments – the ‘HyLogger 4’ technology and ‘Raman Spectroscopy’ – a rapid logging and imaging system that will improve explorers’ ability to identify and analyse geological samples and speed up the discovery of precious resources.

PLAYFORD SCHOLARSHIPS

An initiative to provide \$1.1 million over five calendar years to establish a six-year scholarship program in partnership with government, industry and the Playford Memorial Trust to support around 100 students undertaking resource-related courses.

Total of 16 first and second-year student recipients of the 2021 scholarship are studying with support from the initiative.

JOBS & ECONOMIC GROWTH FUND

\$1.128m

HyLogger 4 and Raman Spectroscopy



INCREASED EXPLORATION

JOBS & ECONOMIC GROWTH FUND

\$1.1m

Playford Trust Scholarships



INCREASED EXPORTS



DIGITAL TOOLS TO ENHANCE CUSTOMER EXPERIENCE

The government is investing \$10 million in a 'Digital Restart Program' to make it easier and simpler for clients to deal with the Department for Energy and Mining.

- Client-facing portal to standardise interactions with the department.
- Tenements Management System upgrades to improve predictability, visibility and self-service.
- A new departmental website to deliver an intuitive and highly accessible user experience
- Updates to ageing databases and cloud enablement.

SUPERCHARGING COLLABORATIVE INNOVATION

EXCITE harnesses Excellence, Collaboration, Innovation, Translation and an Enabled future workforce in a 10-year strategy to grow South Australia's economy.

South Australia boasts a talent base and knowledge capacity to focus on technologies of future and transform industries for a bright future. South Australian universities, collaborative industry partners and innovators instigated centres of excellence of international scope and significance. Through 2020-21, the South Australian government lent strong advocacy to profile and help seed these new frontiers of opportunity.

The **Australian Critical Mineral Research Institute**, led by the University of Adelaide, pools a national talent pool to advance extraction, processing and use of critical minerals.

The Heavy Industry Lower Carbon Transition Cooperative Research Centre - **HILT CRC**, will take up the challenge to decarbonise major

metals, smelting and extractive processing industries. The HILT CRC will transform the heavy industrial sector to a low-carbon future focusing on technologies and methods needed to grow Australia's low-carbon economy.

The **ARC Training Centre for Integrated Operations for Complex Resources** will take smart systems to the next level. The Centre will deliver advanced sensors, data analytics and artificial intelligence to automatise, integrate and optimise mining. Programs run through the centre will develop highly capable people.

The **Advanced Materials Research Facility** will develop materials to help manage carbon dioxide emissions and mitigate climate change. The facility will create new catalyst materials to deliver superior performance to advance hydrogen energy production, battery production and recycling and improve environmental remediation.

South Australia the Critical Minerals Centre

The transition to a high-tech, clean energy world requires secure supplies of critical minerals. During the year The University of Adelaide launched the Australian Critical Minerals Centre with national collaborators.

GROWTH STATE OPPORTUNITIES IN DEVELOPMENT

The 2020 Energy and Mining Strategy outlined opportunities for collaboration and co-investment between Growth State sectors to promote stronger economic growth across the state.

The government committed to focus on:

- **Trade and investment** – promoting the state's energy and resource potential to overseas audiences, growing South Australia's hydrogen economy and developing critical minerals for a sustainable economy.
- **Infrastructure** – facilitating infrastructure to unlock energy and resource sector growth, including coordinated infrastructure corridors, sealing the Strzelecki Track, South Australia's Electric Vehicle Action Plan and a smart energy storage program.
- **Land, water and environment** – water supplies for mining, carbon capture, utilisation and storage and other contributions to a state climate change strategy, fostering a better relationship between industry, traditional landowners and other land users, and contributing to the circular economy.

- **Skills and innovation** – connecting industry with opportunities to innovate, developing our workforce capabilities through both the Industry Skills Council and the Resources and Engineering Skills Alliance, and supporting science, technology, engineering and mathematics scholars through high school and university.

Where these opportunities were developed into actions, they have been reported in the previous section.

In the broader Growth State work plan, policymakers are developing and considering other opportunities to respond to industry needs and ensuring all South Australians' future prosperity. Below is an outline of this work in progress.

TRADE AND INVESTMENT

An Upper Spencer Gulf hydrogen export hub – South Australia can be a world-class supplier of renewable hydrogen. Securing multi-use infrastructure and other support capabilities aligned with industry access to the Australian Government Clean Hydrogen Industrial Hubs program is a key next step.

• **Adding value to our resources** – through a greater understanding of South Australia's magnetite product characterisation, deeper

knowledge of value chain critical minerals opportunities and development of new clean resource manufacturing.

Dimension stone export opportunity – the extractives sector has identified potential for significant export growth of premium South Australian dimension stone. This opportunity has not been pursued as a priority, relative to implementing improved state and local government regulation of the extractives supply chain.

SKILLS AND INNOVATION

Workforce planning – a pilot approach to workforce planning for priority sectors is being progressed by the South Australian Government. This can align with the This can align with the National Hydrogen Skills and Training Analysis Project.

INFRASTRUCTURE

Smart Energy to optimise demand management with distributed energy resources was identified as an opportunity in the Energy and Mining Strategy. A digital energy industry workshop is being planned for early 2022 on technologies and business models for industry to address technology barriers to emerging new energy market business models for a more flexible and dynamic electricity market.

LAND, WATER AND ENVIRONMENT

Circular economy and renewable energy based economic transformation opportunities are recurring themes of the Energy and Mining Strategy.

Carbon capture and storage – industry is actively pursuing sustainable gas industry development enabled by a newly approved national carbon emissions reduction method.

Environmental, social and governance (ESG) performance – South Australian industry is also well placed to demonstrate ESG performance given our lead in the transition to renewable energy generation and sustainable management practices already in place.

2021 Premier's Awards in Energy and Mining

The Premiers Awards in Energy and Mining held in November shone a spotlight on the best and brightest of South Australia's energy and mining sectors. In 2021 the awards sought to recognise global leadership and dynamic, transformative work within the sectors.

The gala event attended by 270 guests recognised innovative companies and young achievers bringing their imagination, drive and passion and determination to the energy and mining industries. The award categories celebrate companies offering new approaches to balance economic, environmental or social objectives.

Achievements recognised this year include a closed-circuit waste management system to reprocess all waste streams, air booster packages suitable for specific drilling rigs, collaboration to extend a mine's life by 15 years, and engagement programs focusing on Aboriginal business and communities.



WHERE DO THE NEXT OPPORTUNITIES LIE?

Achieving growth is not something that any one agency, business or organisation can do on its own.

To maintain momentum and fulfil South Australia's true potential we need to continue identifying new opportunities for growth.

We invite your input into this dynamic strategy to ensure the South Australian government stays focused on what matters, supports economic resilience and invests in the strengths that set us apart.



HOW TO GET INVOLVED

FEEDBACK DUE 23 DECEMBER 2021

Your feedback is sought on this Annual Report. Have your say on the proposed update to the Energy and Mining Strategy.

Questions to be considered

- Are the Strategic Targets of the Energy and Mining Strategy still valid?
- What feedback can you offer on the Energy and Mining Strategy actions already underway?
- What other growth opportunities should we be pursuing? Are there any other opportunities for leveraging South Australia's clean energy transformation to grow jobs and investment?
- Are all the key challenges to strong sustained growth in the energy and mining sector captured in the Strategy?

- Are there any other priority areas that should be the focus of the updated Energy and Mining Strategy?

You can provide feedback through the Department for Energy and Mining website

www.energymining.sa.gov.au/growthstrategy or email DEM.customerservices@sa.gov.au.

All feedback will inform the development of an updated Energy and Mining Strategy, to be published on the Department for Energy and Mining website.

The updated Strategy will continue to inform government of the energy and mining sector's priority needs and will enable the government to respond through the Growth State work plan.

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FURTHER INFORMATION

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**Government
of South Australia**

Department for
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