

Business Plan 2017-18



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Foreword

This first business plan for Green Industries SA outlines the programs and activities which aim to maximise resource recovery opportunities, create jobs and improve the environment in South Australia.

These goals reflect the State Government's economic priorities and recognition of the contribution that the green economy brings in terms of job creation.

The waste and resource recovery industry employs almost 5,000 South Australians. It is worth reiterating that while waste and materials management is a key environment issue, it presents an opportunity to contribute to the State's economic growth and competitive advantage.

Reflecting international developments, and realising the economic benefits of the circular economy is a new focus for the agency.

Creating value from reuse and remanufacture, and keeping materials circulating in the economy for as long as possible, is a new guiding principle for the agency. During 2017-18 the agency will identify collaborative projects and advocate for a circular economy and the economic and environmental benefits of this approach.

Zero waste remains an important guiding principle as reflected in the agency's work to drive targets in *South Australia's Waste Strategy 2015-2020*. It continues to support the State's recycling, remanufacturing and waste management industry through financial incentives for infrastructure, expanded recycling systems and research and market development.

Our statewide waste and resource recovery infrastructure plan, the first for South Australia, will assist with planning decisions relating to future investment in waste and resource recovery infrastructure.

Promoting the export of the State's Intellectual Property and investing in new waste and recycling processes and technologies through commercialisation is also a focus, leveraging relationships developed through the State Government's export strategies for target markets including India and China.

Many of Green Industries SA's activities position it as a first-mover in the green economy. Critical work to be completed in 2017-18 includes a benchmarking study of South Australia's green industry sector, recognising the central role of reliable data and an evidence base to shape the agency's work in this area.

Green Industries SA will continue to advocate for the collaborative economy, from both within and outside of Government.

It will also finalise work to achieve a co-ordinated approach towards disaster waste management planning, the first in Australia.

A loan scheme with the South Australian company, Innovyz, for a business mentoring program to rapidly commercialise innovation, is another first, attracting wide interest.

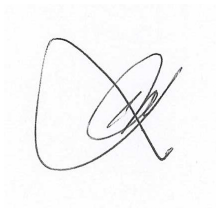
Partnering with Innovyz to turn ideas into products and services that can be exported to the world to provide jobs for South Australians will make the world a better, cleaner place at the same time.

These initiatives contribute towards South Australia's pride in having a reputation for being at the forefront of green innovation in the waste, recycling and resource recovery sectors.

In 2003 South Australians were diverting around 60 per cent of materials from landfill. This has been dramatically improved, with South Australians now diverting around 80 per cent of all waste generated.

Our legacy of achievements through Zero Waste SA provides a sound foundation on which to tackle the increasingly challenging and disruptive times we live in.

Partnerships and collaboration remain vital for the effective delivery of this business plan and, in doing so, ensure that we meet the State Government's objectives for economic growth and positive environmental change.

A handwritten signature in black ink, appearing to read 'Kevin McGuinness', is centered on a light gray rectangular background.

Kevin McGuinness
Presiding Member, Board of Green Industries SA

Key objectives, priorities and future directions

Key objective 1: Promoting innovation and business activity in the waste management, resource recovery and green industry sectors



INFRASTRUCTURE INVESTMENT AND INNOVATION

South Australia's waste sector requires significant investment in new and additional infrastructure to deal with waste generated in the State in the future. Investing in infrastructure stimulates economic growth and supports the goals in *South Australia's Waste Strategy 2015-20*. Innovation in resource efficiency has potential to generate significant cost savings and productivity improvements throughout the economy.



CIRCULAR ECONOMY

Developing new business models to enable the circular economy has potential to create jobs and reduce greenhouse gases. It is a way of creating a self-sustaining system driven by renewable energy and keeping material resources in use for as long as possible.



COLLABORATIVE ECONOMY

Collaborative systems of consumption and production target the 'avoid' part of the waste hierarchy where 'avoid' means not needing to consume resources. Green Industries SA continues to lead through advocacy, engagement and www.sharensave.com.au an open source platform which encourages community and individual sharing of resources.

Key objective 2: Promoting waste management practices that, as far as possible, eliminate waste or its consignment to landfill



BUSINESS ASSISTANCE

Working with industry and business to deliver practical advice and solutions across industry sectors and regions to build capacity, boost productivity, and develop business cases for sustainable change. Target organisations include South Australian businesses, industry associations, business networks, and regional business groups.



DISASTER WASTE MANAGEMENT

Building capacity within individuals and organisations through contingency planning to improve disaster response and recovery activities, provide local employment following the disaster and deliver recycled products to rebuild infrastructure in affected communities.

Future directions

Beyond the three-year outlook of this business plan, Green Industries SA will continue to evolve in response to the economic challenges facing South Australia as it strives to maintain an exemplar standard of leadership in waste management and resource recovery.

Its future directions are reflected in Green Industries SA's *Strategic Plan 2017-2022* which sets out three broad areas of focus: green industry development; the circular economy; and supporting commercialisation and investment (see Table 1 overleaf).

The integrated model which has underpinned the agency's success to date – combining long term strategic planning; regulation; collaboration; a market focus and evidence-based policy – will have a broader application in the newer areas of green industry development and the circular economy.

The circular economy will be a focal point for collaborative research and work undertaken to identify where the new jobs are and the new business models. Green Industries SA will act as a catalyst to stimulate investment in these new industries.

Investment will also have an increased emphasis – whether as an investor or an advisor: The agency will be seen as a global leader, export-oriented, investing in education, innovation, research and development and developing new business models to meet global demand.

Newer areas of investment could support initiatives which enable energy efficiencies and greenhouse gas savings from the application of new technologies.

In five years' time an estimated 500 new jobs will have been created in the waste and resource recovery sector. The recycling rate is expected to be more than 85%.

South Australia's waste management and resource recovery infrastructure will be fully developed – as guided by the State's Waste Infrastructure Plan – and supporting a resource efficient circular economy.

New infrastructure will include permanent facilities for hazardous waste collection and community-based facilities such as maker spaces, fab labs and activities associated with new industries linked to the circular economy.

It can be expected that with the 'low hanging fruit' harvested, commercial solutions for difficult and problematic waste streams such as CCA-treated timber posts will have been developed.

We can also expect that Extended Producer Responsibility for all e-waste, hazardous wastes, tyres, paint and oil and gas bottles will have been completed.

Metropolitan food waste collections will be universally systematised for both households and commercial premises.

Resource efficiency will be part of the normal way of doing business – awareness increased and uniform and centralised recycling education under the *Recycle Right*[®] brand.

These are some of the directions that will shape the agency's work and be reflected in future business plans. The agency's track record for measuring its performance and delivering outcomes means that it is operating on a sound basis to realise this future.

Table 1 Green Industries SA Strategic goals 2017-18

	Strategic goal	Business Plan
Green industry development	Green Industries SA has scoped and defined the nature of its support for South Australia's green industry.	Benchmarking the green industry sector
	A new strategy for state-wide engagement on recycling education has been developed.	Local Government Program
	Infrastructure funding is strategically linked to <i>South Australia's Waste and Resource Recovery Infrastructure Plan</i> and the Circular Economy.	Infrastructure Grants Program Market Development Grants Program
	Knowledge transfer and direct assistance from Green Industries SA supports development of efficient and more competitive businesses.	Business Sustainability Program South Australian Government Trade Waste Initiative
	Data capture and analysis is available to inform the industry and Green Industries SA interventions.	Waste audits and recycling activity study Zero Waste Environment Use System
	Green Industries SA's assistance continues to support the waste and recycling reform processes.	Waste strategy and policy
Circular economy	Green Industries SA fully establishes itself as a focal point for research around the Circular Economy, enabling collaboration with industry, universities and international partners.	Circular Economy policy and implementation
	Circular Economy principles remain central to Green Industries SA's approach towards industry capacity building for resource-efficiency.	Business Sustainability Program
	Identification of new systems to enable reuse, recycling and recovery of specific problematic wastes is undertaken and solutions proposed.	Innovative solutions for problematic wastes
	Newly developed infrastructure enables more creative business development and entrepreneurship opportunities have been developed.	Shared Spaces Infrastructure Grants Program
Supporting commercialisation and investment	Green Industries SA understands and examines the potential for commercialising its own Intellectual Property.	Export opportunities and international engagement and development
	Emerging and innovative technologies for investment are identified.	Innovyz commercialisation of innovation – loan scheme
	Training courses for the Indian and Australian markets are developed and piloted with a view to implementation.	Circular economy policy and implementation (including training courses)
	Solutions for problematic are identified for further development.	Innovative solutions for problematic wastes

Key objective 1: Promoting innovation and business activity in the waste management, resource recovery and green industry sectors

INFRASTRUCTURE INVESTMENT AND INNOVATION

Infrastructure Grants Program

South Australia's Waste Strategy 2015-20 has a long term strategic objective of increasing and maintaining the capacity of South Australia's recycling systems and reprocessing infrastructure. It recognises that continuing and significant investment is needed to enable South Australia to deal with its waste. Benefits resulting from resource recovery infrastructure investment include avoided landfill costs, reduced use of virgin materials, energy, water and greenhouse gases and economic development. The Infrastructure Grants Program assists private sector, local government and not-for-profit organisations to invest in infrastructure and provide innovative approaches towards increasing the recovery of resources and reduce the amount of waste sent to landfill each year. Projects are required to demonstrate economic, environmental and social benefits.

The **Shared Spaces Infrastructure Grants Program** supports the development of shared fabrication spaces which are open access workshops that address the upper part of the waste hierarchy. These spaces do this by promoting a shift in the materials life cycle towards a circular economy through innovative approaches that deliver economic, environmental and social benefits.

The **Market Development Grants Program** aims to stimulate an increase in the quality and market demand for recyclable materials and recycled content products; create market opportunities for new, sustainable products made from recycled materials; expand market-related activities for existing recycled-content products, and improve the quality and supply of waste feedstock used in manufacturing recycled-content products and improve market confidence in the recycled materials and recycled-content products.

Budget

2017-18	2018-19	2019-20
\$2,140,795	\$3,359,000	\$3,268,000

Local Government Program

Kerbside Performance Plus (Food Organics) Incentives Program

The Kerbside Performance Plus (Food Organics) Incentives Program encourages councils to implement systems which assist with the diversion of food waste from landfill, the biggest component of household residual kerbside waste. Councils receive a subsidy for the cost of bench-top containers, compostable bags and production of householder education material. Landfilled food waste generates methane which is a powerful greenhouse gas with a global warming potential 21 times greater than the same amount of CO₂, contributing significantly to global climate change. Blending food scraps with kerbside collected green organic material improves the quality and nutrient value of the processed compost.

Since 2010, some 150,000 households have introduced food waste recycling systems with the support of funding through this program. In 2017-18 funding will be provided to 10 local government organisations to further encourage food waste recycling. Additional marketing support to improve knowledge and correct recycling practices will be provided through the 'Good to Go' suite of branded materials which includes advertising, flyers, calendars and pull up banners.

Recycle Right® household education program

The Recycle Right® householder education program addresses long-standing issues the recycling industry has faced with householders putting incorrect items in kerbside-collected recycling bins. The Recycle Right® program has evolved into a recognisable and valued educational program which uses the most up to date social marketing techniques to engage with waste educators, council staff and elected members and the community

Funding support will be provided to local government organisations to implement Recycle Right® branded educational program using resources such as calendars, banners for shopping centres and council offices. Site visits for council staff and elected members delivered by KESAB *environmental solutions* will also be offered.

Retail precinct pilot of compostable bags

A major barrier impacting on the widespread takeup of household food waste systems is the cost of compostable bags used to line bench top caddies. Subsidies offered to local government through the Kerbside Performance Plus (Food Organics) Incentives Program offset some of these costs.

The City of Holdfast Bay will pilot the use of compostable bags distributed through a local retailer/s. This could eliminate the need for the separate distribution of compostable bags through councils and potentially encourage the local manufacture of the bags. The pilot will involve stakeholder consultation, pre- and post pilot bin inspections, educational material and supplying compostable bags.

Quantifying the economic benefits of food waste recycling measures in South Australia

An economic analysis of the potential economic benefits resulting from food waste recycling will cover a range of measures such as household food waste incentives, legislating compostable bags for retail fresh produce and commercial food waste incentives. An analysis of the greenhouse benefits will also be considered as part of the project.

Budget

2017-18	2018-19	2019-20
\$1,461,705	\$3,835,000	\$4,371,000

Regional Implementation Program

The Regional Implementation Grant Program provided funding and assistance for: infrastructure investment for local government and industry; the development and update of regional waste management plans and strategies; and identifying and implementing innovative local solutions. It has been replaced by the Industry Infrastructure Program. A carryover of funds in 2017-18 allows for the completion of a funding agreement with Alexandrina Council for the redevelopment of a transfer station.

Budget

2017-18	2018-19	2019-20
\$55,000	-	-

Innovative solutions for problematic wastes

There are many problematic wastes which require the development of innovative solutions, particularly those that relate to council waste management interests and services and those of their ratepayers.

In 2017-18 Green Industries SA will examine the potential inclusion of new materials in the recycling stream through kerbside collections such as flexible plastics where householders put plastic bags and other flexible plastic – such as bread packaging and cling wrap – into the recycling bin.

Other materials which could be examined include batteries, which are placed in specially marked or coloured bags for easy identification and removal in recycling centres, and clothing, for example, by having a special day for collection once every three months using the recycling bin.

In addition, work will be undertaken to examine and contribute to solutions for chromated copper arsenate (CCA) treated timber and some plastics such as polystyrene, microbeads and micro plastics. Other problematic wastes include more accessible public drop off facilities, for both hazardous wastes and other unwanted goods such as gas cylinders, furniture, and mattresses.

Budget

2017-18	2018-19	2019-20
\$278,000	\$332,000	\$332,000

Commercialising innovation – loan scheme

Investment in the rapid commercialisation of innovative ideas in the waste and resource recovery sector will help to keep South Australia at the forefront of green innovation in the waste, recycling and resource recovery sectors. In 2016-17 Green Industries SA provided a loan over five years to Innovyz, a South Australian-based company that commercialises research and related innovations, to enable it to provide a nine-month, fast-tracked business development program. Innovyz has identified the waste and recycling sector as one with high potential for the development of new technologies and systems that would have global implications.

A key feature of the program is Innovyz' ability to attract business mentors with significant international expertise in the commercialisation of innovative ideas. The Innovyz program started in April 2017 and will conclude in December 2017, with successful companies launched into world markets.

Budget

2017-18	2018-19	2019-20
\$74,000	\$820,000	\$570,000

NEW ECONOMIES

Circular economy (including training programs)

Gaining attention internationally, a circular economy is framework which presents an alternative to the wasteful traditional linear economy (make, use, dispose). The circular economy is a self-sustaining system driven by renewable energy and keeping material resources in use for as long as possible, it extracts the maximum value from these whilst in use, then recovers and regenerates products and materials at the end of each service life.

It builds upon the 'reduce, reuse, recycle' rungs of the waste hierarchy that has been the cornerstone of waste management policy globally and a fundamental legislative and strategy framework for Green Industries SA. The concept is included as a guiding principle in the *Green Industries SA Act 2004*. Formalising a future circular economy model for the State would help to build upon current policy initiatives and activities designed to reduce waste, improve material and energy efficiency, and decrease greenhouse gas emissions. Further, the potential benefits of a circular economy align closely with other State goals and economic priorities such as the stimulation of employment and resilient local economies, and the development of a low carbon economy.

Green Industries SA has commissioned a report which quantifies the potential benefits of a circular economy for South Australia. The report evaluates the potential employment and greenhouse gas emissions benefits that could be created under key assumptions relating to various aspects of a more circular economy. It provides initial insights into how South Australia could create jobs and reduce carbon emissions in an innovative and sustainable way. Green Industries SA will undertake detailed investigations, advocate for increased understanding and encourage support for the circular economy in South Australia. It will also identify key sectors, materials and regions which would benefit from the circular economy and seek to support practical consideration and actions. The agency will continue to assist organisations wanting to learn more about resource efficiency and industrial symbiosis whereby one organisation's waste is a useful and valuable input to another organisation.

Some of this work will be undertaken in regional areas including the South-East of South Australia where a program adviser is currently located. Working across diverse sectors and with the assistance of industry associations, opportunities are investigated for higher value uses of waste including alternative uses of waste such as a new product, input for another organisation's production processes, on-site energy production, or use as an on-site alternative fuel source.

Leadership training program in the Circular Economy

Opportunities are emerging for South Australia to be a training destination for overseas practitioners, whether these are in behaviour change or systems design and deployment, or alternative technology policy. In 2017-18, the agency will continue its work to develop short training courses for international and Australian participants to study circular economy, resource efficiency and waste management policies and practices in South Australia. Proposals will be sought from tertiary institutions and other training providers to design, deliver, market and evaluate a pilot course/s for national and international markets.

Budget

2017-18	2018-19	2019-20
\$509,000	\$451,000	\$454,000

Collaborative consumption and sharing economy¹ - Share N Save

'Share N Save' is a collaborative economy initiative which, since its development in 2013, has positioned Green Industries SA as a first mover internationally in the sharing and collaborative economy fields. It is one of the few governments to have an established presence in this area. Share N Save is an interactive website which identifies activities such as food swaps, community gardens, Men's Sheds, toy and tool lending libraries, co-working spaces and other resources. The website is at: www.shareNsave.com.au www.facebook.com/shareNsave.

In response to demand from users a new feature for the web platform allows for 'one to one' sharing, mapping both *offers* ('I have') and *needs* ('I want') from the community.

This further assists South Australians to reduce household financial pressures through sharing and increases the use of resources to avoid consumption and associated waste. In another first, the software platform has been released as an Open Source product, at <https://github.com/ShareNSave>. This allows anyone to collaborate on improvements to the software, contributing code or design to continually improve the product.

During 2017-18, community engagement with users and groups will be undertaken to:

- identify opportunities where the platform could be used to enable local industry and business to benefit from collaborative economy activities such as industrial symbiosis, with a focus on the health and the tertiary sectors
- support the development and promotion of collaborative production approaches such as maker and co-working spaces

¹ The 'sharing economy' (also known as 'collaborative consumption' or 'peer to peer' economy) is a global movement where people use web and mobile technology to barter, lend, swap and otherwise share to create social benefit within a community. This sharing approach helps people save time, money and resources by meeting their needs in collaboration with others.

- inform and identify sharing opportunities in the community which can build on Share N Save
- continue sponsoring national and international thought leaders to visit South Australia to engage our stakeholders and the community on the co-operative and collaborative economy
- identify opportunities for partnerships such as that with the Natural Resource Management Board in the Department of Environment, Water and Natural Resources for further expansion of the platform.

Budget

2017-18	2018-19	2019-20
\$165,800	\$142,000	\$143,000

COMMERCIALISING INTELLECTUAL PROPERTY

Export opportunities and international policies

Internationally, Green Industries SA has established a reputation for leadership in waste management and resource recovery. There are opportunities for this State’s businesses to export their expertise and develop pragmatic solutions that are fit for purpose in other jurisdictions.

The State Government has prioritised India and China as target markets which are supported by detailed engagement strategies. Green Industries SA is invited to advocate on behalf of South Australia’s capability in waste management and resource recovery through in-bound and out-bound trade and investment missions.

In 2017-18 the agency will advance its activities in India following a market assessment of opportunities for training programs undertaken by Austrade (refer to *Development of Training Programs* below). Austrade has highlighted the need for training and certification in the waste management sector, particularly as it is an important area for both the national and State Governments. India generates about 60 million tonnes of waste every year. Ten million tonnes generated in just the metropolitan cities: Delhi, Mumbai, Chennai, Hyderabad, Bangalore and Kolkata.

In 2017-18 the agency’s work in China will be consolidated with a Memorandum of Understanding between the Department of Environmental Protection of Shandong Province and Green Industries SA and the Department of Environment, Water and Natural Resources. An in-bound mission in September 2017 is expected to lay the ground work for further engagement with potential interest in training and other targeted recycling opportunities. Marketing opportunities for South Australian companies in the waste sector in Indonesia, Malaysia and Singapore will be considered in 2017-18.

Budget

2017-18	2018-19	2019-20
\$105,000	\$79,000	\$79,000

STRATEGIES, POLICIES AND NATIONAL ISSUES

Waste strategy and green industry policy

South Australia's Waste Strategy provides a framework to assist South Australia meet its priorities for economic prosperity and community well-being. Its three objectives are:

- a resource efficient economy where the best or full value is secured from products and materials produced, consumed and recovered across the State
- a stable and efficient market for investors through a clear policy framework providing a solid platform for investment decisions
- a culture enabling the South Australian community, business and institutions to continue and strengthen their role in implementing zero waste strategies and programs locally, nationally and internationally.

In 2017-18 the following projects and activities will be undertaken:

- Contribute to the development and implementation of relevant policies and initiatives such as contaminated soil, energy from waste and improved waste management systems for multi-unit dwellings and mixed use developments.
- Support the State Government's work to transition to a low carbon economy and making Adelaide, South Australia's capital city, and the world's first carbon neutral city through the establishment of a carbon neutral 'Adelaide Green Zone' by advising on initiatives relating to waste management, recycling and resource recovery.
- Start strategy development for growing green industries in South Australia that identifies priority sectors for growth, strategies and measurement indicators.
- Advocate for new product stewardship approaches for waste products and materials that will in turn provide market opportunities for South Australian businesses.
- Advocate for better national product stewardship systems for tackling problematic wastes, or products as well as acting independently in the State's interests. This will also support materials banned from landfill under the *Environment Protection (Waste to Resources) Policy 2010*.

Planning for waste infrastructure

The State-wide Waste and Resource Recovery Infrastructure plan developed in 2016-17 identifies infrastructure investment over the next 30 years. It was developed in response to a critical finding of the *Review of South Australia's Waste Strategy 2011-15* which identified waste and resource recovery infrastructure planning and investment as important future needs to support industry development (particularly to retain South Australia's position on the global platform where it currently stands high) and economic growth in the State. In 2017-18 the agency will have regard to the Plan by implementing its various programs and activities alongside considering other types of infrastructure that target the higher re-use and avoidance rungs of the waste hierarchy, such as repair and refurbishment activities and or maker spaces.

Benchmarking Green Industries

Green Industries SA is undertaking a benchmarking study to identify the scope and scale of industry sectors and business activities which fall within the definition of 'green industry'. This project responds to the State Government's policy goals to realise the full potential of the Green Economy and help to keep South Australia at the forefront of green innovation.

It aims to gain a better understanding of green industries in South Australia, the relevant industry sectors and companies which fall within the definition, its size and to identify barriers and opportunities for its growth. This project is being undertaken in stages. In 2016-17, substantial internal research and analysis was undertaken to define green industry for the project and to identify data sources in addition to liaising with relevant government agencies and industry associations to collect, validate and compile data.

The next stage involves collaboration with the Australian Bureau of Statistics (ABS) to identify various economic variables of green industry in the State, including turnover, employment, exports and research and development. In 2017-18 this study will be completed and it will help to inform the development of strategies for growing green industries in South Australia. The project is first of its kind for the ABS to collaborate and use information held within its combined administrative data for a State Government project.

Budget

2017-18	2018-19	2019-20
\$407,000	\$441,000	\$482,000

Key objective 2: Promoting waste management practices that, as far as possible, eliminate waste or its consignment to landfill

BUSINESS ASSISTANCE

Business Sustainability Program

The Business Sustainability Program helps businesses understand, develop and implement strategies to improve resource efficiency and waste management. This helps to build capacity, boost productivity, and develop business cases for sustainable change.

Target organisations include South Australian businesses, industry associations, business networks, and regional business groups. In-house support is provided to assist with projects that are commercially-focussed and likely to lead to environmental improvements. Financial assistance is available to individual businesses and industry groups requiring specialist expertise in the areas of resource efficiency (materials, energy and water), waste management and lean production. The services and grants offered through this program have been developed following consultation with other government agencies, key industry sector groups and previous clients. Key elements include:

- Support to gain a greater understanding of the potential for cost savings, productivity improvements and improved environmental performance through better resource efficiency (materials, energy, water), waste management, and lean production.
- Grants for individual businesses to engage third party technical advisers for resource efficiency and productivity assessments which identify and prioritise opportunities for improvements. Additional financial support is offered for selected implementation activities identified through an assessment.
- Grants for projects that encourage behavioural and cultural change (through education and mentoring; recognition and awards; pilot program trials and testing) to reduce waste and/or improve resource efficiency within an industry sector, geographical region, or business cluster.
- Financial and in-house support to identify and implement strategies based on waste management hierarchy principles, particularly solid waste avoidance and reduction; this includes support for waste assessments, strategic planning, implementation activities and trials, and establishing systems and standards for improved solid waste management.
- Showcasing environmental achievements by producing case studies to acknowledge industry leaders and exemplar performance in business assistance program areas.

Budget

2017-18	2018-19	2019-20
\$428,500	\$494,000	\$746,000

South Australian Government Trade Waste Initiative

This program aims to help businesses improve the way trade waste is managed (focusing on quality and quantity), reduce operating costs and increase productivity by improving the way materials, energy and water are used. It targets South Australian businesses with high trade waste volume and load, specifically the food and beverage industry.

Resource Productivity Assessments

Eligible business can apply for a grant to cover up to 50% (to a maximum of \$10,000 GST exclusive) towards the cost of a resource productivity assessment that will identify opportunities to reduce trade waste impacts through efficiency gains and better use of waste, energy, materials and water.

Businesses must engage a supplier from the Preferred Supplier List to complete a resource productivity assessment and the assessment can form the basis of a business case for implementation.

Budget

2017-18	2018-19	2019-20
\$339,000	\$710,000	-

Food and Beverage Implementation Grants

Grants will be offered to eligible SA Water trade waste customers in the food and beverage industry to support implementation activities that are expected to lead to improvements in trade waste management (reductions in volume and/or improvement to water quality). Eligible businesses can apply for a grant to cover up to 50% of implementation costs, with grant funding capped at \$300,000 (GST exclusive) per business. This program supports the South Australian Government's economic priority, 'Premium food and wine produced in our clean environment and exported to the world'.

Budget

2017-18	2018-19	2019-20
\$822,300	\$1,811,000	\$1,444,000

Technical Support and Communications

A qualified trade waste specialist has been appointed to advise businesses on trade waste improvement opportunities and provide technical expertise for enquiries and funding requests.

Budget

2017-18	2018-19	2019-20
\$132,000	\$187,000	-

KNOWLEDGE MANAGEMENT

Waste audits and recycling activities study

Green Industries SA is the custodian of data which measures the State's progress against indicators in *South Australia's Strategic Plan 2011*, *South Australia's Waste Strategy 2015-2020* and relative to other jurisdictions. Data is also used to guide investment opportunities and evaluate programs and market interventions, for example the results of innovation grants, overseas investment in South Australia or export outcomes from the sector.

South Australia's Strategic Plan 2011 (SASP) has a target of reducing waste to landfill by 35% by 2020 against a 2002-03 baseline. Since 2003-04, the agency has reviewed recycling activity in South Australia to guide its activities and to monitor progress of the State against targets in the SASP and South Australia's Waste Strategy.

Data is collected from recyclers and re-processors to provide stream-by-stream and waste type recycling tonnages. Previous surveys have shown a steady increase in recycling.

The 2017-18 survey will capture data obtained for the 2016-17 financial year and form a major part of South Australia's submission to the Australian Government for inclusion in the national report on waste.

Budget

2017-18	2018-19	2019-20
\$126,000	\$126,000	\$127,000

Zero Waste Environment User System (ZEUS)

ZEUS is a web-based system developed by Green Industries SA to facilitate the monitoring, analysis and reporting of waste reduction targets in South Australia's Waste Strategy. ZEUS collects information on: recycling activity; waste (tonnes) to landfill by waste stream (municipal solid waste, commercial and industrial waste, and construction and demolition waste); litter; economic and environmental costs and benefit; infrastructure needs; and areas needing regulatory underpinning.

ZEUS also captures corporate data including contract information, agency publications and industry and stakeholder contacts. Councils can use ZEUS at no cost, with free training provided by the agency.

In 2017-18 Green Industries SA will collaborate with the Environment Protection Authority to identify opportunities for gathering additional data to support waste reforms.

Budget

2017-18	2018-19	2019-20
\$193,500	\$178,000	\$180,000

HOUSEHOLD HAZARDOUS WASTE

Household hazardous waste and farm chemical collection program

South Australians are provided with a responsible safe collection and disposal service for unwanted chemicals through the Hazardous Waste Depot at Dry Creek. The facility is invaluable to the South Australian community.

Collections are free and open to all householders. The depot is open between 9am and 12 noon on the first Tuesday of every month.

During 2017-18 and in line with South Australia's Waste Strategy, Green Industries SA will continue to fund a household and farm hazardous waste program including mobile events held in partnership with local government and report the results. It will educate the community about proper household hazardous waste management practices and encourage the recovery and treatment of oils, solvents and other valuable materials for reuse.

The agency will also continue to advocate for investment in expanded facilities for the disposal of household hazardous waste and re-examine the feasibility of developing permanent collection facilities.

Budget

2017-18	2018-19	2019-20
\$420,500	\$936,000	\$652,000

BackLight Program

The Backlight program, run in conjunction with Green Industries SA and Mitre10, Banner and True Value hardware stores allows South Australians to recycle all domestic light globes at no cost. The globes are recycled by Chemsal Resource Recovery.

The aluminium and mercury is used to make new light globes, the phosphor powder is used in fertilizer, and the glass is re-used for a variety of other glass products.

Since the program was launched in 2010, some 279,252 light globes have been collected, equivalent to almost 28,000 kilograms of light globes being diverted from landfill and responsibly recycled.

Budget

2017-18	2018-19	2019-20
\$78,000	\$78,000	\$78,000

PARTNERSHIPS

Local Government Association of South Australia

Local government plans and manages municipal systems for solid waste, recyclables and green organics. It is central to planning infrastructure needs, including industrial waste needs where municipal and industrial facilities combine.

Green Industries SA collaborates with the Local Government Association of South Australia to develop a strategic and co-ordinated approach towards regional and metropolitan planning and investment decisions to ensure optimal outcomes for the community. This approach has reaped tangible results in previous years through a systematic and prioritised approach towards improving regional waste management planning and operations.

In 2017-18, the partnership with the Local Government Association of South Australia will support the implementation of South Australia's Waste Strategy and policy goals for the green economy in relation to the following areas:

- coordinating and advocating for national solutions to problematic waste such as packaging and hazardous waste
- supporting the implementation of the *Environment Protection (Waste to Resources) Policy 2010*
- facilitating local government discussion of key issues of relevance to the agency.

Budget

2017-18	2018-19	2019-20
\$35,000	\$35,000	\$35,000

Waste Management Association of Australia

The Waste Management Association of Australia (WMAA) SA Branch represents and advocates its members' issues. South Australia's Waste Strategy recognises that a partnership with the WMAA provides valuable input into decision-making processes. This continued partnership will help WMAA link the industry with Green Industries SA and support WMAA to:

- hold events to improve industry knowledge and expertise, and provide networking opportunities
- administer working groups and distribute information to members regarding the transition to and establishment of Green Industries SA.

Budget

2017-18	2018-19	2019-20
\$39,013	\$39,538	\$39,538

COMMUNITY EDUCATION

KESAB *environmental solutions*

Keep South Australia Beautiful environmental solutions (KESAB) has a valued role as a partner delivering programs to schools and households on litter measurement, reduction, education and awareness under a three-year service level agreement.

Litter data and research and branded litter monitoring

KESAB has been monitoring litter incidence at 151 sites across the State on a quarterly basis since 1998, providing the best continuous data set for measuring litter incidence in Australia. This program helps Green Industries SA to maintain effective litter data on trends, item types and locations, and develop community education and awareness campaigns. Data is stored and analysed in ZEUS. In 2017-18 KESAB will conduct two counts at 151 sites throughout South Australia in May and November and maintain a comprehensive database and trend line of litter streams in South Australia. In addition, it will:

- develop litter reduction strategies and resources based on litter count data
- regularly report to, engage and inform stakeholders
- continue ongoing public awareness and media management
- independently audit count procedure and results annually.

Budget

2017-18	2018-19	2019-20
\$53,000	\$53,000	\$53,000

Community litter, education, resources and campaigns

Extensive social research into community behaviour, litter and recycling highlights the need for new community and public place litter resources and strategies.

The research findings identify targets and opportunities to focus on key issues and community sector groups. This enables resources and strategy options to be developed in collaboration with partners and stakeholders. The program aims to develop and regularly update a suite of contemporary litter awareness and information materials (brochures, posters, signs, some in languages other than English), and make these available to councils, schools, community groups and stakeholders to increase awareness of litter disposal.

In 2017-18 KESAB will:

- develop and implement litter awareness strategies in collaboration with sectors identified through the Litter Data and Branded Litter Monitoring programs and through stakeholder feedback
- monitor new packaging types and report on their impacts
- develop and disseminate information and resources to stakeholders for implementation.

Budget

2017-18	2018-19	2019-20
\$68,000	\$68,000	\$68,000

Wipe Out Waste schools program

The Wipe Out Waste (WOW) program provides training and resources for teachers and helps drive positive change in schools and preschools. WOW was developed on behalf of Green Industries SA by KESAB, the Department of Environment, Water and Natural Resources, and the Department for Education and Child Development.

WOW is an integrated comprehensive waste education program supported by curriculum resources and teacher training. It is the first waste education program in Australia to span preschool through to primary and secondary schools. WOW resources enable teachers and school staff to gain an understanding of waste, litter, recycling, resource recovery and related environmental issues as part of the curriculum. WOW is a fundamental adjunct to the Australian Sustainable Schools Initiative.

Through this program KESAB will:

- develop age-appropriate resources as needed
- identify community, council and industry linkages and partnerships for each participating school
- encourage and support the reduction of waste in sites
- provide regular reports to stakeholders.

Budget

2017-18	2018-19	2019-20
\$256,000	\$257,000	\$257,000

Recycle Right® 1300 telephone information line

The Recycle Right® 1300 recycling telephone hotline is operation by KESAB *environmental solutions* to enable provision of a responsive and accurate service to the community seeking information on options for recycling a wide range of information. KESAB is also responsible for ensuring the Recycle Right® database delivered through a new dedicated website is updated at least monthly to reflect changes in council systems, options and legislative and industry changes.

Budget

2017-18	2018-19	2019-20
\$55,000	\$44,000	\$44,000

DISASTER WASTE MANAGEMENT

Disaster waste management plan and guidelines development

In 2017-18, the agency will complete the development of a Disaster Waste Management Plan to sit under the authority of the State Emergency Management Plan as well as the associated practical Guidelines and Implementation Plan.

The Review of *South Australia's Waste Strategy 2011-2015* identified disaster management waste planning as an important area of policy development.

In response to this finding, in 2015-16, with Australian Government funding support, the agency completed a Stage 1 Disaster Waste management Scoping Study.

This Study reviewed current disaster waste management practices and the associated regulatory framework in South Australia, and developed waste profiles for selected flood, severe storm, earthquake and bushfire scenarios.

It also identified skills required for personnel, equipment needs, selection criteria for temporary debris storage sites and developed a disaster waste management contingency planning methodology.

The Study also found that to date, there is no framework for managing disaster waste in South Australia and disaster waste management practices have been largely reactive with little pre-planning.

In 2016-17, the agency successfully applied for funding under the State Significant Project Category of the Australian Government Natural Disaster Resilience Program and commenced Stage 2 work.

Budget

2017-18	2018-19	2019-20
\$275,000	\$130,000	\$131,000

CORPORATE SUPPORT

Communications, media, marketing and website

Green Industries SA’s communications, media and marketing activities target industry, government and community. Communications aim to raise awareness of the agency’s program and activities. The main channels for communications include www.greenindustries.sa.gov.au media announcements, events held in partnership with key stakeholder, video and online case studies and social media.

Budget

2017-18	2018-19	2019-20
\$114,000	\$97,000	\$97,000

Board support

Green Industries SA provides policy and administrative support to the Board of Green Industries SA and committees approved by the Board (for example, the Governance Committee). The Board meets approximately 10 times a year and members (excluding public servants) receive remuneration. This budget item is for Board meeting operational costs, training and staff salaries and on-costs allocated to support the Board function.

Budget

2017-18	2018-19	2019-20
\$283,000	\$281,000	\$285,000

Corporate services

This budget items provides administration support to the organisation, including work health and safety, rental office lease payments, payroll, insurance, fleet management, telecommunications and purchasing, Board support and management of the Green Industry Fund.

Budget

2017-18	2018-19	2019-20
\$870,887	\$889,462	\$791,462

Funding provisions

Funding for Green Industries SA's programs comes from the solid waste component of the waste depot levy, collected under the Fees and Levies regulations of the *Environment Protection Act 1993*. The Environment Protection Authority collects the levy of which 50% is paid into the Green Industry Fund to be used by Green Industries SA for its programs. The expenditure authority for the 2017-18 business plan is \$23.577 million which includes a carryover of \$91,000 and new climate change initiatives of \$4.75 million approved by the Department of Treasury and Finance on 1 December 2017.

Department of Treasury and Finance Approved Revenue, Expenditure and Cash balance as at 12 February 2018

	2017-18 (\$)	2018-19 (\$)	2019-20 (\$)
Revenue	33,602,000	39,056,000	39,944,000
50% of waste levy payments from Environment Protection Authority	31,549,000	36,020,000	36,706,000
Revenue received from South Australian Government Departments	218,000	0	0
Interest on deposits	1,800,000	3,000,000	3,200,000
Interest on Commercialising Innovation – loan scheme	35,000	36,000	38,000
Currently approved expenditure authority	23,577,000	21,900,000	16,929,000
Cash held 1 July 2017, opening balance	118,726,000	135,385,000	158,392,000
Net movement in cash held	16,659,000	23,007,000	25,536,000
Cash held 30 June 2018 Closing Balance	135,385,000	158,392,000	183,928,000

Authority to make variations to the business plan within five per cent of the budget

The Minister for Sustainability, Environment and Conservation has authorised the Board of Green Industries SA to make variations to this business plan within five per cent of the specified budget.

This will ensure that minor changes can be made quickly in response to issues as these arise.

The Board will advise the Minister of the details of any variations to the business plan that are made within that five per cent variation limit.

Expenditure

2017-18

2018-19

2019-20

Key objective 1: Promoting innovation and business activity in the waste management, resource recovery and green industry sectors

Infrastructure investment and innovation				
Local Government Program (food waste, household recycling education)	1,461,705	3,835,000	4,371,000	
Industry and Local Government Infrastructure	2,140,000	3,359,000	3,268,000	
Regional Implementation Program	55,000	0	0	
Innovative solutions for problematic wastes	278,000	332,000	332,000	
Commercialising innovation – loan scheme	74,000	750,000	500,000	
Sub-total	4,009,500	8,346,000	8,541,000	
New economies				
Circular economy policy and implementation (including training programs)	509,000	451,000	454,000	
Share N Save and the collaborative economy	165,800	142,000	143,000	
Sub-total	674,800	593,000	597,000	
Commercialising Intellectual Property for export				
Export opportunities and international engagement	105,000	79,000	79,000	
Sub-total	105,000	79,000	79,000	
Strategies, policies and national issue				
Waste strategy and green industry policy	407,000	441,000	482,000	
Sub-total	407,000	441,000	482,000	
TOTAL KEY OBJECTIVE 1	5,196,300	9,459,000	9,699,000	

Key objective 2: Promoting waste management practices that, as far as possible, eliminate waste or its consignment to landfill

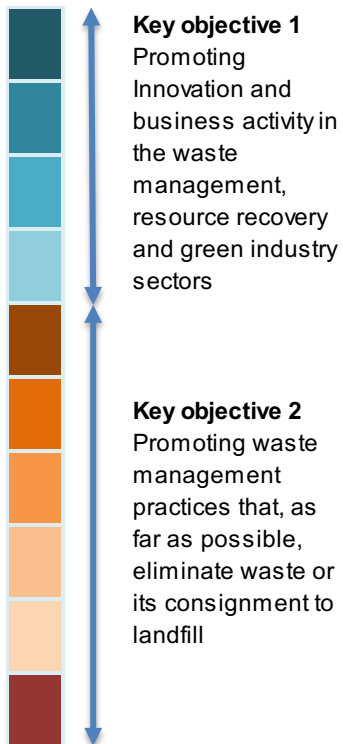
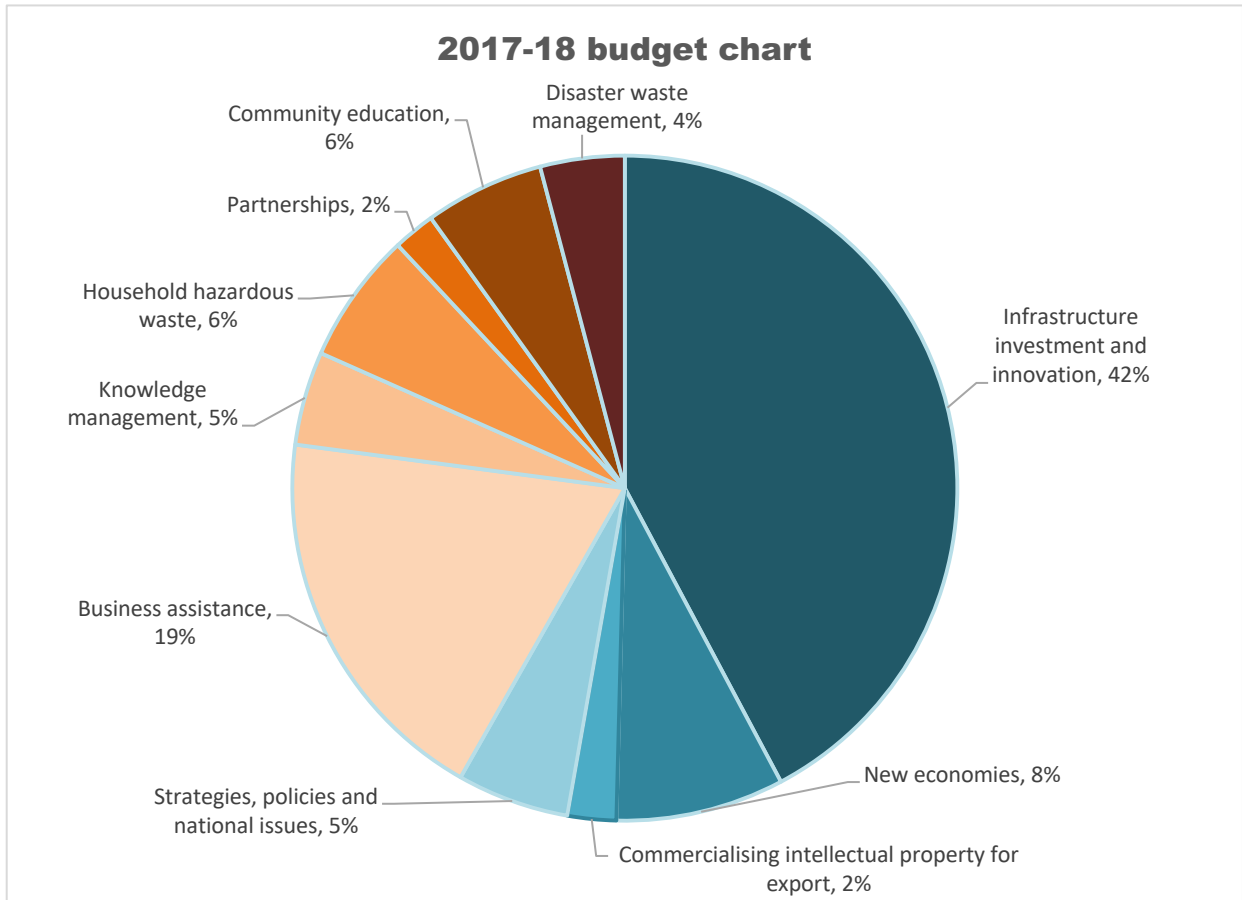
Business assistance				
Business Sustainability Program	428,500	494,000	746,000	
Sub-total	428,500	494,000	746,000	
<i>South Australian Government Trade Waste Initiative</i>				
Resource Productivity Assessments	339,000	710,000	0	
Food and Beverage Implementation Grants	822,300	1,811,000	1,444,000	
Technical support and communications	132,000	187,000	0	
Sub-total	1,293,300	2,708,000	1,444,000	
Knowledge management				
Waste audits and recycling activity study	126,000	126,000	127,000	
Zero Waste Environment User System	193,500	178,000	180,000	
Sub-total	319,500	304,000	307,000	

Expenditure	2017-18	2018-19	2019-20
Household hazardous waste			
Household hazardous waste collections	420,500	936,000	652,000
Backlight	78,000	78,000	78,000
Sub-total	498,500	1,014,000	730,000
Partnerships			
Local Government Association of South Australia	35,000	35,000	35,000
Waste Management Association of Australia (SA Branch)	39,013	39,538	39,538
Sub-total	74,013	74,538	74,538
Community education (KESAB environmental solutions)			
Litter data and research and branded litter monitoring	53,000	53,000	53,000
Community litter education, resources and campaigns	68,000	68,000	68,000
Wipe Out Waste	256,000	257,000	257,000
Recycle Right®1300 information line and website	55,000	44,000	44,000
Sub-total	432,000	422,000	422,000
Disaster waste management			
Disaster waste management plan and guidelines development	275,000	130,000	131,000
Sub-total	275,000	130,000	131,000
TOTAL OBJECTIVE 2	3,320,813	5,146,538	3,854,538
Corporate support			
Communications, media, marketing and website	114,000	97,000	97,000
Board support	283,000	281,000	285,000
Corporate services	870,887	889,462	791,462
Sub-total	1,267,887	1,267,462	1,173,462
TOTAL CORPORATE SUPPORT	1,267,887	1,267,462	1,173,462
Intra Government transfer			
Climate Change Initiatives approved by the Minister ²	13,792,000	4,985,000	1,160,000
CURRENT INTERNAL BUDGET TOTAL	23,577,000	20,858,000	15,887,000
APPROVED EXPENDITURE AUTHORITY³	23,577,000	21,900,000	16,929,000

²Intra government transfer for climate change projects as determined by the Minister for Sustainability, Environment and Conservation (refer *Green Industries SA Act 2004* s17(5)(b)(i)) and independent of consideration by the Board of Green Industries SA. During 2017-18 the Minister approved the following climate change projects: Carbon Neutral Adelaide Partnership Framework (\$1,042,000 in 2017-18); Climate Knowledge and Innovation Community Australia initiative (\$50,000 in 2017-18); Low Carbon Transport Investment Ridership Strategy (\$7,000,000 in 2017-18 and \$3,000,000 in 2018-19), Carbon Sequestration (\$500,000 in 2017-18 and 2018-19 respectively), Electric Vehicle Charging Infrastructure (\$275,000 in 2017-18), Laneway Battery Demonstration (\$175,000 in 2017-18 and \$325,000 in 2018-19) and Hydrogen Refuelling Station and Fuel Cell Bus Trial (\$4.75 million in 2017-18 and \$1.16 million each year from 2018-19 to 2020-21).

³Includes funding for climate change projects approved by the Department of Treasury and Finance (DTF) and yet to be approved by the Minister.

Budget distribution chart



Note: Intra government transfers for climate change initiatives are excluded.

Appendix 1

South Australia's achievements in waste management and recycling

Landfill data for 2015-16 indicates that South Australia has reduced waste to landfill by 29% since 2002-03, equivalent to 363,000 tonnes of waste. Based on this trend, SA is progressing towards achieving its Target of 35% reduction by 2020. The previous milestone set in the SA Strategic Plan of a 25% waste disposal to landfill reduction from 2002-03 levels by 2014 was surpassed in 2013-14.

Recycling activity data collected for 2015-16 shows that South Australia remains a strong performer in recycling and recovery of resources. The 2015-16 SA Recycling Activity Report (Rawtec) shows that 3.91 million tonnes of materials were diverted from landfill and into recycling in 2015-16 with a diversion rate of 81.5%, the highest reported rate compared with other states and territories in Australia.

In 2015-16, South Australia's resource recovery activities led to estimated savings in:

- greenhouse gas emissions of 1.18 million tonnes of CO₂-e, equating to taking 272,000 cars off the road
- energy savings of about 15,130 Terajoules, equating to 2.7 million barrels of oil
- water savings of about 12,716 Megalitres, equating to 5,090 Olympic sized swimming pools.

The total 'direct' market value of resource recovered materials for South Australia in 2015-16 was estimated to be \$203 million, which is \$52 per tonne of resource recovered on average. Metal, paper and cardboard, and organic waste materials were the major contributors to this resource market value. Metals remained the major contributor (\$64 million), although this is significantly lower than the 2013-14 Metals value of \$141 million as a result of lower commodity prices.

South Australia's total landfill disposal during 2015-16 was 0.890 million tonnes, down 2.7% from 0.914 million tonnes recorded in 2013-14. The decrease in landfill disposal was mostly due to a fall in volumes of standard reporting materials in the Construction and Demolition, and a decrease in Commercial and Industrial materials.

Since 2003-04:

- total reported resource recovery has nearly doubled, from approximately 2 million tonnes to almost 4 million tonnes each year
- the diversion rate has steadily increased from 61.5% to 81.5%.

Appendix 2

South Australian Government's economic priorities

The South Australian Government has also released Economic Priorities for the State: 'South Australia is the place where people and business thrive' with 10 priorities for action. It is anticipated that Green Industries SA will form part of the strategy to meet these priorities, as outlined in the figure below.

The 10 economic priorities are:

- unlocking the full potential of South Australia's resources, energy and renewable assets
- premium food and wine produced in our clean environment and
- exported to the world a globally recognised leader in health research, ageing and related
- services and products
- the knowledge state – attracting a diverse student body and commercialising our research
- South Australia- a growing destination choice for international and domestic travellers growth through innovation
- South Australia – the best place to do business
- Adelaide, the heart of the vibrant state
- promoting South Australia's international connections and engagement
- South Australia's small business have access to capital and global markets.

Green industries SA will form part of the strategy to meet these priorities

as summarised in Figure 1 below.

	<p>Unlocking the full potential of South Australia's resources, energy and renewable assets.</p> <p>Use of recycled materials in remanufacturing. Cleaner production and resource efficiency.</p>	<p>Premium food and wine produced in our clean environment and exported to the world.</p> <p>Cleaner production and Resource efficiency. Hazard reduction.</p>	<p>A globally recognised leader in research, ageing and related services and products.</p> <p>Operational research through collaborative partnerships with universities.</p>	<p>The Knowledge State - attracting a diverse student body and commercialising our research.</p> <p>Research led work attracts international students and global awareness.</p>	<p>South Australia – a growing destination choice for international and domestic travellers.</p> <p>SA is perceived and is clean, free of litter and waste is handled in the most appropriate manner.</p>
GREEN INDUSTRIES SA	<p>Growth through innovation.</p> <p>Innovation grants to specific sectors focussed on resolving problematic issues of potentially global commercial application.</p>	<p>South Australia the best place to do business.</p> <p>Waste and recycling companies and consultancy firms are aligned with the needs of smart businesses, advising on better waste handling, processes and waste reduction initiatives. Commercial economic savings for industry to reduce cost of doing business.</p>	<p>Adelaide the heart of the vibrant state.</p> <p>Best practice waste systems, remanufacturing and other technologies are operating and on show. Strong public support for same.</p>	<p>Promoting South Australia's international connections and engagement.</p> <p>Exporting IP and local technology to China, India and ASEAN countries.</p>	<p>South Australia's small businesses have access to capital and global markets.</p> <p>Introducing local businesses to international investors facilitating capital investment.</p>
GREEN INDUSTRIES SA					

Source: Green Industries SA Consultation Paper