Technology and policy-based initiatives to support innovation and economic growth in South Australia

ATSE Australian Academy of
Technological Sciences
& Engineering

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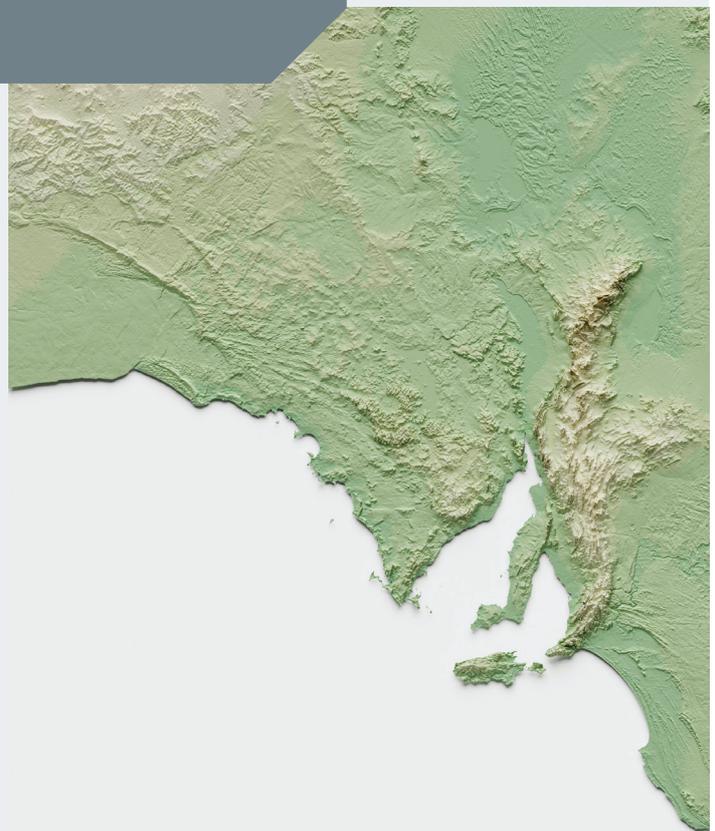
The future prosperity of South Australia requires technology and innovation to grow new industries and move towards the evolution and decarbonisation of existing ones. The South Australian tech, industry and research sector has a clear opportunity for economic growth while addressing climate change and other key issues through the development of emerging technologies.

The 2026-2030 term of government requires decisive leadership to ensure that South Australia continues to grow as an exemplar of a leading evidence-based economy and STEM-driven community. The Australian Academy of Technological Sciences and Engineering (ATSE) has identified key initiatives across the sectors of energy, digital transformation, water resources, agriculture and science, technology, engineering and mathematics (STEM) education. These would enable South Australia to boost its economic growth, reduce its carbon footprint, improve its natural environment and enhance its reputation as an international leader in scientific and technological innovation.

About ATSE

An independent, non-government organisation and charity, ATSE is led by a diverse Fellowship of over 900 Australian leaders in applied science, technology and engineering. Our Fellows lead STEM-based companies and work at the highest levels of industry, academia and government research and development. We celebrate excellence in science, technology, engineering and mathematics (STEM) by appointing prestigious and accomplished Fellows, awarding and recognising upcoming innovators, and equipping the next generation with the necessary skills to build a better Australia.

ATSE's South Australian and Northern Territory Division includes 78 Fellows, spanning industry, government and academia.

ATSE

ATSE's 10-point plan for the next South Australian Government

Building a resilient South Australia

1. Safeguard SA's long-term electricity security by implementing policy and technology solutions for: demand side management, expanding state-funded incentives for household energy upgrades, streamlining planning regulations for new energy projects, and accelerating the roll out of zero-emissions energy generation and associated firming technologies.

2. Establish South Australia as a national leader for cybersecurity by drawing on existing capabilities (e.g. Lot Fourteen), strategically partnering with private sector institutions across the defence science and technology capabilities centred around the Adelaide ecosystem.

3. Develop a public-private partnership to establish a domestic Australian sovereign digital technologies capability for critical defence, support services, transport, industrial and social data led by South Australia and provide access to these resources to become a trusted custodian for Indo-Pacific nations.

4. Support R&D on biological crop nitrogen generation, and uptake of nitrogen fertiliser production technologies to improve efficiency and reduce greenhouse gas emissions.

5. Secure SA's water resources through: driving resilient outcomes for SA in long-term Murray-Darling Basin management; investing in digital technologies for Basin data collection; increasing direct funding for water research; and conducting a study into the viability of providing purified recycled water for coastal cities and inland towns.

6. Support research into detection and monitoring of algal blooms and their causes and develop and deliver a plan to minimise the impact of the current bloom.
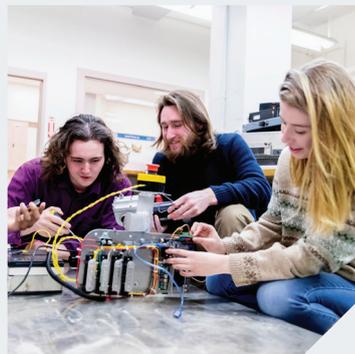

Boosting the South Australian economy

7. Support the development of practical and economic pathways to produce green hydrogen in South Australia, especially in relation to production of ammonia for fertilisers and green steel at Whyalla.

8. Investigate the viability of nuclear waste management aligned with AUKUS objectives, and its broader relevance to Australia as an exporter of uranium products and its potential contribution to energy security.

Growing South Australia's STEM-skilled workforce

9. Enable more hands-on STEM learning in schools through resource and infrastructure support, including professional development for teachers, upgrading laboratory facilities, and adoption of proven curriculum-aligned programs like ATSE's STELR STEM education program.

10. Invest in expanding programs like the *Elevate: Boosting diversity in STEM* scholarship program to support girls, Aboriginal and Torres Strait Islander students and other underrepresented groups to engage and excel in STEM education.

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50 YEARS

Australian Academy of Technological Sciences & Engineering

ATSE is Australia's foremost impact network for leading applied scientists, technologists and engineers.

Since 1975 we have been an authoritative and independent voice to government, delivering frank, fearless and evidence-based policy advice to help drive a technology-powered, human-driven future.

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Cover image: SAHMRI — South Australia's flagship not-for-profit health and medical research institute. Unsplash.