Senate Standing Committees on Environment and Communications — Waste and recycling industry in Australia

Submission from the South Australian Government

October 2017

SOUTH AUSTRALIA

Government of South Australia

Contents

Introduction

South Australia has introduced many waste management reforms over the past decade that have successfully promoted resource recovery in our state and established our reputation as a leader in this field.

The waste and resource recovery sector has grown into an economically significant part of our economy. South Australia's waste industry has an annual turnover of about $1 billion, contributing around $500 million to Gross State Product and employing approximately 5,000 people.

The South Australian Government is seeking to help realise the economic potential from innovation in waste and resource recovery technologies while at the same time protecting our environment. It is committed to providing the right settings to attract investment, drive innovation and create jobs. Further growth, including significant job creation, is anticipated with the next series of modernised regulatory and policy settings.

To achieve these outcomes, as discussed further in the body of this submission, the South Australian Environment Protection Authority (SA EPA) has a clear compliance approach and is pursuing an extensive waste reform program to achieve sound regulation that supports fair and equitable competition, stability, growth and innovation in the sector.

The regulatory approach of the SA EPA complements the actions of Green Industries SA (GISA, formerly Zero Waste SA) to further sustainable waste management practices and promote innovation and business activity in the waste management, resource recovery and green industry sectors through education, funding and network-building.

The South Australian Government also actively participates in a range of inter-jurisdictional policy forums (formal and informal), including the Meetings of Environment Ministers, Product Stewardship working groups, chairing the Controlled Movement of Waste Inter-Jurisdictional Working Group and recently agreeing to chair the Heads of EPA Waste Working Group.

The South Australian Government is very pleased to have the opportunity to make a submission to this Inquiry. Successful, sustainable waste management across our nation will require the resolution of a range of complex issues faced by the industry and the Australian Government has a critical role to play in addressing matters that cannot readily be tackled by any State acting alone.

This submission addresses each topic nominated in the Terms of Reference for this Inquiry. I would also be happy to arrange for senior officials to present to the Inquiry to expand on topics of interest if desired.

Hon Jay Weatherill MP

Premier

Comments relating to the Terms of Reference

a) The quantity of solid waste generated and the rate of diversion of solid waste for recycling

Resource recovery and disposal data

GISA regularly commissions a Recycling Activity Survey for South Australia, with the most recent report being for the 2015-16 financial year[1]. The 2015-16 report presents resource recovery data collected from a survey sent to 114 organisations in South Australia (SA) that are involved in collecting waste material for recycling. This data is combined with landfill disposal data collected by the Environment Protection Authority.

The 2015-16 report indicates a trend of increasing total waste per capita together with increases in recycling and decreased volumes to landfill as depicted in Figure 1.

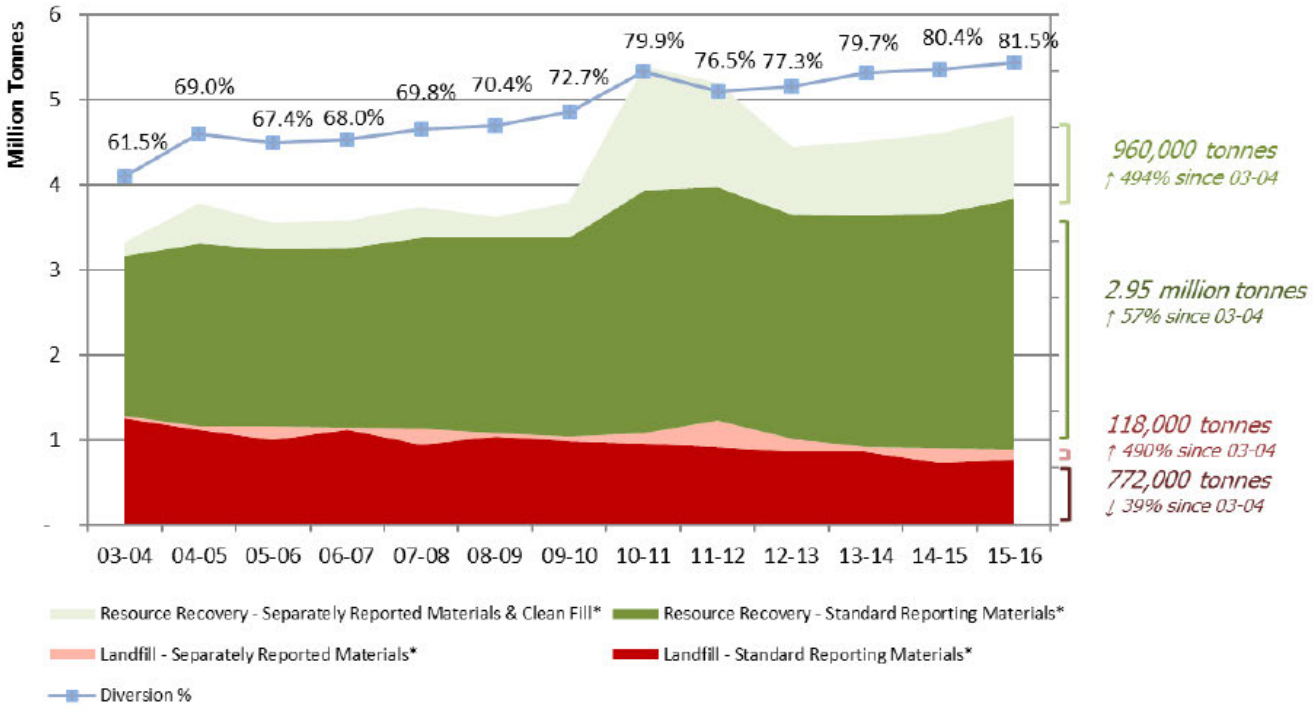

Figure 1: South Australian waste volumes and destinations 2015-16
Source: *South Australia's Recycling Activity Survey 2015-16 Financial Year Report*

[1] Prepared by Rawtec for GISA (2017), 'South Australia's Recycling Activity Survey: 2015-16 Financial Year Report', http://www.greenindustries.sa.gov.au/_literature_173500/Recycling_Activity_in_South_Australia_2015-16

The report shows that the total waste generated in South Australia was 4.8 million tonnes for 2015-16. This equates to 2,810kg per person. Total resource recovery was 3.91 million tonnes, a nation-leading diversion rate of 81.5%. Resource recovery comprised:

- 2.95 million tonnes of 'Standard Reporting Materials'[2] – which includes traditionally reported material categories of metals, organics, cardboard & paper, glass, plastics, masonry, etc.; and,
- 0.96 million tonnes of 'Separately Reported Materials' & Clean Fill[2] – which includes data for soil, sand, rock, rubble and fly ash materials, which can fluctuate significantly across reporting years.

Total landfill disposal for South Australia was 0.89 million tonnes. Approximately 13% (118,000 tonnes) of landfill disposal was contaminated soil from construction activities.

The majority of SA's resource recovered material (2.17 million tonnes or 55%) was made up of Masonry materials, Clean Fill and Separately Reported Materials. These materials were mainly generated by Construction and Demolition (C&D) activities.

Organics was also a major contributor to SA's resource recovery in 2015-16, with over 1 million tonnes or 28% of all materials. These materials were predominately from the Commercial and Industrial (C&I) sector, including timber mills and regional processing of primary produce.

Metals were the third greatest contributor (7% by weight). Following this was Cardboard and Paper (6% by weight) and Glass (2%). Most Metals were from the C&I sector, whereas Cardboard and Paper and Glass were sourced predominately from the Municipal and C&I sectors.

The report is comprehensive in its assessment of materials, their sources and final destinations (including overseas and interstate) and analyses trends in waste arising, recycling activity and employment.

[2] As specified by the National Guidelines for compiling waste and recycling data: Department of the Environment and Energy (2015); National Waste Data Classification and Reporting System (NWDCRS) supporting documentation: SOPs, reporting tool user guide, and reporting guidance. Project number PREC037.

b) The accreditation and management of landfills

Regulatory approach

The SA EPA is responsible for regulating the receipt, treatment, storage and disposal of waste in accordance with the Objects of the *Environment Protection Act 1993*. The SA EPA regulates to ensure that the environment is adequately protected to support the achievement of economic, social and environmental policy objectives for South Australia.

The SA EPA aims to apply a consistent, fair and effective regulatory approach. The Regulatory Spectrum (Figure 2) highlights how the EPA tailors its regulatory actions based on particular circumstances; from supporting and recognising those who demonstrate a strong commitment to good compliance and going beyond compliance to enforcing the law for those who intentionally or recklessly fail to comply.

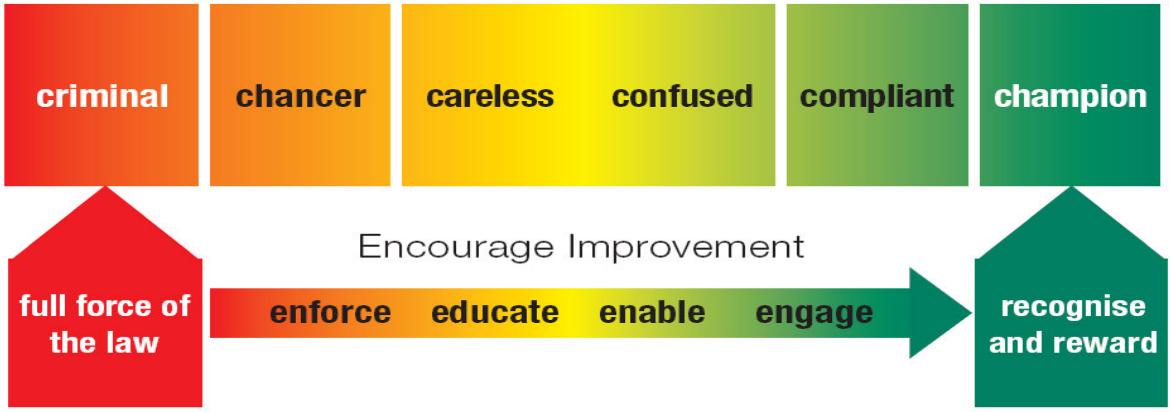

Figure 2: The EPA's regulatory approach

In South Australia, all waste and recycling facilities are required to be licensed under the Environment Protection Act, with only some limited exceptions (e.g. the recycling or reuse of under 100 tonnes of waste). The potential environmental impacts of licensed facilities are managed by the SA EPA through site specific licence conditions.

The SA EPA licences around 400 waste-related or recycling facilities (including composters and scrap metal treatment) and around over 600 waste transporters. The state's industry involves large, multi-national organisations and local business working across multiple aspects of waste collection, recycling and disposal through to very small regional transfer stations and landfills operated predominantly by councils. Over 75% of licensed facilities receive less than 5,000 tonnes of waste per annum.

The SA EPA uses a risk-based approach to applying licence conditions relevant to the type of facility involved, its setting, its scale and its intensity. There are standard administrative conditions that are applied to all licences. Beyond these, the SA EPA classifies licences according to risk and establishes conditions with each licence holder according to factors such as:

- the location of the activities and proximity to vulnerable receptors such as watercourses or higher density urban living
- age of equipment and infrastructure
- new technologies that may have been installed on site that reduce environmental risk
- effective implementation of plans and processes to best manage environmental risks
- other legislation affecting the site
- specific issues on site requiring action that are identified during compliance inspections, audits or monitoring reports, and
- previous compliance history.

Waste facilities are comprised of a mix of tier one licences (the highest risk category), tier two licences and tier three licences (the lowest risk category). Facilities are regularly inspected in accordance with expectations for these different risk categories. A variety of audits and operations are conducted on various aspects of the waste sector – from resource recovery operations to unauthorised asbestos storage.

For waste transporters, the SA EPA undertakes audits where a fixed site is specified. In addition to this, waste transporter vehicles are inspected when in transit and covert surveillance activities are undertaken by the EPA (in conjunction with SA Police and the Department of Planning, Transport and Infrastructure). These measures are aimed at ensuring that licensed waste transporters are meeting their specific licence conditions, as well as ensuring that they are meeting general obligations with respect to covering waste loads.

As well as conducting investigative and enforcement programs for waste disposal depots, resource recovery facilities, the SA EPA dedicates substantial time to the assessment and monitoring of development applications and licences for these facilities, including for initial plans, variations and across the subsequent operation and closure of facilities plus technical assessments of waste derived resource reuse proposals.

Assessment and management of landfills

When considering development applications and licence or licence renewal applications, the SA EPA must take into account various matters including:

- the Objects of the Environment Protection Act which include seeking to promote specified principles of ecologically sustainable development,
- the State's Waste Strategy – *South Australia's Waste Strategy 2015-2020,*
- the waste management objective of the *Environment Protection (Waste to Resources) Policy 2010* that seeks to achieve sustainable waste management by applying the waste management hierarchy consistently with the principles of ecologically sustainable development as set out in the Environment Protection Act, and

- *EPA Guidelines for Environmental Management of Landfill Facilities (Municipal Solid Waste and Commercial and Industrial General Waste) 2007* ("SA EPA Landfill Guidelines").

The SA EPA Landfill Guidelines provide guidance on the construction and management requirements for landfill based on the capacity and site conditions (eg proximity to water) of the proposed landfill. The guidelines cover a broad range of matters related to landfill construction and management, including:

- Screening and siting of landfill facilities (including community, planning regulations, buffer distances, water aspects, Aboriginal and heritage issues, flora and fauna etc.),
- Site layout for landfill facilities,
- Environmental assessment and management strategies (in particular, landfill design considerations to manage potential impacts to groundwater and surface water),
- Leachate containment and management systems (including geotechnical aspects, site preparation, landfill liners and leachate storage and treatment),
- Management strategies for landfill gas and air quality, and
- Landfill capping systems.

Following introduction of the SA EPA Landfill Guidelines in 2007, landfill management practices around the State have been enhanced. Some waste management operators also chose to close small, older landfills and instead use well-managed regional facilities to most efficiently satisfy modern environmental standards.

To ensure that the SA EPA Landfill Guidelines promote the most contemporary practices, the SA EPA is currently reviewing the landfill guidelines. Preliminary targeted consultation has been undertaken to establish the scope of review. The SA EPA intends that the review will include an update of selected engineering specifications, landfill gas management requirements and the use of alternative daily covers. Extensive consultation with stakeholders is planned as part of the review process.

c) The extent of illegal landfilling

Illegal dumping regulation

Given the requirement for licensing of all landfills within SA, it is believed that there may be less concerning levels of inappropriate landfilling than is alleged in some other states.

The SA EPA leads investigations of commercial-level and hazardous illegal dumping, including the operation of illegal waste depots. Where responsible parties are identified, the SA EPA will undertake further regulatory action, including prosecution if appropriate.

Investigations into illegal dumping make up a significant proportion of all investigations undertaken by the SA EPA. Across 2016-17, 346 reports of illegal dumping were received by the SA EPA. These calls are received from both Councils and the general public who want to report an illegal dumping incident or who have concerns about an EPA licensed facility. In addition to this, the EPA fielded around 1,000 general asbestos and incident-related phone calls from a variety of community and government stakeholders.

Where sufficient evidence has been available for action, the SA EPA has managed illegal dumping incidents using environment protection orders, clean-up orders, prosecution and expiations. Across 2016-17, the SA EPA issued environment protection orders re-directing in excess of 40,000 tonnes of illegally deposited waste into the legitimate waste management industry. The SA EPA maintains a record of orders, completed prosecutions and civil penalties on the EPA's website www.epa.sa.gov.au.

A notable illegal dumping prosecution in South Australia was finalised in the ERD Court in February 2016. It set a precedent as the first time a jail sentence was imposed in South Australia for illegal dumping. After pleading guilty to 12 counts of unlawful disposal of waste and for failing to comply with an Environment Protection Order, the offender was sentenced to four months and two weeks in prison, suspended for two years with a $100 good-behaviour bond. The offender was also ordered to pay $44,000 in clean-up costs as well as the Victims of Crime Levy.

In recent years, other large dumping incidents have involved the deposit of around 40,000 cubic metres of construction and demolition waste, soils and other materials at an old quarry without authorisation from the SA EPA and the apparent construction of a horse arena that saw waste received at a rural property without approval from the SA EPA.

The SA EPA also works together with other South Australian Government departments (including Renewal SA, the Department of Planning, Transport and Infrastructure and the Australian Rail Track Corporation) in the deployment of cameras at known places where illegal dumping occurs.

With the introduction of the *Environment Protection (Waste Reform) Amendment Bill 2017* into Parliament in August 2017, the South Australian Government is pursuing improvements to the Environment Protection Act to enable the SA EPA to better tackle illegal dumping. Intended reforms are outlined further in section (j) of this submission.

Councils have responsibility for smaller scale, non-hazardous illegal dumping under the *Local Government Act 1999* and the new *Local Nuisance and Litter Control Act 2016* (LNLC Act). The South Australian Parliament passed the LNLC Act in 2016. It gives councils increased powers to deal with illegal dumping in their areas, providing councils with increased penalties and expiations to punish those who illegally dump as well as additional tools in identifying illegal dumpers.

The first prosecution and conviction for illegal dumping under the LNLC Act was handed down on 8 August 2017 and resulted in a fine of $1,200 awarded for the dumping of two wheelie bins of green waste and general household waste which included plastic bags, wrappers and plastic bottles onto a reserve.

The SA EPA provides ongoing support to councils to manage smaller scale illegal dumping through sharing of expertise, providing training and the use of the SA EPA's surveillance cameras. More significant incidents of illegal dumping are referred to the EPA for investigation. The EPA works with local councils to deploy covert tactics to identify and take enforcement action against identified offenders.

It should be noted that the waste levy has not been found to be driving incentive for illegal dumping. A 2012 review by KPMG of the New South Wales Waste Levy concluded "illegal dumping is not due to pricing signals, but rather a convenience factor". In Queensland, there is no waste levy, and yet they report cases of illegal dumping in their community.

d) The role of landfill levies in determining the end destination of material, including the hypothecation of collected levies for enforcement and waste diversion purposes

Section 113 of the Environment Protection Act requires waste depot licensees to pay the prescribed waste levy to the EPA in respect of waste received at the depot. The *Environment Protection Regulations 2009* prescribe levy payable per tonne of waste in various circumstances.

The waste levy is an important economic instrument for promoting waste minimisation and resource recovery in South Australia since the disposal of waste to landfill has historically been the cheapest waste management option for most waste.

The waste levy provides an incentive to reduce the amount of waste sent to landfill. It also continues to provide a financial incentive for industry to seek alternatives to the disposal of waste and to facilitate investment into future technologies, processes and resource recovery systems in South Australia.

The waste levy provides a price signal that reflects the adverse environmental impacts of waste disposal (externalities) and the use of 'virgin' materials (avoided externalities) in comparison to recycled materials as a means of encouraging resource recovery. It also generates funding for recycling and environmental initiatives.

It is designed to divert material from landfill by increasing the cost of landfill disposal, making reuse and recycling more economically attractive in comparison and thereby increasing the rate of reuse and recycling.

The waste levy has progressively increased since its initial introduction and across this time resource recovery has increased significantly:

- Resource recovery has increased from around 2 million tonnes in 2003-04 to almost 4 million tonnes in 2015-16[3].
- This represents an increase in the rate of resource recovery from around 60% in 2003-04 to 81.5% in 2015-16[4]. This is the highest resource recovery rate in Australia.
- Total waste to landfill for 2015-16 was 889,500 tonnes, a 29% reduction on 2002-03 levels[5].

South Australia's Strategic Plan set a target of reducing waste to landfill by 35% by 2020 (compared to 2002-03 levels). It is noted that this reduction in waste disposal and increase in

[3] Report for GISA: Rawtec, *South Australia's Recycling Activity Survey 2015−16 Financial Year Report* (2017), pg. 7

[4] Report for GISA: Rawtec, *South Australia's Recycling Activity Survey 2015−16 Financial Year Report* (2017), pg. 7

[5] Report for GISA: Rawtec, *South Australia's Recycling Activity Survey 2015−16 Financial Year Report* (2017), pg. 11

recycling has occurred during a period of significant increase in per capita waste generation due to the increasing waste intensity of economic activity.

Diverting resources away from landfilling and into reuse and recycling has associated environmental benefits. Green Industries SA's recycling activity survey for 2015-16, estimates that resource recovery of waste materials in 2015-16 (total of 3.91 million tonnes) resulted in the following environmental benefits[6]:

- Greenhouse Gas Emissions of 1.18 million tonnes of CO2-e – the emissions that around 271,900 cars would produce in one year;
- Cumulative Energy Demand savings of 15,130 terajoules (TJ) – the energy used by over 294,400 average households in one year; and
- Water savings of 12,720 megalitres (ML) – nearly 6% of Metropolitan Adelaide's total water consumption for 2015-16.

This is in addition to a number of other benefits from reduced landfilling, including reduced leaching of waste associated with contamination of soils, groundwater resources and surface water; reduced noise and odour impacts on local amenity, which can lead to a reduction in house prices in the vicinity of landfill sites; and reduced opportunity cost of higher value future uses of land, after capping and rehabilitation[7].

Diverting waste from landfill and into resource recovery also increases employment, with an estimated 2.8 full time employees per 10,000 tonnes of waste associated with landfilling, compared to 9.2 full time employees per 10,000 tonnes of waste associated with resource recovery[8].

GISA's investment has built industry capacity, improved markets and assisted the development of new products and skills. Benefit cost ratios for funded projects that improve industry competitiveness achieve ratios of 6.7, and for infrastructure investment, between 1.4 and 11.5. For example, then Zero Waste SA support for establishing the three-bin kerbside waste collection system across metropolitan councils delivered a net benefit of $22 million at a benefit cost ratio of 2.6. For every dollar invested, $2.6 was returned in direct cost savings to local government[9].

Levy rates

On 1 July 2017, the solid waste levy increased to $87 per tonne in metropolitan Adelaide and $43.50 per tonne in non-metropolitan Adelaide. Currently a $0 levy applies to waste fill (i.e. clean soil) and a $35.81 per kilolitre levy applies to liquid waste.

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[6] Report for GISA: Rawtec, *South Australia's Recycling Activity Survey 2015−16 Financial Year Report* (2017), pg. 75

[7] Report for Australian Council of Recycling: Deloitte, *Economic Effects of the South Australian Solid Waste Levy* (2015), pg.18-19

[8] Access Economics, *Employment in Waste Management and Recycling* (2009).

[9] *Review of South Australia's Waste Strategy 2011-2015,* Resources and Waste Advisory Group, 2014

Previous levy rates set per tonne for the metropolitan solid waste levy have been:

- 2016-17: $62 metro ($31 non-metro) from 1 July 2016

  $76 metro ($38 non-metro) from 1 September 2016
- 2015-16: $57 metro ($28.50 non-metro)
- 2014-15: $52 metro ($26 non-metro)
- 2013-14: $47 metro ($23.50 non-metro)
- 2012-13: $42 metro ($21 non-metro)
- 2011-12: $35 metro ($17.50 non-metro)

As part of the 2016-17 South Australian Government budget, it was announced that the levy would increase in stages to $87 per tonne in 2017-18, $100 per tonne in 2018-19 and $103 per tonne in 2019-2020. The South Australian Government has committed to all additional revenue from these increases being reinvested in environmental management (as discussed further below).

Levy hypothecation

As required by the *Green Industries SA Act 2004* and Environment Protection Act respectively, the levy is distributed as follows:

- 50% is paid into the Green Industry Fund (formerly the Waste to Resource Fund), to be used for purposes pursuant to the Green Industries SA Act (formerly the Zero Waste SA Act 2004).
- 5% is paid into the Environment Protection Fund, to be used for the purposes outlined in section 24 of the Act.
- 45% is directed to the EPA funding mix to deliver its regulatory and administrative functions.

GISA is funded entirely from the Green Industry Fund. The GISA Act hypothecates that the Fund may only be applied:

- by GISA in accordance with a business plan approved by the Minister outlining its projects and programs in relation to its functions under the GISA Act; and
- by the Minister towards the costs of climate change initiatives and managing waste or debris, or harm to the environment following a major incident, emergency or disaster under the *Emergency Management Act 2004*.

Since the establishment of Zero Waste SA in 2003 (now GISA), over $107 million has been spent from the Green Industry Fund on programs and projects that have stimulated councils, businesses and the community to reduce, reuse, recycle and recover, thereby cutting the amount of waste going directly to landfill.

The Fund has:

- provided grants and incentives for a diverse range of world class recycling and leading edge waste reduction projects;
- provided grants and incentives to councils to improve kerbside recycling systems;
- supported business and industry to improve waste management practices;
- provided regional communities with new or upgraded transfer stations using state-of-the-art technologies, sorting equipment and improved waste management;
- supported school educational projects;
- supported litter reduction initiatives; and
- supported free household collection services for hazardous waste including e-waste.

The 2016-17 South Australian budget included staged increases to the solid waste levy up to $103 per tonne in 2019-2020. The additional $64 million raised over the four years is being reinvested in the following areas:

- over $14 million in programs to support local government infrastructure investment, waste education programs, household hazardous waste collection and innovative solutions for problematic waste;
- $12.4 million towards grant programs for the waste and resource recovery industry for infrastructure investment and innovation, as well as levy waivers for particular waste from scrap metal recyclers;
- $15.7 million over four years for the Environment Protection Authority to deal with the management of contaminated sites where no responsible party is known, as well assisting with compliance activities; and
- $21.9 million for climate change initiatives to transition the State’s economy to a low-carbon future and make Adelaide a carbon neutral city.

e) The role of different incentives and collection methods in determining the quality and quantity of material collected for recycling

The Australian National Waste Report 2016 recognised South Australia as have the highest resource recovery rate in Australia. The report acknowledged the following as contributing to South Australia's success in resource recovery[10]:

- a moderate landfill levy
- a well-established container deposit scheme since 1977
- the use of high calorific construction and demolition (C&D) wastes to generate energy
- a history of progressive waste management policies and state government investment in infrastructure, market development and education programs.

South Australia has implemented a range of programs that involve the provision of funding in the form of grants and incentives that have:

- assisted the construction of new and upgraded infrastructure and processing systems;
- improved kerbside recycling systems;
- introduced resource efficiency and lean production measures;
- identified options for higher value uses of waste; and
- supported community resource recovery projects.

Many of these incentive programs aim to increase recycling capacity and/or improve the quality of the recycled material e.g. infrastructure to remove contaminants.

More than $17 million in recycling infrastructure grants has been provided towards over 150 projects across South Australia. In metropolitan areas this has supported recycling infrastructure targeting plastics, organics, mixed waste and e-waste. Funding in regional areas has supported upgraded and new transfer stations using state-of-the-art technologies and sorting equipment.

As reported above, in 2002-03, South Australia was diverting approximately 61% of material from landfill. With the above investment, this has increased significantly to 81.5% in 2015-16 and total resource recovery tonnages have nearly doubled. Waste to landfill has reduced by 29% this period.

Some $7.25 million in incentives has been provided for implementing high-performance, council kerbside recycling collection systems. This work has provided South Australian households with access to easy-to–use, two or three-bin systems. The three-bin system generally comprises a 240 litre (L) mobile garbage bin (MGB) for co-mingled recyclables, a 240L MGB for organic waste (green organics and food organics) and a 120L MGB for residual waste. This collection

[10] Prepared by Randell Environmental Consulting for the Department of the Environment and Energy (2017), 'Australian National Waste Report 2016, p. 53

method relies on the householder to voluntarily source separate waste and recyclables into the appropriate bin with contamination arising where this is not undertaken correctly.

In 2002, South Australian councils were diverting about 20 per cent of kerbside collected material from landfill. Through the provision of State Government funding, kerbside recycling has increased significantly to 47.8 per cent.

Source separation at the point of generation (i.e. household) generally results in a much higher quality recyclable material than a single bin system for all household wastes that relies on downstream processing technology to subsequently separate out various materials. Collection is undertaken using compaction vehicles that in the case of recyclables can result in further contamination due to glass breakage that embeds in other recyclables such as paper / cardboard.

In South Australia, container deposit legislation results in reduced glass in kerbside recycling bins as many households elect to set aside the deposit bearing containers to redeem the deposit value at collection depots established for this purpose. Reduced deposit bearing glass containers in the kerbside collection bins results in less glass breakage in compaction vehicles and higher quality recyclables. Container deposit legislation also increases the quality of recovered materials (particularly glass) due to the greater level of separation based on container type. Around 120 depots operate across the state where consumers can redeem their deposits.

Currently, around 150,000 South Australian households have access to council food waste recycling systems, subsidised by GISA. It is estimated that councils that provide fortnightly collection of green organics, including food waste recycling systems to all residents, as well as recycling and residual waste collection, can achieve a 60% diversion rate and potentially higher than this with further systems and collection improvements.

In support of these programs and funding incentives, the Recycle Right® household education program addressed long-standing issues facing the recycling industry, with householders putting incorrect items in kerbside-collected recycling bins. The campaign was developed in close collaboration with the South Australian Waste Educators Working Group of the Waste Management Association of Australia (WMAA – SA Branch), the Local Government Association of South Australia (LGA), and the recycling and waste industry.

The Recycle Right® campaign used media advertising, social media, fact sheets, a 1300 recycling ‘hot-line’, education resources for schools, a template calendar and banners for councils, and workshops and site visits for council staff and elected members delivered by KESAB *environmental solutions*. KESAB continues to run the Recycle Right® hotline under a service level agreement with GISA.

Other collection methods at the household level, including council supported (via rates) hard (bulky) waste collection or private sector skip bin services, generally result in mixed waste streams of variable quality and quantity that rely on downstream processing to separate out materials (where separation is undertaken).

Currently in South Australia, municipal solid waste (MSW) and commercial and industrial (C&I) wastes are not charged on the basis of weight generated (i.e. the actual amount of waste generated and collected). South Australian households generally pay for waste collection services via their council rates bill on a flat fee basis, regardless of the actual quantity of waste generated and personal recycling efforts made by each household. Most businesses have their waste collected and charged on a volume basis (for example, per bin lift or empty).

An additional policy instrument that could be considered by State governments to further enhance resource recovery is variable rate pricing which charges waste in a similar manner as other utilities such as water and electricity where households and businesses pay a variable amount depending on the quantity of waste they actually generate and the corresponding services provided. Variable rate pricing is based on the guiding principles of environmental policy, that is, the polluter pays principle and the shared responsibility concept. Its potential for changing behaviour would be influenced by its proportion as a cost driver relative to necessary service charges, such as the provision of a collection service in an area.

Variable rate pricing increases the transparency of the price differential between recycling and landfill disposal as charges are usually imposed on the residual waste set out for collection in combination with an adjusted or lower charge for the collection of recyclables, which often have a market value and/or where the costs for managing them are already covered by extended producer responsibility. This can provide a more direct market based price signal and economic incentive for behavioural change towards resource recovery.

An effective variable rate pricing system builds on three key pillars:

- identification (for reasons of accountability of the waste generator)
- measurement (of the generated amount of waste and/or services obtained for it)
- unit pricing (for individual charging according to the availed service).

A variable rate pricing system can take various forms such as weighing the amount of waste in collection bins or using pre-paid bags, tags or stickers or prescribed sizes of waste bins. Technical specifications depend on the specific situation in the collection area, provisions made in legislation and other waste policy. While they operate differently from one another, these systems share one defining characteristic - person/business who throws away more, pay more.

The South Australian Government will continue to promote and explore options to achieve *South Australia's Waste Strategy 2015-2020* diversion targets for different metropolitan waste streams by 2020:

- municipal solid waste – 70%
- commercial and industrial waste – 80%, and
- commercial and demolition waste – 90%.

As well as other areas to maximise diversion to the extent practically and economically achievable.

f) The destination of material collected for recycling, including the extent of material reprocessing and the stockpiling of collected material

Reprocessing destinations

South Australia has well established reprocessing capabilities for most materials. In 2015-16, approximately 87% (3.39 million tonnes) of recovered material in South Australia was reprocessed in the State. Masonry, organics and glass were almost entirely reprocessed in South Australia representing 100%, 97% and 80% of recovered material, respectively.

Of the remaining recovered material, 8% of material (310,000 tonnes) was reprocessed interstate in 2015-16 and 5% (210,000 tonnes) was sent overseas for reprocessing. Cardboard and paper, and metals comprised the majority of these materials: with 56% and 45% of these recovered materials reprocessed interstate, respectively.

Around a third (34%) of total plastic generated in SA was reprocessed locally in 2015-16. In addition, around 7,700 tonnes of plastic were imported into SA for recycling.

Policy settings can influence reprocessing choices. As a result of South Australia's container deposit legislation, glass bottles returned for deposit are of high quality and are sought after by re-processors. The price for recovered glass in South Australia in 2015-16 was around $90 per tonne, compared to an average of about $50 per tonne. There are two major glass reprocessors in the State – AMCOR and Owen Illinois.

Stockpiling

Waste stockpiling is occurring at various locations in South Australia.

Potential environmental risks from stockpiling are managed via site specific conditions on a facilities' licence and regular inspections. On the basis of information available to the SA EPA from inspections, the most prevalent materials being stockpiled include soils, fill and overburden and construction and demolition waste, whilst substantial amounts of timber and green waste are also being stockpiled from time to time.

However, there are currently no formal sector-wide requirements for facilities to report on the quantities of stockpiled materials. In the absence of such reporting, it is not possible to advise on current total stockpiles and the proportion of material that may be recyclable versus needing disposal to landfill. Stockpiling characteristics may also change with process failures and changing export settings

In regulating stockpiling, there is a need to balance the genuine need of many businesses and local governments to undertake some degree of stockpiling (for example , for reasonably anticipated sales) against excessive stockpiling that can create environmental, abandonment or unfair competition risks.

Through its current waste reform program, the SA EPA is seeking balanced material flows with no excessive stockpiling. As a key step, the Waste Reform Bill is seeking to provide new powers for the EPA to be able to better regulate stockpiling of materials, including through improving its powers to address material flows and abandonment risks.

The SA EPA is also pursuing the introduction of Mass Balance Reporting. This would require all South Australian waste and recycling facilities that receive 5,000 tonnes or more of waste per annum to report on material entering and leaving their facilities as well as on materials being stockpiled. It will support ready identification of stockpiling trends and issues at sites. A paper outlining a proposed mass balance reporting system has been released for consultation from 15 September – 31 October 2017.

g) The current economic conditions in the industry, including the market for material collected for recycling

Recycling markets

Recyclable materials that are exported interstate or overseas materials are subject to market conditions including fluctuating commodity prices and changing policy and legislative settings in the State or country into which the materials are exported.

Plastics and metals exports to China have previously been affected by that country's 'green fence' policy. In July, China informed the World Trade Organisation that it will ban a wide range of waste imports including plastics, scrap paper and textiles from the end of 2017. Recycled plastic is particularly vulnerable and in South Australia plastics baling and export operators need to charge operating fees to cover handling and export (shipping) costs and compete in a 'shrinking' global market for other export destinations, such as Malaysia and Vietnam. These countries are now buying the same material for less and some plastics recyclers are struggling to compete with landfill disposal operators to receive the material. Due to these circumstances and plastics' lightweight nature, some plastics can currently be disposed to landfill at a cheaper rate than directing the material to a plastics recycler.

Developing and maintaining local markets

For locally recovered materials, important elements for success include the availability of reliable markets for the recovered materials and local business conditions.

Commodity prices for imported materials (virgin or recovered) relative to the prices for local recovered materials are an important influence on end-users purchasing decisions. If virgin materials can be brought in from countries with different environmental, labour and occupational safety standards or changing production rates more cheaply than recovered materials can be produced locally then that can have a detrimental impact on local businesses.

Product standards that support or enable the use of recovered materials (for example, recovered materials in road aggregates) will be an important element in continuing to develop local markets. The waste and resource recovery sector continues to highlight the importance of continuing to increase local "pull-through" for recyclables with all levels of government.

GISA and the SA EPA are in the early stages of a project that is seeking to identify current barriers to the use for recovered materials to then explore how to best seek to influence State Government procurement to further increase use of locally recovered material.

Assisting South Australian businesses

The waste and resource recovery sector is identified as having high potential for the development of new technologies and systems with global implications, and which have the potential to generate economic growth for the State.

Innovation plays a critical role in transforming the South Australian economy and has been recognised as one of the State's economic priorities. There is enormous economic potential arising from new technologies and the trend towards re-manufacturing. Innovation in resource efficiency has the potential to generate significant cost savings and productivity improvements throughout the economy. Realising the economic potential from innovation in technology is the overriding ambition of the *South Australia's Waste Strategy 2015-2020*.

One of key policy goals of transitioning ZWSA to GISA is to work with businesses, governments and the environmental sector to realise the full potential of the green economy and help to keep South Australia at the forefront of green innovation. GISA's Innovation Grants program has assisted to incentivise innovation projects and processes in waste management.

In addition, GISA is assisting waste businesses with commercialisation of innovation. Locally, GISA has entered into an agreement with a South Australian-based company (Innovyz) to run a fast-tracked mentoring and business development program for the waste and recycling sector. As part of the program, Innovyz will develop up to ten new start-ups that are leading innovators from within the waste management and recycling sector to support new recovery opportunities. Details of current participants are available at www.innovyz.com/waste-recycling-companies.

GISA is also examining opportunities for South Australian businesses to export their expertise and develop pragmatic solutions that are fit for purpose in other jurisdictions, including India, China and South-East Asia. Opportunities are also emerging for South Australia to be a training destination for overseas practitioners, whether these are in behavioural change or systems design and deployment, or alternative technology policy. There is potential to partner with South Australia's tertiary institutions with this work.

h) The transportation of solid waste across state boundaries

As reported above, waste levies have an important role in enhancing resource recovery and the multiple environmental, business and employment benefits associated with recycling. Different states currently have different waste levies, including no levy. With constitutional requirements protecting free and fair trade between states, these levy differences can encourage the long-haul movement of waste to areas with lower disposal charges. For example, the removal of the waste levy in Queensland has created a significant adverse incentive for waste facilities in New South Wales to transport waste to Queensland.

A national Waste Working Group has recently been established under the Heads of Environment Protection Authorities (HEPA) and is actively considering this transport issue. South Australia will be chairing the Waste Working Group from its next meeting.

The National Environment Protection (Movement of Controlled Waste) Measure (NEPM) requires Australian jurisdictions to track certain waste, which present a high risk to the environment, when these wastes are transported interstate. The NEPM is enforced in South Australia via the *Environment Protection (Movement of Controlled Waste) Policy 2014*. The transport of wastes interstate which are not covered by the NEPM are not subject to tracking requirements. As part of this, an intergovernmental workshop was recently held in September 2017 to explore the role of the NEPM in the transport of waste and will provide comments for consideration by the HEPA Waste Working Group.

There is currently no indication that general waste is being transported from South Australia to or other Australian jurisdictions for the purpose of levy avoidance. Further, the announced increase of solid waste levy to $103 per tonne in metropolitan Adelaide by 2019-20 better aligns with the levy applied in NSW and reduces the risk of interstate waste being dumped in SA.

Specific controlled waste types are transported interstate from South Australia for treatment and disposal where those facilities and infrastructure are available interstate and not available here. Similarly, there are specialist wastes that are brought from interstate into South Australia for appropriate treatment and disposal. Victoria has a waste levy of $250 per tonne on prescribed waste from manufacturing industries and contaminated soils. As a result, some of these hazardous wastes could potentially being transported into South Australia from Victoria for the purposes of avoiding payment of this levy. All appropriate safeguards remain in place to ensure that waste is tracked and that all potential environmental harm is managed.

Solid waste may also be transported between States for effective Australian resource recovery. The 2015-16 Recycling Activity Survey for South Australia showed that significant quantities of glass, organics, metals, plastics and other materials were imported into South Australia for resource recovery. Based on survey responses, over 177,000 tonnes of total waste materials were imported into the state in 2015-16. Around 42% of imported material was sourced from Victoria and 29% from overseas[11].

[11] Prepared by Rawtec for GISA (2017), ‘South Australia’s Recycling Activity Survey: 2015-16 Financial Year Report’.

i) The role of the Australian Government in providing a coherent, efficient and environmentally responsible approach to solid waste management, including by facilitating a federal approach

Role and directions for the Australian Government

In recent years, following the disbandment of the former Standing Committee for Environment and Water, there has been no formal forum for Environment Ministers to prioritise and respond to issues. Given the real need for regular discussion and coordination on key issues, Environment Ministers still choose to meet at least biannually via the Meeting of Environment Ministers (MEM) and EPA's regularly convene the Heads of EPA.

The South Australian Government considers that the Australian Government should take a stronger coordination role and that it has an essential role to play in addressing matters that cannot readily be tackled by any State acting alone to achieve coherent, efficient and environmentally responsible approaches for solid waste management. A coordination role by the Australian Government would also enhance opportunities for interaction with other national agencies with responsibilities impacted by waste management, recovery and trade. The South Australian Government is strongly aware that increased national harmonisation of policies and regulations for the waste industry and to support the recovery and use of recovered materials has long been sought by the waste and resource recovery sector. Current position statements for the Waste Management Association of Australia and the National Waste Recycling Industry Council continue to highlight issues relating to harmonisation[12].

Part one of the National Waste Policy, *Less Waste, More Resources*[13] concisely describes the history of collaboration between levels of government and the role and opportunities for the Australian Government. While significant progress has been made in some areas since the release of the National Waste Policy, the outcomes and key directions sought remain as relevant now as in when it was released in 2009 (refer to Box 1).

Box 1 – Outcomes and Key Directions in the National Waste Policy

Outcome: Less waste, more resources by 2020

Where we want to be in 2020:

1. Australia manages waste, including hazardous waste, in an environmentally safe, scientific and sound manner, and has reduced the amount per capita of waste disposed.

[12] Waste Management Association of Australia *Position Statement* (16 May 2016), available at http://www.wmaa.asn.au/lib/pdf/01_about/161011_WMAA_Position_Statement16.pdf and National Waste Recycling Industry Council *Policy Roadmap* (June 2017) available at http://www.nwric.com.au/wp-content/uploads/2017/04/NWRIC-Policy-Roadmap-August-2017-Edition.pdf. Both accessed 26 September 2017.

[13] Department of the Environment, Water, Heritage and the Arts, *National Waste Policy: Less Waste, More Resources* (2009).

2. Waste streams are routinely managed as a resource to achieve better environmental, social and economic outcomes, including saving water, energy, greenhouse gas emissions and finite resources, and to increase productivity of the land.

3. Australia has increased the amount of products, goods and materials that can be readily and safely used for other purposes at end of life.

4. Opportunities to safely manage, reduce and recycle waste are available to all Australians, including approaches that have been tailored to meet the needs of remote and rural communities.

5. The risks associated with waste and hazardous substances are understood and managed to minimise current and intergenerational legacy issues.

- Australia manages its products, materials and chemicals that contain potentially hazardous substances, in particular those that are persistent, bio-accumulative and toxic, consistent with its international obligations and using best available evidence, techniques and technologies.
- Local stockpiling of hazardous waste has been significantly reduced, particularly for rural and remote areas.
- There are consistent and clear requirements for disposal of hazardous material, and for content labelling of manufactured goods, that also provide a level playing field for Australian manufacturers and importers and informs consumers.

Key directions

1. Taking responsibility—Shared responsibility for reducing the environmental, health and safety footprint of products and materials across the manufacture-supply-consumption chain and at end of life.

2. Improving the market—Efficient and effective Australian markets operate for waste and recovered resources, with local technology and innovation being sought after internationally.

3. Pursuing sustainability—Less waste and improved use of waste to achieve broader environmental, social and economic benefits.

4. Reducing hazard and risk—Reduction of potentially hazardous content of wastes with consistent, safe and accountable waste recovery, handling and disposal.

5. Tailoring solutions—Increased capacity in regional, remote and Indigenous communities to manage waste and recover and re-use resources.

6. Providing the evidence—Access by decision makers to meaningful, accurate and current national waste and resource recovery data and information, in order to measure progress and educate and inform the behaviour and the choices of the community.

In seeking these outcomes and pursuing key directions, issues requiring particular attention nationally now are:

- Facilitating harmonisation on key policy matters, including jurisdictional levy differences incentivising long-haul transport of general wastes for economic benefit and energy from waste principles
- Continuing to develop and support product stewardship in Australia (discussed further below)
- Circular economy promotion, including new business models, building resilience through improved use of local markets and recognising the impacts of changing importation

requirements internationally for recyclable wastes (for example, China's upcoming ban for 24 waste types as being discussed by industry and the Department of Foreign Affairs and Trade[14]).

- Properly considering the impacts of export permits for waste on local businesses and local solutions for problematic wastes (discussed further below)
- The role of government procurement to support local market development for recycled products. Stronger demand on the domestic market will also help to ease the impact of policy changes from overseas countries that some recovered resources are exported to.
- Greater recognition and support for remote and indigenous communities to manage waste, and
- Comprehensive hazardous materials governance, recovery and destruction.

No single state or territory can effectively resolve such inter-jurisdictional matters.

Product Stewardship

A key achievement of the Australian Government in pursuit of the National Waste Policy is the *Product Stewardship Act 2011* and the establishment of the co-regulatory National Television and Computer Recycling Scheme as well as selected voluntary product stewardship schemes.

The Australian Government is best placed to establish product stewardship schemes given the protection of free and fair trade between states under the Constitution and the requirements of the *Mutual Recognition Act 1992* as well as the national or international nature of many business markets. Further schemes ought to be considered and established under this Act to ensure that participants in the product supply and consumption chain of particular goods, rather than the general community, are responsible for safe resource recovery and waste management costs.

The South Australian Government is pleased to be contributing to a draft strategic framework in this area for consideration by Environment Ministers. It also suggests that the decision-making processes under which coregulatory schemes are able to be supported (eg when industry is seeking a coregulatory scheme due to realistic free rider concerns and there is community support for recycling or safe disposal) should be reviewed to ensure Governments are effectively supporting desired community outcomes.

The South Australian Government encourages new schemes to increasingly be required to consider product design to minimise hazards, reduce waste and maximise recyclability in addition to sound end-of-life management.

[14] Information on affected wastes is discussed in various articles, for example, www.wastemanagementreview.com.au/transports-macroeconomic-headwind and www.waste360.com/recycling/china-notifies-wto-intent-ban-24-types-solid-waste-imports.

Export permits

The Australian Government administers the granting of permits for the export of hazardous waste from Australia under the *Hazardous Waste (Regulation of Exports and Imports) Act 1989*. The legislation sets out matters to which the Minister must have regard when considering a permit application and circumstances when the Minister may refuse to grant a permit, including[15]:

> The Minister may decide not to grant the permit if the permit sought is a Basel export permit and the Minister thinks that:
>
> (a) the hazardous waste could be disposed of safely and efficiently by using a facility in Australia; and
>
> (aa) such a disposal would be consistent with the environmentally sound management of the waste; and
>
> (b) having regard to the desirability of using facilities in Australia for the disposal of hazardous waste, the waste should be disposed of by using that facility rather than in accordance with the export proposals.

Permitting decisions made can have significant implications for local businesses and State Governments seeking to promote sustainable local recovery or treatment options, as well as associated industry development.

For example, the South Australian Government is aware that subsequent to the establishment of the National Television and Computer Recycling Scheme several permits have been granted for the export of leaded glass waste. These permits were granted despite South Australia having a well-established, licensed specialist recycling facility that was able to safely and efficiently take the material for a closed loop glass recycling process. This facility had initially established the leaded glass recycling process with assistance of State Government grants of $300,000 in 2009. The Government understands that the outcome of those export permits was that the business had to close its leaded glass recycling process in 2014 with a loss of around 20 Australian jobs while the Scheme was seeing greatly increased tonnages of televisions and computers being received for recycling across the nation[16].

Currently, Port Pirie based recycler Nyrstar is upgrading its facility and will have expanded electronic waste (e-waste) processing ability. The transformation of the Nyrstar Port Pirie smelter to a multi-metals processing and recovery facility will provide the technology for it to accept a wide range of electronic products such as printed computer circuit boards, cathode ray tubes, mobile phones and related devices. It will also accept photovoltaic cells from roof solar panels, alkaline batteries and potentially other batteries such as lead acid and nickel cadmium. Initial treatment rates of e-waste have been reported as expected to be around 3,000 tonnes per

[15] *Hazardous Waste (Regulation of Exports and Imports) Act 1989 s17(5).*
[16] Reported in www.adelaidenow.com.au/news/crt-recycling-will-close-on-friday-with-20-job-losses-as-dday-looms-for-autistic-workers-at-aspitech/news-story/95de38ae83d12f72d70166463cd99bc5.

annum, increasing to over 20,000 tonnes per annum as the facility ramps up, with a recovery of 98% of metal content[17].

As efforts are made to continue to enhance local resource recovery, the South Australian Government seeks that robust and transparent permit assessment processes that consider costs and impacts and involve consistent consultation with State governments be pursued by the Australian Government to ensure positive outcomes.

[17] As reported in https://www.premier.sa.gov.au/index.php/ian-hunters-news-releases/7288-biggest-e-waste-recycling-plant-in-australia-destined-for-port-pirie.

j) Any other related matters

The South Australian Government is seeking to help realise the economic potential from innovation in waste and resource recovery technologies while at the same time protecting our environment. It is committed to providing the right policy settings to attract investment, drive innovation and create jobs. Further growth, including significant job creation, has been identified as possible with the next series of modernised regulatory and policy settings.

Important measures to realise this potential include *South Australia's Waste Strategy 2015-2020*, SA EPA waste reforms and the finalisation and implementation of South Australia's Waste and Resource Recovery Infrastructure Plan, as well as exploring the potential benefits of the Circular Economy. The SA EPA is also seeking to discuss policy issues relating to increasing interest in Energy from Waste opportunities.

Waste Strategy

The *Green Industries SA Act 2004* includes the requirement for South Australia to have an integrated waste strategy and that waste strategies are to be developed at intervals of not more than five years.

Three waste strategies have been developed for the periods 2005-10, 2011-15 and 2015-20. Achievements under the strategies have included the roll-out of high-performing kerbside recycling systems, investment in important waste infrastructure, improvements in the recovery of materials from regional areas, industry resource efficiency, and commercial recycling incentives.

South Australia is a national leader in recycling and has achieved significant landfill diversion outcomes through waste prevention, reuse and recycling for over a decade. GISA will continue to enhance these efforts under the current strategy.

South Australia's Waste Strategy 2015-2020 includes the following objectives:

- 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, businesses and institutions to continue to strengthen their role in implementing zero waste strategies and programs locally, nationally and internationally.

GISA has an annual Business Plan establishing actions to implement strategy objectives.

Waste reform initiatives

The SA EPA's *Strategic Directions 2015-2018* seeks a better environment for the wellbeing and prosperity of all South Australians. The SA EPA's *Corporate Plan 2017-18* includes improved regulation in the waste and resource recovery sector as a priority.

Building on past regulatory reforms to promote sustainable waste management, the SA EPA is pursuing an extensive waste reform program to achieve sound regulation that supports fair and equitable competition, stability, growth and innovation in the sector by seeking to:

- minimise the risk of environmental harm occurring,
- support the highest and best, safe available use of secondary materials in accordance with the waste management hierarchy,
- provide more certainty and fairness for lawful operators, promoting investment, innovation and growth of the sector,
- halt illegal operators, and
- obtain levy revenue due to the South Australian Government.

In 2015, a discussion paper, *Reforming waste management – creating certainty for an industry to grow,* was released for consultation which summarise key issues being faced by the industry and discussed reform options to address these issues. Stakeholder feedback on the discussion paper, together with input from the EPA's regular stakeholder engagement groups, comprising representatives from the waste industry, local government, Renewal SA, the Conservation Council, Keep South Australia Beautiful (KESAB) and GISA, has helped the EPA identify waste reform priorities to support the sustainable operation of the waste and resource recovery sector.

These waste reform priorities include:

- Introduction of changes to the Environment Protection Act (via the Waste Reform Bill).
- Introduction of mass balance reporting.
- Introduction of an amended manner of collection of levy at landfills to achieve material flow reform and effective levy payment.
- Implementation of improved stockpiling controls.
- Better management of waste soils and waste derived materials, including revision of the waste derived fill standard.

Many of the intended reforms require legislative amendments to be able to be successfully pursued, including amendments to the Environment Protection Act, new additions and amendments to the *Environment Protection Regulations 2009* and, potentially, the *Environment Protection (Waste to Resources) Policy 2010*.

A significant step in implementing these reforms was introduction of the *Environment Protection (Waste Reform) Bill 2017* into Parliament in August 2017. The Bill seeks to provide the EPA with modernised and strengthened powers under the Environment Protection Act to better support a strong, legitimate resource recovery sector, as well as enhancing the EPA's ability to successfully prosecute illegal dumping cases. Notably, the Bill proposes to expand the EPA's powers so that it can ensure the sustainable movement of materials at resource recovery facilities to cater for environmental, abandonment or market distortion issues.

The SA EPA is also undertaking consultation until 31 October 2017 on a draft mass balance reporting scheme. The scheme proposes that facilities including transfer stations, resource recovery facilities and waste disposal depots which receive 5,000 tonnes or more of waste per annum will need to report on the monthly tonnages of materials that the site receives, stockpiles, uses onsite or transfers from the site for sale or disposal. The proposal also sets out associated record-keeping, weighbridge, video monitoring and site survey requirements.

South Australia's Waste and Resource Recovery Infrastructure Plan

In order to guide further infrastructure investment across South Australia, GISA is developing a state-wide waste and resource recovery infrastructure plan. The Infrastructure Plan meets the commitment in the 2017 update of the *30-Year Plan for Greater Adelaide:* delivery of long-term planning for waste and resource recovery infrastructure to identify locations to meet the future demand and support a resource efficient economy.

The Plan provides a clear guide for future waste and resource recovery infrastructure needs over the next 10 and 30 years, and supports a resource efficient economy in the State. It will support the objectives of *South Australia's Waste Strategy 2015-2020*, in particular, the objective of 'a stable and efficient market for investors through a clear policy framework providing a solid platform for investment decisions'. It also looks at land-use planning considerations for waste and resource recovery infrastructure to ensure adequate provision of suitable sites for waste and resource recovery sector infrastructure investment over the medium to long-term.

GISA is finalising the Plan taking into consideration feedback received during the public consultation process. Updated modelling on waste flow projection and the associated infrastructure needs and economic impact assessments has also been undertaken to incorporate 2015-16 data as baseline (instead of 2013-14).

South Australia's Waste and Resource Recovery Infrastructure Plan will be released in late 2017.