

Business Plan 2018-19



FOREWORD	4
KEY OBJECTIVES, PRIORITIES AND FUTURE DIRECTIONS	6
FUTURE DIRECTIONS.....	7
GREEN INDUSTRIES SA STRATEGIC GOALS BY 2019	8
KEY OBJECTIVE 1: PROMOTING INNOVATION AND BUSINESS ACTIVITY IN THE WASTE MANAGEMENT, RESOURCE RECOVERY AND GREEN INDUSTRY SECTORS	9
INFRASTRUCTURE INVESTMENT AND INNOVATION.....	9
Local Government Program.....	9
Recycling Infrastructure Grants Program - Industry & Local Government	10
Market Development Grants Program.....	11
Transport subsidies for regional councils.....	11
Infrastructure investment loan scheme.....	11
<i>Recycle Right</i> ® household education program.....	12
Innovative solutions for problematic wastes.....	12
COMMERCIALISING INNOVATION.....	13
NEW ECONOMIES	13
Circular Economy (including training programs).....	13
Leadership training program on the Circular Economy.....	14
Collaborative consumption and sharing economy.....	14
COMMERCIALISING INTELLECTUAL PROPERTY.....	15
Export opportunities and international policies.....	15
STRATEGIES, POLICIES AND NATIONAL ISSUES.....	16
Waste strategy and policy.....	16
Benchmarking Green Industries.....	16
KEY OBJECTIVE 2: PROMOTING WASTE MANAGEMENT PRACTICES THAT, AS FAR AS POSSIBLE, ELIMINATE WASTE OR ITS CONSIGNMENT TO LANDFILL	17
Business Enabling.....	17
<i>Business Sustainability Program</i>	17
<i>South Australian Government Trade Waste Initiative</i>	18
KNOWLEDGE MANAGEMENT	19
Waste audits and recycling activities study.....	19
Zero Waste Environment User System (ZEUS).....	20
HOUSEHOLD HAZARDOUS WASTE.....	20
Household hazardous waste and farm chemical collection program	20
BackLight Program.....	21
PARTNERSHIPS	21
Local Government Association of South Australia	21
Waste Management Association of Australia.....	21
COMMUNITY EDUCATION.....	22
KESAB environmental solutions	22
Litter data and research and branded litter monitoring	22
Community litter, education, resources and campaigns	22
Wipe Out Waste schools program.....	22
<i>Recycle Right</i> ® 1300 telephone information line	23
DISASTER WASTE MANAGEMENT	23
Disaster waste management plan and guidelines development.....	23
CORPORATE SUPPORT.....	24

Communications, media, marketing and website	24
Board support	24
Corporate services	24
FUNDING PROVISIONS	25
Department of Treasury and Finance Approved Revenue, Expenditure and Cash balance as at 28 June 2018 .	25
EXPENDITURE	26
BUDGET DISTRIBUTION CHART	28
APPENDIX 1	29
South Australia's achievements in waste management and recycling.....	29

Foreword

This business plan for 2018-19 sets out the programs and activities which support Green Industries SA's vision for South Australia to be internationally recognised as a leader in green industry development, the circular economy and recycling and resource recovery.

It has a focus on measures to build the resilience and capabilities of our local industry through infrastructure investment, market development, education, innovation and procurement.

Prepared at a particularly challenging time with local government and the waste management and recycling industry impacted by from China's National Sword policy, there is consensus among key stakeholders that all levels of government and industry should work together to address the issue in the short, medium and longer-term.

The bans and restrictions on recycled materials by China, one of the world's largest economies, resulting in record low commodity prices for recycled materials is having a detrimental impact on the global, national and local recycling marketplace. Green Industries SA's role as an investor and catalyst for positive change through policy advocacy, has been central to discussions on how the affected sectors can adapt through longer-term structural adjustments to a more sustainable circular economy business model.

Green Industries SA's assistance in response to China's National Sword policy is being delivered in 2018-19 through a \$12.4 million support package¹ which includes a range of measures to enable industry investment in remanufacturing and local re-use, as well as improved sorting and processing to enhance the quality of recovered materials. Measures include:

- Infrastructure grants for local government and industry to maintain and build the capacity of South Australia's recycling systems and reprocessing infrastructure specifically targeting infrastructure for post consumer paper, cardboard, glass and plastics (\$5.8 million).
- A loan scheme to support projects with large capital requirements, which can have an immediate effect to increase local remanufacturing/reprocessing of targeted waste streams and job creation opportunities through construction and ongoing operation (\$5 million).
- Transport subsidies recognising the barrier of high transport costs for recycling in regional areas (\$0.5 million).
- Market development grants to stimulate an increase in the quality and market demand for recyclable materials and recycled content products (\$0.3 million).
- A state-wide Recycle Right® education campaign to maintain the community's faith in the recycling process and help to reduce contamination levels through consistent messages which will ensure better quality recyclable material enters the recycling system (\$0.8 million).

¹ The Minister for Environment and Water effected the Government's decision by directing Green Industries SA to apply the funding as per Section 4(4) and (5) of the *Green Industries SA Act 2004*¹.

Medium and longer term responses will also assist the sector's structural adjustment to a more sustainable circular economy business model. Concurrently, Green Industries SA will advocate for a national and whole of government response in the areas of the circular economy and sustainable/green procurement.

South Australia's Waste and Resource Recovery Plan, the first such plan for the State, developed by Green Industries SA, provides a clear guide for future waste and resource recovery infrastructure needs across the State and to support a resource efficient economy in South Australia.

Investment in innovation, more than ever before, is critical to reinforcing the State's global reputation for exemplar leadership in the waste management and recycling sector.

In 2018-19 Green Industries SA will invest in a second commercialisation of innovation program to generate economic activity in South Australia and realise opportunities through the establishment of new business activity based on commercialised innovation.

This program will build on the achievements of the Innovyz Waste and Recycling Commercialisation Program, funded by Green Industries SA through a loan scheme, which has facilitated the growth and establishment of eight globally relevant technologies/innovations in the waste management and resource recovery sector.

Additionally, the South Australian economy has benefitted in terms of business capacity building and stimulating business activity. In particular, the benefits accruing to the local industry (and other supply chains) through collaboration and/or partnerships is encouraging. In parallel, measures to enable a collaborative platform which brings together researchers, sector case studies and pilot industry projects to support the agency's strategic focus on driving the transition to a more circular economy in South Australia will be strengthened.

Complementing this work will be the agency's investment in the export of Intellectual Property through the Global Leadership Program on the Circular Economy and engagement with India, China and the Asia-Pacific region.



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 (INCLUDING CHINA NATIONAL SWORD POLICY RESPONSE PACKAGE)

South Australia's waste sector requires significant investment in new and additional infrastructure to deal with waste generated in the State in the future and in response to the impacts of China's National Sword Policy and low commodity prices for recycled materials. Investing in infrastructure stimulates economic growth and supports the goals in *South Australia's Waste Strategy 2015-20* and *South Australia's Waste and Resource Recovery Infrastructure Plan*. 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 and engagement to encourage business, 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 ENABLER

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

Green Industries SA (GISA) continues to evolve in response to the economic, demographic, technological and environmental trends and challenges facing South Australia. The demand for less contamination and better feedstocks for remanufacturing processes will continue. This requires investment in new sorting technologies, education and better procurement processes for recycled content products.

The opportunity to leverage innovative science, chemistry and engineering capabilities to lower the time, cost and precision required to extract the maximum value of waste will continue to gather pace with a global perspective.

New materials, while presenting an opportunity for some sectors, will present challenges for the waste and recycling sector, and increased social consciousness and consumer expectations will demand solutions - from microbeads and other plastics to marine litter.

Responses will be broadly delivered in the context of the United Nations Sustainable Development Goals and the imperative to conserve resources, and reduce pollution. GISA's work will have established Adelaide as a demonstration destination for the Sustainable Development Goals in action.

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 become a focal point for collaborative research and work to identify the new jobs and the business models, and GISA will act as a catalyst to stimulate investment in these new industries.

Investment in innovation which tackles long standing problematic waste issues (and which are globally relevant) will also gather pace. Newer areas of investment could support initiatives which enable energy efficiencies and greenhouse gas savings from the application of new technologies. It can be expected that with the 'low hanging fruit' harvested, commercial solutions for difficult and problematic waste streams will have been commercially developed.

During the next five years, South Australia's waste management and resource recovery infrastructure will be further developed – as guided by the State's Waste Infrastructure Plan – and supporting a resource efficient circular economy. In five years time an estimated 500 new jobs will have been created in the waste and resource recovery sector, and overall the recycling rate is expected to be more than 85%. New infrastructure will include permanent facilities for hazardous waste collection and community-based facilities and activities associated with new industries linked to the circular economy such as industrial symbiosis, re-localisation, re-manufacturing and re-making to support the emerging networks of the new circular and collaborative economies.

We can also expect that national 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 universal 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.

Green Industries SA Strategic goals by 2019

Green Industries SA's *Strategic Plan 2017-2022* sets out three areas of focus: green industry development; the Circular Economy; and supporting commercialisation and investment as set out in the table below.

	Strategic goal	Business Plan
Green industry development	Green Industries SA's support includes facilitating investment in new clean technologies, energy efficiency, water efficiency and greenhouse gas savings.	Benchmarking the green industry sector
	Greenhouse gas savings from improved waste recycling and management systems are clearly identified for Adelaide's CBD and broader metropolitan areas.	Local Government Program Business Sustainability Program South Australian Government Trade Waste Initiative
	New opportunities for greenhouse gas savings from applications of new commercially-viable technology are identified.	Infrastructure Grants Program Market Development Grants Program Business Sustainability Program South Australian Government Trade Waste Initiative
	South Australia continues to export its knowledge and technology.	Export opportunities and international engagement and development Development of training programs
	Local and international training and education systems are in place in South Australia.	
	Green Industries SA has identified and enabled export opportunities for local South Australian businesses.	
Circular economy	South Australia has a successful Circular Economy focal point that supports research and a transition to a more Circular Economy, with new ventures, jobs and new business models identified.	Circular Economy policy and implementation
	New infrastructure is in place for household hazardous waste and related facilities for new industries linked to the Circular Economy	Household hazardous waste program
	New systems to enable reuse, recycling and recovery of specific problematic waste are identified.	Innovative solutions for problematic wastes
	Businesses are building self-directed capacity in resource efficiency underpinned by the Circular Economy.	Circular Economy policy and implementation Business Sustainability Program
Supporting commercialisation and investment	Green Industries SA influences where investment is best placed through the supply of information.	Knowledge management
	Investment by Green Industries SA supports activity in new industries through equity in innovative ventures or through grants and loans.	Commercialisation of innovation
	Waste and recyclables collection is by electric vehicles.	
	Solutions are being implemented for problematic wastes.	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

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 165,000 households have introduced food waste recycling systems with the support of funding through this program. In 2018-19 funding will be provided to 10 local government organisations to further encourage the take-up and ongoing use of food waste recycling by householders.

Retail precinct pilot of compostable bags

A major barrier impacting on the widespread take-up 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 in retail outlets in place of barrier-film bags for fruit and vegetables. This could eliminate the need for the separate distribution of compostable bags through councils and making the bags more readily accessible. The pilot will involve supplying compostable bags, stakeholder consultation, educational material for local residents, bin inspections to gauge uptake, and associated in-store infrastructure.

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

An economic analysis of the potential 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

2018-19	2019-20	2020-21
\$899,000	\$3,544,000	\$3,652,000

Recycling Infrastructure Grants Program - Industry & Local Government

South Australia's Waste and Resource Recovery Infrastructure Plan and *South Australia's Waste Strategy 2015-20* have long term strategic objectives to increase and maintain 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 and, more critically, in response to the impacts of China's National Sword policy and low commodity prices for recycled materials.

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.

With China's National Sword policy requiring lower contamination levels in post-consumer recyclables there is greater emphasis on the need for recycling facilities to improve processes to reduce contamination to ensure high quality material can reach viable end markets, specifically post consumer paper, cardboard, glass and plastic.

This one-off grants program will support South Australian recycling businesses and local governments that recover, handle and process these targeted material streams.

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 promote a shift in the materials life cycle towards a circular economy through innovative approaches that deliver economic, environmental and social benefits.

Budget

2018-19	2019-20	2020-21
\$6,646,000	\$2,955,000	\$3,036,000

Market Development Grants Program

The Market Development Grants Program aims to stimulate an increase in the quality and market demand for recyclable materials and recycled content products at a time when the impacts of China's National Sword policy focuses attention on creating market opportunities for new, sustainable products made from recycled materials; expand market-related activities for existing recycled-content products; and improved quality and supply of waste feedstock used in manufacturing recycled-content products and improved market confidence in the recycled materials and recycled-content products.

Budget

2018-19	2019-20	2020-21
\$314,000	\$314,000	\$314,000

The need for capital investment to provide greater local remanufacturing/reprocessing and adopting new technology to improve quality and reduce contamination levels for recyclable materials for local use and re-entry into export markets has never been greater.

Transport subsidies for regional councils

High transport cost for recycling in regional areas has long been recognised as a barrier and this factor will be exacerbated given the impacts of China Sword policy.

Temporary one-off transport subsidies to regional councils will assist regional councils to address this barrier and support their continued recycling efforts by offsetting some of the extra costs associated with processing and transporting collected recyclables. The subsidies will be available for six months followed by review.

Budget

2018-19	2019-20	2020-21
\$514,000	-	-

Infrastructure investment loan scheme

The need for infrastructure capital investment to provide greater local remanufacturing/ reprocessing and adopting new technology to improve quality and reduce contamination level for recyclable materials for local use and re-entry into export markets has never been greater given the impacts of China National Sword policy and low commodity prices.

The loan scheme will provide an alternative funding mechanism to support projects with large capital requirements, which can have an immediate effect to increase local remanufacturing/reprocessing of targeted waste streams and job creation opportunities through its construction and ongoing operation.

The loan scheme will be available to fast track infrastructure projects for recovered paper, cardboard, plastic and glass.

Budget

2018-19	2019-20	2020-21
\$18,000*	-	-

*Staff time allocated to the loan scheme which is recorded in the agency's balance sheet and not the Expenditure table.

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.

A major, integrated campaign will be developed using digital media, paid press and television advertising, direct mail and public relations.

Budget

2018-19	2019-20	2020-21
\$854,000	\$856,000	\$856,000

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.

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.

Work continues in examining and contributing to solutions for chromated copper arsenate (CCA) treated timber and plastics such as polystyrene, microbeads and micro plastics, and multicomponent polymeric materials that are difficult to recycle. 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

2018-19	2019-20	2020-21
\$275,000	\$258,000	\$263,000

Commercialising innovation

Investment in the rapid commercialisation of innovative ideas in the waste and resource recovery sector is essential to keep South Australia at the forefront of green innovation in the waste, recycling and resource recovery sectors. Green Industries SA has previously provided a loan of \$750,000 over five years to Innovy, a South Australian-based company that commercialises research and related innovations.

Through its unique fast-tracked business development program globally relevant technologies in the waste and recycling sector have spun out into eight start-ups.

See the video releases at www.greenindustries.sa.gov.au/innovation

Green Industries SA will continue to stimulate the development of technologies to address long-standing and problematic waste issues through investment in innovation and research, recognising the potential to generate economic benefits for South Australia.

Budget

2018-19	2019-20	2020-21
\$821,000	\$572,000	\$572,000

New Economies

Circular Economy (including training programs)

A focus of international attention, a circular economy is an alternative framework to the wasteful traditional linear economy (make, use, dispose). The circular economy is a self-sustaining system driven by keeping material resources in use for as long as possible, to extract the maximum value from these while in use, then recovering and regenerating products and materials at the end of the product's 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*.

Creating Value, the Potential Benefits of a Circular Economy in South Australia, a report commissioned by Green Industries SA, quantifies the potential benefits of a circular economy for South Australia. 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. 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 on the Circular Economy

In 2018-19 the agency will further develop the Global Leadership Program on the Circular Economy delivered in partnership with Ekonnnect Knowledge Foundation and Circular Economy Alliance Australia to include an e-learning platform.

The program was launched at the Eighth Regional 3R Forum in Asia and Pacific, Indore, India in April 2018. It targets influential decision makers from the Asia Pacific region and capitalises on South Australia’s global reputation for leadership in environmental issues and facilitates business-to-business introductions with representatives and experts from leading companies and organisations.

Budget

2018-19	2019-20	2020-21
\$494,000	\$463,000	\$478,000

Collaborative consumption and sharing economy

Building on the Share N Save initiative (www.shareNsave.com.au) work will continue with business, industry and the community to move towards a more circular economy and to view waste avoidance as a priority. In 2018-19 projects will include:

- Investigate online platforms to map waste avoidance and collaborative consumption and production activities.
- Connecting South Australians working on collaborative consumption, industrial symbiosis, re-localisation, re-manufacturing and re-making to support the emerging networks of the new circular and collaborative economies which are linked by the need to conserve materials and make smarter use of resources.
- Bring selected leaders to South Australia to: engage directly with policy makers, community leaders and businesses looking to: develop strategies to incorporate circular economy thinking into their practices; promote greater ‘materials literacy’, promote resource efficiency through design and; promote better appreciation of the financial and environmental cost of wasted resources and to extend the lifecycle of materials.

Budget

2018-19	2019-20	2020-21
\$64,000	\$88,000	\$89,000

Commercialising Intellectual Property

Export opportunities and international policies

Internationally, South Australia through the work of 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 2018-19 the agency will advance its activities in India and the region following a market assessment of opportunities for training programs undertaken by Austrade (refer to *Development of Training Programs*).

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.

As the State Government opens trade representation across the region, marketing opportunities for South Australian companies in the waste sector in Indonesia, Malaysia and Singapore will be considered in 2018-19.

Budget

2018-19	2019-20	2020-21
\$80,000	\$80,000	\$80,000

Strategies, policies and national issues

Waste strategy and 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; and
- 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 2018-19 the following projects and activities will be undertaken:

- Contribute to the 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 work of local government by advising waste management, recycling and resource recovery.
- Develop a strategy for growing green industries in South Australia that identifies priority sectors for growth, strategies and measurement indicators.
- Advocate for better and new product stewardship approaches for waste products and materials that will in turn provide market opportunities for South Australian businesses.
- Support measures for materials banned from landfill under the *Environment Protection (Waste to Resources) Policy 2010*.
- Support the Fight Food Waste Collaborative Research Centre which aims to reduce food waste throughout the supply chain, transform unavoidable waste into innovative high-value co-products and engage with industry and consumers to deliver behavioural change.
- Development of South Australia's next waste strategy for 2020-2025 will begin. It will reflect emerging issues and new policy directions and include community and stakeholder engagement.

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.

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

2018-19	2019-20	2020-21
\$427,000	\$507,000	\$510,000

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

Business Enabling

Business Sustainability Program

The Business Sustainability Program helps businesses understand and support the transition towards a more circular economy. 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-focused and will 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 build industry capacity and encourage behavioural change (through education and mentoring; pilot program trials and testing; development of guidelines) to reduce waste and/or improve resource efficiency within an industry sector, geographical region or business sector. For example, benefiting from an industry led approach, waste management guidelines for the Aged Care industry sector is under development to be piloted in partnership with Aged and Community Services Australia and its member organisations.
- 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, seeking innovative solutions for problematic waste streams and establishing systems and standards for improved solid waste management.
- In 2018-19, following the provision of support to the City of Adelaide for the development of guidelines for sustainable events, Green Industries SA will update the Zero Waste SA Waste Management Guide for Events and Venues and supporting resources.
- Showcasing environmental achievements by producing case studies to acknowledge industry leaders and exemplar performance in business sustainability program areas.

Budget

2018-19	2019-20	2020-21
\$472,000	\$596,000	\$631,000

South Australian Government Trade Waste Initiative

This program aims to help businesses improve the way trade waste (that is, commercial and industrial waste water) 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

2018-19	2019-20	2020-21
\$697,000	\$24,000	-

Food and Beverage Implementation Grants

Grants are offered to eligible SA Water trade waste customers in the food and beverage industry to support implementation activities that will result in improvements to 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.

Budget

2018-19	2019-20	2020-21
\$1,817,000	\$1,479,000	\$22,000

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

2018-19	2019-20	2020-21
\$202,000	\$24,000	\$38,000

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 2018-19 survey will capture data obtained for the 2017-18 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

2018-19	2019-20	2020-21
\$126,000	\$127,000	\$128,000

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 2015-2020*. 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.

As ZEUS has been in use for 10 years its functionality will be reviewed in 2018-19 to assess its fit with the business requirements of Green Industries SA. Its user interface will also be reviewed to ensure it is updated for user-friendly access for existing and any new data capture requirements. This review will also ensure ZEUS can be accessed when and where it is required, and in particular, from portable devices.

Budget

2018-19	2019-20	2020-21
\$178,000	\$181,125	\$184,278

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, with the depot open between 9am and 12 noon on the first Tuesday of every month.

Recognising the need to improve the accessibility and convenience of this service, in 2018-19 Green Industries SA will progress the design and construction of new permanent facilities for the disposal of household chemicals and paint in metropolitan areas. The service will include Paintback which provides home painters with an easy option for disposing of unwanted paint and packaging correctly.

The first three facilities to be available from July 2019 (subject to appropriate approvals) will include: Adelaide Waste and Recycling Centre, North Plympton (open seven days a week); Northern Adelaide Waste Management Authority, Edinburgh North (open seven days a week); Campbelltown City Council works depot, Campbelltown (open weekdays only).

Mobile events will also be scheduled in consultation with local councils in 2018-19. The Dry Creek depot will operate until the new permanent facilities have been commissioned. The community will continue to be educated about correct disposal practices for household chemicals and paint, and encourage the recovery and treatment of oils, solvents and other valuable materials for reuse.

Budget

2018-19	2019-20	2020-21
\$962,000	\$678,000	\$693,000

BackLight Program

Green Industries SA operates the *Backlight* program with Mitre10, Banner and True Value hardware stores to enable 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 332,165 light globes have been collected, equivalent to almost 33,898 kilograms of light globes being diverted from landfill and responsibly recycled.

Budget

2018-19	2019-20	2020-21
\$78,000	\$78,000	\$78,000

Partnerships

Local Government Association of South Australia

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 through a systematic and prioritised approach, for example, towards improving regional waste management planning and operations.

In 2018-19, 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 circular economy by, for example:

- 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*; and
- facilitating local government discussion of key issues of relevance to the agency.

Budget

2018-19	2019-20	2020-21
\$35,875	\$36,772	\$37,691

Waste Management Association of Australia

The Waste Management Association of Australia (WMAA) SA Branch represents and advocates on behalf of its members. 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; and
- administer working groups and distribute information to members regarding the work program of Green Industries SA.

Budget

2018-19	2019-20	2020-21
\$39,538	\$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. During 2018-19 the agency will review the three-year Service Level Agreement with KESAB.

Litter data and research and branded litter monitoring

KESAB has been monitoring litter incidence at 151 sites across the State 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 2018-19 KESAB will undertake two counts in May and November and maintain a comprehensive database and trend line of litter streams in South Australia.

During 2018-19 Green Industries SA will lead a national review of the annual National Litter Index.

Budget

2018-19	2019-20	2020-21
\$58,000	\$58,000	\$58,000

Community litter, education, resources and campaigns

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.

Budget

2018-19	2019-20	2020-21
\$59,000	\$59,000	\$59,000

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 (now the Department of Environment and Water), and the Department for Education and Child Development.

Through this program KESAB develops age-appropriate resources as needed; identifies community, council and industry linkages and partnerships for each participating school; encourages and supports the reduction of waste in site; and provides regular reports to stakeholders.

Budget

2018-19	2019-20	2020-21
\$271,000	\$261,000	\$261,000

Recycle Right® 1300 telephone information line

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

Budget

2018-19	2019-20	2020-21
\$39,000	\$40,000	\$40,000

Disaster Waste Management

Disaster waste management plan and guidelines development

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

Building on a successful completed Stage 1 Disaster Waste Management Scoping Study, with funding support under the State Significant Project Category of the Australian Government Natural Disaster Resilience Program, the agency has completed the development of a Disaster Waste Management Capability Plan to sit under the authority of the State Emergency Management Plan as well as the associated practical Guidelines and Implementation Plan in 2017-18.

The Plan specifies the guiding principles, objective for disaster waste management. It also establishes a governance framework throughout the preparedness, response and recovery phases. Data collection, assessment and reporting as well as guiding principles for implementing special initiatives are also included. Most importantly, the Plan specifies the roles, responsibilities and key activities associated with the Plan's Functional Lead and Participating Agencies throughout each emergency phase.

The accompanying Guidelines provides guidance for the Functional Lead and Participating Agencies on how to carry out disaster waste management activities throughout each emergency phase. It includes guidance on key decisions, including identifying the level of state government support provided to disaster waste management stakeholders and technical guidance generally and specifically for 19 waste streams.

After the Plan's endorsement in the State Emergency Management Plan, GISA will participate in various aspects of the Plan's state-wide implementation where appropriate.

Budget

2018-19	2019-20	2020-21
\$103,000	\$118,000	\$118,000

Corporate Support

Communications, media, marketing and website

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

Budget

2018-19	2019-20	2020-21
\$94,000	\$85,000	\$85,000

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

2018-19	2019-20	2020-21
\$282,000	\$284,000	\$286,000

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

2018-19	2019-20	2020-21
963,587	935,565	979,492

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 2018-19 business plan is \$23.9 million.

Department of Treasury and Finance Approved Revenue, Expenditure and Cash balance as at 28 June 2018

	2018-19 (\$)	2019-20 (\$)	2020-21 (\$)
Revenue	38,656,000	40,544,000	43,364,000
50% of waste levy payments from Environment Protection Authority	36,020,000	36,706,000	37,624,000
Revenue received from South Australian Government Departments	0	0	0
Interest on deposits	2,600,000	3,800,000	5,700,000
Interest on Commercialising Innovation – loan scheme	36,000	38,000	40,000
Total approved expenditure authority	23,910,000	16,943,000	15,816,000
GISA expenditure authority	17,883,000	14,741,000	13,588,000
Climate change initiatives funding²	6,027,000	2,202,000	2,228,000
Cash balance			
Cash held 1 July 2018, opening balance	118,114,000	132,825,000	156,418,000
Net movement in cash held	14,711,000	23,593,000	27,519,000
Cash held 30 June 2019 Closing Balance	132,825,000	156,418,000	183,937,000

Authority to make variations to the business plan within five per cent of the budget (subject to the Minister's approval)

The Minister for Environment and Water 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.

² Intra government transfers for climate change projects as determined by the former Minister for Sustainability, Environment and Conservation under the *Green Industries SA Act 2004* independent of the Board of Green Industries SA. These are also subject to the 2018-19 State Government Budget.

Expenditure

2018-19 2019-20 2020-21

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

Infrastructure investment and innovation

Recycling Infrastructure Grants Program - Industry & Local Government	6,646,000	2,955,000	3,036,000
Local Government program (food waste)	899,000	3,544,000	3,652,000
Recycling market development grant program	314,000	314,000	314,000
Infrastructure investment loan scheme	18,000	0	0
<i>Recycle Right</i> ® household education program	854,000	856,000	856,000
Transport subsidies for regional councils	514,000	0	0
Innovative solutions for problematic wastes	275,000	258,000	263,000
Commercialising innovation	821,000	572,000	572,000
Sub-total	10,341,000	8,499,000	8,693,000

New economic models

Circular economy policy and implementation (including training programs)	494,000	463,000	478,000
Collaborative economy	64,000	88,000	89,000
Sub-total	558,000	551,000	567,000

Commercialising Intellectual Property for export

Export opportunities and international engagement	80,000	80,000	80,000
Sub-total	80,000	80,000	80,000

Strategies, policies and national issue

Waste strategy and green industry policy	427,000	507,000	510,000
Sub-total	427,000	507,000	510,000

TOTAL KEY OBJECTIVE 1 11,406,000 9,637,000 9,850,000

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

Business enabling

Business Sustainability Program	472,000	596,000	631,000
Sub-total	472,000	596,000	631,000

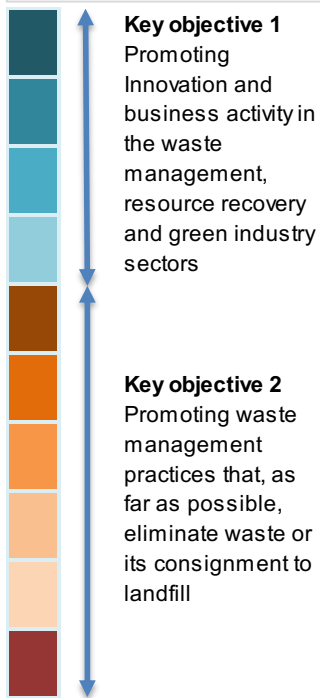
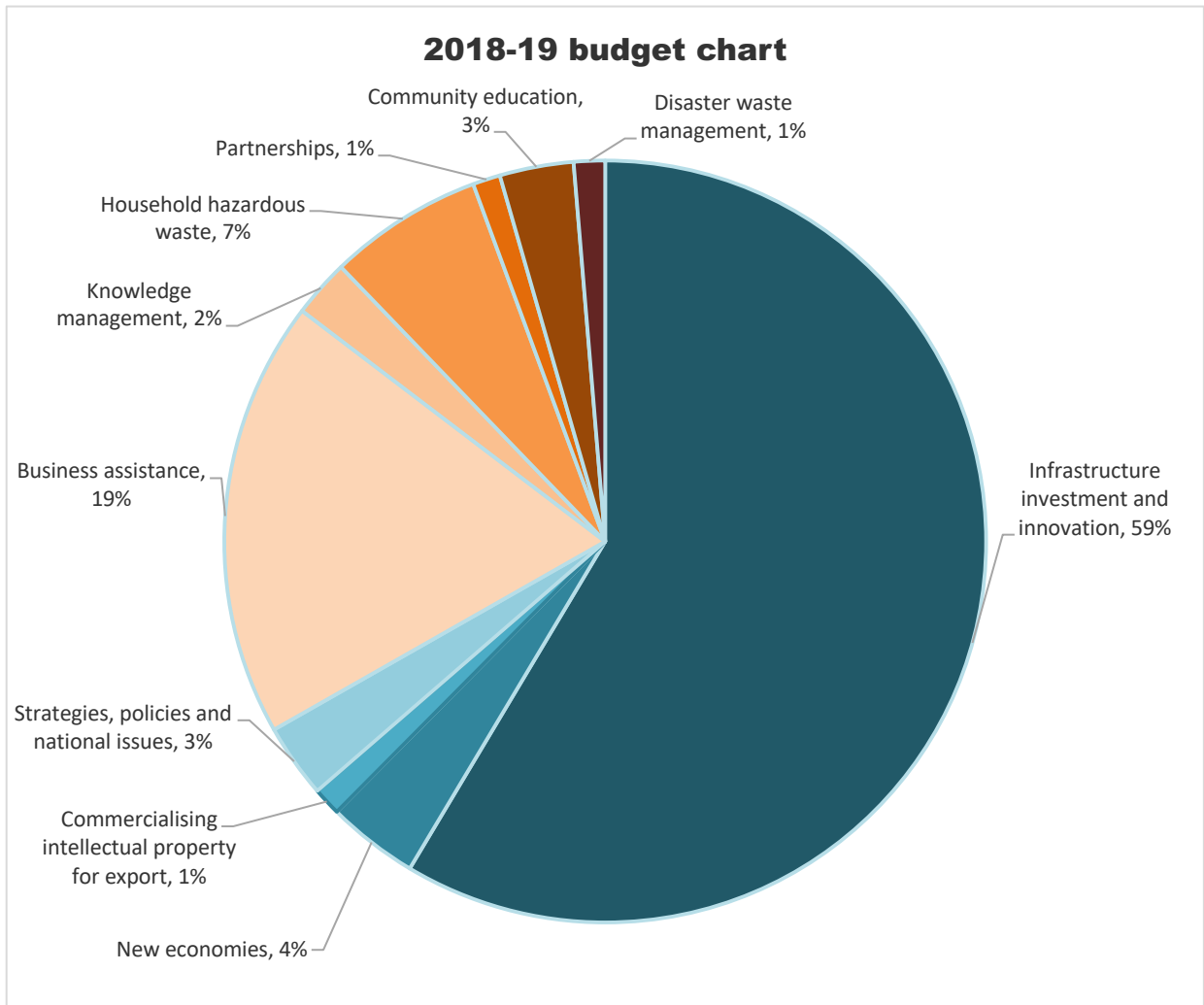
South Australian Government Trade Waste Initiative

Resource Productivity Assessments	697,000	24,000	0
Food and Beverage Implementation Grants	1,817,000	1,479,000	22,000
Technical Support and Community	202,000	24,000	38,000
Sub-total	2,716,000	1,527,000	60,000

Expenditure	2018-19	2019-20	2020-21
Knowledge management			
Waste audits and recycling activity study	126,000	127,000	128,000
Zero Waste Environment User System	178,000	181,125	184,278
Sub-total	304,000	308,125	312,278
Household hazardous waste			
Household hazardous waste collections	962,000	678,000	693,000
BackLight	78,000	78,000	78,000
Sub-total	1,040,000	756,000	771,000
Partnerships			
Local Government Association of South Australia	35,875	36,772	37,691
Waste Management Association of Australia (SA Branch)	39,538	39,538	39,538
Sub-total	75,413	76,310	77,229
Community education (KESAB environmental solutions)			
Litter data and research and branded litter monitoring	58,000	58,000	58,000
Community litter education, resources and campaigns	59,000	59,000	59,000
Wipe Out Waste	271,000	261,000	261,000
Recycle Right@1300 information line and website	39,000	40,000	40,000
Sub-total	427,000	418,000	418,000
Disaster waste management			
Disaster waste management plan and guidelines development	103,000	118,000	118,000
Sub-total	103,000	118,000	118,000
TOTAL OBJECTIVE 2	5,137,413	3,799,435	2,387,507
Corporate support			
Communications, media, marketing and website	94,000	85,000	85,000
Board support	282,000	284,000	286,000
Corporate services	963,587	935,565	979,492
TOTAL CORPORATE SUPPORT	1,339,587	1,304,565	1,350,492
APPROVED EXPENDITURE AUTHORITY³	17,883,000	14,741,000	13,588,000

³Excludes funding for climate change initiatives.

Budget distribution chart



Note: funding for climate change initiatives is excluded.

Appendix 1

South Australia's achievements in waste management and recycling

Landfill data for 2016-17 indicates that South Australia has reduced waste to landfill by 29% since 2002-03, equivalent to 379,000 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 2016-17 shows that South Australia remains a strong performer in recycling and recovery of resources. The 2016-17 SA Recycling Activity Survey (Rawtec) shows that 4.401 million tonnes of materials were diverted from landfill and into recycling in 2016-17 with a diversion rate of 83.4%, the highest reported rate compared with other states and territories in Australia.

In 2016-17, South Australia's resource recovery activities led to estimated savings in:

- greenhouse gas emissions of 1.25 million tonnes of CO₂-e, equating to taking 288,500 cars off the road;
- energy savings of about 16,030 Terajoules, equating to 2.8 million barrels of oil; and
- water savings of about 13,100 Megalitres, equating to 5,200 Olympic sized swimming pools.

The total 'direct' market value of resource recovered materials for South Australia in 2016-17 was estimated to be \$320 million, which is \$85 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 (\$150 million).

South Australia's total landfill disposal during 2016-17 was 0.873 million tonnes, down 1.9% from 0.890 million tonnes recorded in 2015-16.

Since 2003-04:

- total reported resource recovery has increased from approximately 2 million tonnes to just over 4.4 million tonnes each year
- the diversion rate has steadily increased from 61.5% to 83.4%.