Government of South Australian

Submission to the Senate Standing Committee on Environment, Communications and the Arts

Inquiry into the Management of Australia's waste streams and the Drink Container Recycling Bill 2008

May 2008

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The Senate Standing Committee on Environment, Communication and the Arts

Inquiry into the Management of Australia's Waste Streams and the Drink Container Recycling Bill 2008

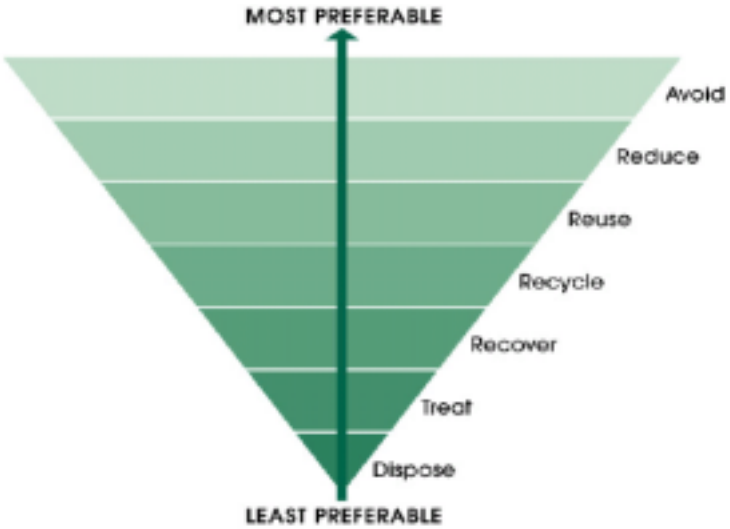
SOUTH AUSTRALIAN GOVERNMENT SUBMISSION

The South Australian Government welcomes the opportunity to provide a submission to the Senate Committee's inquiry into the management of Australia's waste streams and the *Drink Container Recycling Bill 2008*. This submission follows the Committee's Terms of Reference.

The Committee's Inquiry comes at a time when there is abundant evidence of the need to reduce our impacts on the planet or face profound changes and consequences that will affect every aspect of our environment, our lives, our economies and societies.

The South Australian Government has a strong commitment to providing policy and legislative frameworks, based on the waste hierarchy (Fig 1), aimed at avoiding or reducing waste, and recovering resources.

Fig 1: The Waste Hierarchy



This commitment is demonstrated through *South Australia's Strategic Plan* released in March 2004 and updated in 2007. The Strategic Plan is about embracing change – improving our current ways and finding better ways to do things – to meet the challenges confronting us as a community.

Attaining sustainability is one of six key strategic objectives in the Strategic Plan. Objective 3 of the Strategic Plan - Attaining Sustainability-, states:

> *'Our priority is to make South Australia world-renowned for being clean, green and sustainable. This will boost community wellbeing, safeguard future generations and contribute to our State's prosperity. The focus will be on protecting our biodiversity, securing sustainable water and energy supplies, and minimising waste.'*

Target 3.8 of SA's Strategic Plan 2007 specifies that waste to landfill be reduced by 25% by 2014 as a step towards the goal of attaining 'zero waste'. Zero waste to landfill is a new way of thinking that recognises the need for change in the way that society considers and manages its waste.

In South Australia, the *Environment Protection Act 1993* provides the legislative framework to regulate the waste stream, including the licensing of landfills. However, to drive the necessary transformation and contribute to the sustainability framework identified by South Australia's Strategic Plan, the State Government established Zero Waste SA on 1 July 2003 and released South Australia's Waste Strategy for the period 2005 – 2010, with further strategies to follow. The Waste Strategy provides a comprehensive blueprint for achieving the outcomes and targets for zero waste set out in the Strategic Plan and provides direction for continued and timely action.

The Waste Strategy 2005 – 2010 is focused on the following five key objectives:

- **Foster sustainable behaviour** - providing information and educational programs to encourage behavioural change in people leading to increased recycling or re-use of materials and the more sustainable use of resources.
- **Less waste** - achieving substantially less waste going to landfill in South Australia means that materials must be redirected towards more beneficial uses.
- **Effective systems** - South Australia needs to establish, maintain and increase the capacity of recycling systems and re-processing infrastructure in metropolitan and regional areas.
- **Effective policy instruments** - economic, regulatory and other policy measures must be introduced to give the necessary traction in the market place to encourage avoidance, reduction, re-use and recycling of waste.
- **Successful cooperation** - targets of this and future strategies will only be reached with the successful cooperation of a range of stakeholders.

South Australia's commitment to more efficient waste management is also demonstrated at the national level, through active participation in the Environment Protection and Heritage Council (EPHC) and through being a signatory to initiatives such as the National Packaging Covenant.

Recently, South Australia brought to EPHC a proposal to develop national container deposit legislation (CDL), South Australia being the only state or territory to have had such a scheme in place since 1977. EPHC at its April 2008 meeting resolved to assess the matter further through a working group and will consider the issue again at its November 2008 meeting.

a) Trends in waste production in Australia across household, consumer, commercial and industrial waste streams.

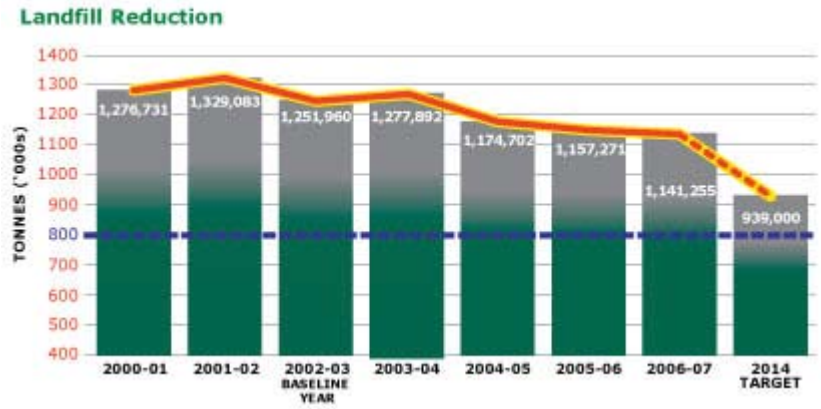
The SA Waste Strategy sets targets for reducing the amount of waste sent to landfill and increasing the amount of materials recycled from municipal, commercial and industrial, and construction and demolition waste streams. These targets are provided in Figure 2.

Fig 2: Waste Targets under the SA Waste Strategy

Waste Stream	By 2006	By 2008	By 2010	By 2014
Municipal Solid Waste	At least 25% of all material presented at the kerbside is recycled	50% of all material presented at the kerbside is recycled	75% of all material presented at the kerbside is recycled (if food waste is included)	Reduce waste to landfill by 25% (as required by *South Australia's Strategic Plan*)
Commercial and Industry	5% increase in recovery and use of C&I materials	15% increase in recovery and use of C&I materials	30% increase in recovery and use of C&I materials	
Construction and demolition	20% increase in recovery and use of C&D materials	35% increase in recovery and use of C&D materials	50% increase in recovery and use of C&D materials	

Information regarding the amount of waste disposed to landfill is reported to the South Australian Environment Protection Authority (EPA). Reductions for the period 2000 – 2007 are shown in Figure 3. Between the 2003-04 and 2005-06 recording period, there has been a 9.4% reduction in waste going to landfill during which time South Australia's population increased by 1.8%. This reduction is reflected by an increase of 6% in the amount of materials recycled, with 69.4% of total waste being recycled.

Fig 3: Landfill reductions in South Australia 2000 - 2007



There has been a number of initiatives to promote recycling and other resource recovery since 2003, including cost-based initiatives to increase the cost of waste being disposed to landfill. Such initiatives include:

- doubling of the solid waste landfill levy on 1 July 2007
- improved landfill design standards for new and upgraded landfills ensuring better environmental performance;
- closure of the older Wingfield landfill in 2004 and consequent expansion of operations at newer sites in Dublin, Inkerman and Uleybury.
- investigation into trends of materials entering landfill
- a range of programs offering support and assistance to establish more efficient resource recovery in SA.

As a market based instrument, the solid waste levy promotes improved resource recovery practices.

Of the million tonnes of waste going to landfill in SA yearly, around 400,000 tonnes are from commercial and industrial sources. In 2005/06, commercial and industrial waste accounted for 36.4% of materials sourced for reprocessing.

Significant changes have occurred in the commercial and industrial and construction and demolition waste sectors over the past three years, with large investment in new infrastructure and innovation:

- Zero Waste SA's Reuse and Recycling Infrastructure Grants Program is providing $1.4 million over three years to improving infrastructure in the commercial and industrial waste sector. Over three years, $2.05 million will also be provided in grants to regional councils and recyclers to assist with the development of recycling infrastructure and help to secure the long-term viability of recycling throughout regional SA. Future rounds of grant funding will be focussed on collection and sorting arrangements to improve facilities and introduce new technologies.

- Zero Waste SA's Research and Market Development Incentive Scheme was initiated in 2004/2005 and aims to build SA's capacity to develop innovative recycled products and to expand opportunities for local business in Australian and overseas markets.

These initiatives have made South Australia the national recycling leader, on a per capita basis, mainly due to its strong performance in the construction and demolition recycling, and resource recovery sector (Fig 4).

Similarly, the 2008 Municipal Solid Waste target (50% of material collected at kerbside is recycled) has largely been achieved, with an average rate of approximately 55% of materials now being recycled within metropolitan Councils.

Fig 4: Recycling Activity in SA 2005-2006

Annual South Australian landfill diversion and over waste recycling

	2003 -04	**2005-06**
Diversion from landfill (tonnes	2 041 776	2 395 582
Waste to landfill (tonnes)	1 161 327	1 051 687
Total waste generation (tonnes)	3 203 103	3 447 269
SA Diversion rate (%)	63.7%	69.5%
SA population	1 531 259	1 568 204
Per capita diversion (kg/person)	1 333	1 528
Per capita landfill (kg/person)	758	671
Per capita total waste (kg/person)	2092	2198

South Australia also has a strong commitment to reducing litter, which is a concern to the Government and the community. The container deposit scheme ensures higher than the national average return rates for containers captured under CDL (Fig 5), with other initiatives through, for example KESAB[1], aimed at reduce littering. The KESAB Litter Index, developed in South Australia, has been adopted as the National Litter Index since November 2005.

[1] KESAB environmental solutions is an organisation that works with the community to restore, preserve and improve the environment through various programs (eg Tidy Towns awards). It also undertakes research such as the litter index.

Fig 5: Average return rates 2003 - 2006

Glass	85%
Aluminium	73%
Polyethylene Terephthalate (PET) plastic	70%
Liquid PaperBoard (LPB)	40%
High Density PolyEthylene (HDPE) plastic	45%

Over 420 million containers per year are diverted away from landfill into recycling through CDL in SA. This includes:

140 million glass bottles	= 29,100 tonnes of glass
168 million aluminium cans	= 2,550 tonnes of aluminium
92.2 million PET bottles	= 5,570 tonnes of PET

20 million liquidpaperboard & other containers (fruit drink & flavoured milk cartons)

Zero Waste SA has also implemented the Household and Farm Chemical Collection Program, a mobile system for the proper disposal of household hazardous waste and farm chemicals across metropolitan and regional areas of the State. Between March 2004 and August 2007, collections have occurred at 134 sites within 68 Council areas and the Outback Areas Community Development Trust. A total of 724,621 kilograms of waste has been collected from 13,860 participants. Overall the top three wastes received from the public were waste oil (226,365.0kg – 31.2%), waste paint (190,552.5kg – 26.3%) and lead acid batteries (97,631.0kg – 13.5%). In regional areas, agricultural chemicals were the main type of materials collected. The average amount of waste delivered per person in the metropolitan area was 31.64kg and for the regional areas was 145.30kg. Approximately 70% of the waste collected from the public through the Program has been recycled or reused. Packaging was also recycled where possible.

An emerging issue of concern, raised through the Public and Environmental Health Council, is that with the increasing role of Materials Recovery Facilities (which sort materials for recycling or disposal), there is increased risk of injury from medical sharps. It has been suggested that there has been an increase in sharps being disposed of in domestic waste, with these sharps being used for purposes such as insulin injection. Options for management could include a product stewardship scheme. There are a number of other emerging issues such as the management of compact fluorescent lights and electronic wastes (eg computers).

In summary, South Australia performs well in construction and demolition waste recycling, beverage container recycling, steel, and leads the way in some plastics (predominantly those used in the beverage sector such as PET and HDPE polymers). South Australia has a large network of privately operated drop off centres for CDL materials and other recyclables (some 110

across the state), and councils that are committed to sustainability and resource conservation by working with State government and industry. South Australia also has industry leaders in the composting and construction and demolition recycling sectors.

Studies commissioned by Zero Waste SA add value to waste policy development and when conducted over time (as is the case in South Australia), trends and performance can be determined. While recycling activity studies in South Australia indicate that, although waste disposed to landfill is trending downwards due to growth in recycling and increased reprocessing of materials, waste production is trending upward, due in part to wasteful consumption. Decreasing the generation of waste through avoidance continues to be a challenge.

b) Effectiveness of existing strategies to reduce, recover or reuse waste from different waste streams

South Australia's Approach

The introduction of the South Australian Waste Strategy, based on the waste management hierarchy and the formation of a dedicated agency, Zero Waste SA, has resulted in dramatic changes to waste management. Using the waste management hierarchy is a nationally and internationally accepted philosophy for prioritising and guiding efforts to manage waste. It is a guiding principle of the *Zero Waste SA Act 2004* and the foundation upon which South Australia's Waste Strategy has been developed. It also underpins environment protection policies, which are legislative tools under the Environment Protection Act, such as the *Environment Protection(Water Quality) Policy 2003* and the draft *Environment Protection (Waste to Resources) Policy* currently under development.

The South Australian Government has developed a balanced set of legislative and non-legislative policy measures to increase awareness and encourage behavioural change. The measures aim to ensure that the South Australian community moves up the waste management hierarchy from disposal to avoidance. Amongst others, these measures include:

- Increasing Environment Protection Authority powers and associated improved environmental performance at licensed landfills and recycling operations
- Limiting the development of any new landfills servicing metropolitan Adelaide
- Establishing Zero Waste SA and legislative frameworks to enable State and Local Government, industry and the community to work together to drive a new strategy for waste avoidance and reduction, waste reuse and recycling and waste disposal.

- Developing the South Australian Waste Strategy 2005 – 2010 that builds on innovative and strong policy decisions, such as South Australia's Strategic Plan, and our highly successful container deposit legislation (CDL).

Zero Waste SA has:

- Provided a range of incentives to local government and industry to better manage waste and resources in SA
- Produced South Australia's first state-wide Waste Strategy (2005-2010)
- Developed new education programs for school children, eg The Wipe Out Waste Schools (WOW) Program
- Strategically funded new investment in infrastructure
- Reduced waste in government (greening of government program)
- Identified litter and illegal dumping issues to be addressed
- Researched new markets for recycled materials through grants programs
- Collected household and farm chemicals for treatment or disposal
- Provided incentives to councils to introduce high performing kerbside recycling systems
- Sponsored the development of regional waste management plans with local government
- Promoted recycling at public events, and
- Reduced plastic bag use by the community.

c) Potential new strategies to reduce, recover or reuse waste from different waste streams

Build future capacity

In 2008, Zero Waste SA entered into a partnership arrangement with the University of South Australia to create a centre of excellence (or equivalent). The aim is to build long term capacity in undertaking activities at the higher end of the waste hierarchy (waste avoidance, reduction and, resource efficiency) and create a focal point for waste-related research.

In an effort to improve the efficiencies of state government services to the business community, four agencies (SA Water, EPA, Zero Waste SA and the Centre for Innovation – Department of Trade and Economic Development) are forming an alliance called the "Business Sustainability Alliance" (BSA).

BSA seeks to:

- advance the delivery of government services to industry sectors and specific businesses in order to enhance environmentally sustainable practices including climate change response, energy efficiency, waste minimisation, water conservation, lean manufacturing, environmental responsibility, strategic planning/staff engagement, value chains.
- better coordinate BSA activities and enable more strategic approaches to their service delivery

- liaise with business associations, research bodies (such as universities), Local and Federal governments to improve the services to business and to promote the adoption of more sustainable practices.
- increase the efficiency, effectiveness and coordination of BSA services
- act as a centralised coordinating body to facilitate the attraction of extra funding and resources from external sources.

Some of the strategic delivery mechanisms for the BSA that have already been initiated are:

- A Memorandum of Understanding signed by the CEs of all the four agencies enabling the formal agreement to collaborate as the BSA and to formulate a business plan.
- the creation of a "single point of entry" website for businesses to be able to gain access to all relevant environmental sustainability information including sources of grants, advice, education / training, audit tools, legal information and agency programs. This website will be linked to both government agencies and credible third parties (eg universities, industry associations and registered training organisations).
- "Business sustainability" information seminars including water and energy reduction, waste minimisation, lean manufacturing principles and environmental management systems, presented by the members of the BSA.
- The Resource Efficiency Assistance Program (REAP) is being created to assist businesses to reduce their consumption of resources and reduce the production of waste while ensuring that environmental management is integrated into the business plans of the organisation. This program will use a diagnostic tool to assess and benchmark each aspect of the business, resulting in a series of recommendations on how to improve the business including training packages to address deficient practices.

In summary, government strategies to assist businesses to reduce, recover, or reuse waste will be directed through the Business Sustainability Alliance as a centralised coordinating body in collaboration with all relevant agencies, business associations and research bodies.

Financial incentive programs

Zero Waste is funded by hypothecation of 50% of the monies collected through the waste levy (administered by the EPA).

Zero Waste SA offers a suite of financial incentives, advocacy and strategic partnerships, to facilitate the achievement of South Australia's Waste Strategy. Funding has been provided for improved municipal kerbside recycling infrastructure, infrastructure for recycling materials sourced from the commercial and industrial and construction/demolition sectors, assistance for public place recycling, and market development for problematic waste streams. Zero Waste SA also plays an integral role in promoting behaviour change to achieve greater waste reduction, through programs such as the

Plastic Bag Reduction Program and Wipe Out Waste program with schools. Zero Waste SA also supports KESAB programs.

d) The economic, environmental and social benefits and costs of such strategies

International, interstate and previous State-based analysis provides reassurance that South Australia's Waste Strategy 2005-2010 is an optimal approach that makes good economic, social and environmental sense. In particular, South Australia is building on previous successes demonstrated in promoting eco-efficient principles through a former Pollution Prevention Program and through South Australia's container deposit legislation which has been an effective form of extended producer responsibility.

South Australia will continue to encourage increased uptake of resource efficiency measures in industry through Zero Waste SA's incentive programs and initiatives.

Policies based on a narrow economic approach to cost benefit analysis however, do not lead to good outcomes for the community and the environment, given there is too much uncertainty in valuing social and environmental benefits in economic terms.

e) Policy priorities to maximise the efficiency and efficacy of efforts to reduce, recover or reuse waste from different waste streams

A mid term review of South Australia's Waste Strategy 2005-2010 has commenced. The mid-term review will provide guidance to the development of the 2010 – 2015 Waste Strategy.

Policy priorities in the current Waste Strategy 2005-2010 include:

Improved use of targets
South Australian strategies and policies in relation to waste management will continue to set targets to provide direction and a means for checking progress. South Australia's Waste Strategy 2005-2010 incorporates non-mandatory targets and importantly recognises that future waste strategies will look to re-examine, and where necessary adjust, these targets based on improved data acquisition and knowledge obtained through many of the initiatives in the Waste Strategy.

Continue to shift the emphasis along the waste hierarchy
South Australia will continue to use the waste hierarchy as a guide to contemporary and progressive waste management policy development. The waste hierarchy is a nationally and internationally accepted guide for prioritising waste management practices with the objective of achieving

the optimal environmental outcome. Importantly, the waste hierarchy also provides an approach that enables meaningful engagement with community – it provides an easy to understand guide by which the community can assess waste management options both at the personal level and in relation to third party approaches.

Extended producer responsibility and product stewardship

A variety of policy models is available for extended producer responsibility (EPR) schemes, ranging from purely voluntary to fully regulated. Local analysis and international experience suggest that schemes with some regulatory intervention are the most effective in achieving EPR objectives. Future policy development will continue to examine the most effective approach to EPR. Where such schemes are developed through the National Environment Protection Council (NEPC) as a National Environment Protection Measure, South Australia has the legislative capacity, through the Environment Protection Act, to implement such schemes.

Climate change, greenhouse gas, carbon

Climate change, greenhouse gas and carbon are increasingly prominent as waste management policy drivers. One of the means to slow the potential for climate change is by retaining the energy embodied in waste products by re-use and recycling. Reducing demand on the processing and manufacturing of primary materials by re-using and recycling secondary materials (waste products) saves energy and the resulting emissions associated with production processes.

Fostering sustainable behaviour is a cornerstone of the South Australian Waste Strategy 2005-2010. With increasing resource scarcity, policy priorities will have to address complex issues associated with consumption behaviour.

Market-based instruments

The waste depot levy (waste levy) and container deposit legislation are currently the only policy-based economic instrument the South Australian Government has to address market failure and influence waste management. The waste levy is incorporated by landfill operators into the total price of the gate fee charged to users of the facility. In the absence of other policy intervention measures that address resource efficiency and the externality costs of landfill, the waste levy applied at 'end of pipe' is a broad economic instrument that catches all (with the exception of illegally dumped materials).

f) Drink Container Recycling Bill

South Australia has operated a successful container deposit scheme (CDS) since 1977 that ensures the recovery of about 70% of containers that are subject to deposit requirements. This compares with an estimated national recovery rate of about 40% according to the Packaging Stewardship Forum. In 2006/07 South Australia's CDS facilitated the recovery of over 450 million containers for recycling. This is over 200 million more containers than would have been recovered in the absence of container deposit legislation, assuming that container recovery in SA would have been comparable to the national average.

The South Australian Government strongly supports the introduction of a national CDS. As a result of the discussion at the recent meeting of EPHC, it was decided to establish a national working group to conduct an assessment of potential options for national measures, including a CDS to address resource efficiency, environmental impacts and the reduction of litter from packaging wastes such as beverage containers.

Container deposit systems are a product stewardship scheme that is intended to encourage recycling of used containers by requiring consumers to pay a deposit at the time of purchase of a container that is refundable upon its return to a designated collection facility. These schemes operate by providing a financial incentive to consumers to recycle and also by requiring producers of beverages to manage effective container return services.

Beverage container deposit systems (CDS) are now in use in South Australia, most of Canada, 11 states in the USA, 8 European countries, Israel, and Kiribati. Substantially higher container recovery rates are a feature of these schemes (ie 50 – 95%) in comparison with jurisdictions that do not employ CDS (ie 20 – 45%).

A detailed cost-benefit analysis regarding the introduction of a CDS in NSW by Dr Stuart White from the University of Technology Sydney in 2001 concluded that a CDS in conjunction with kerbside recycling would result in significant net benefits and recommended that a container deposit system be considered at a national level. A review of the National Packaging Covenant identified disparate views regarding deposit refund systems, with some stakeholders arguing that a national beverage container deposit scheme would significantly improve glass recycling and reduce contamination of paper, whilst others argued that it would have a negative impact on kerbside recycling and/or that it is too costly.

Container deposits systems were also criticised by the Productivity Commission (PC) in its 2006 report on waste management in relation to impacts on overall waste recovery rates, compatibility with kerbside recycling and costs.

Despite these negative views and the opposition of a number of beverage producers and retailers, there appears to be widespread support for container deposit systems, particularly amongst consumers and Local Government and also has some support from beverage producers.

Local Government Issues

- The Eastern Waste Management Authority has advised that South Australia's container deposit legislation (CDL) enables it to set compactors at 200 kg p/M^3 on its trucks compared with 120 kg p/M^3 on trucks used for kerbside recycling in Victoria. Greater compaction together with reduced weight enables East Waste's vehicles to double the recyclable material that it can transport.

- The Alexandrina Council in SA has advised that over 30% of paper and cardboard collected via kerbside collections in the eastern states is degraded or completely wasted due to glass contamination, whilst in SA, the removal of a significant amount of glass from kerbside recycling due to CDL has resulted in a wastage rate of about 10%.

- The Local Government Association of SA supported an increase in the container deposit in SA because a reduction of glass in kerbside collections will reduce contamination of other recyclables. The value of recyclable paper and cardboard currently saved from spoilage by glass as a result of CDL in SA is about $2.8 million pa.

- Modelling undertaken for the White Report found that under the CD options examined, overall waste management cost savings for Local Government in NSW would be about $22 million - $50 million pa.

- An assessment of the financial impacts of CDS for the Victorian EPA using three case studies by Nolan-ITU concluded that a CDS would result in a significant reduction in the net cost of providing kerbside services. The estimated cost reduction for the Councils studied was in the range of $0.75 million - $1.24 million pa.

- A US Congressional report recognised that CDS reduces operating costs of kerbside collection systems and noted that studies suggest that a greater diversion of waste from disposal can be achieved at a lower cost, if both CDS and kerbside collection programs are used.

Litter

While kerbside recycling makes a valuable contribution to resource recovery, it does not address recovery of containers consumed away from home. Away-from-home consumption accounts for about 50% of all containers used. This makes beverage containers a significant potential source of litter. SA's container deposit system has proven to be very effective in reducing beverage

container litter with data from Keep Australia Beautiful indicating for example, that while beverage containers make up around 50% of litter (by volume) in Western Australia, they account for less than 20% of litter in SA.

The White Report estimated that the introduction of a CDS could reduce annual expenditure on litter management by NSW Councils by about $4.5 million pa. Extrapolation of these estimated cost savings (based on the fact that NSW accounts for about one-third of national population and economic activity) indicates a potential saving in litter management costs for Local Government across Australia of well in excess of $10 million pa.

Environmental Impacts

The environmental impacts of introducing a CDS in NSW were assessed in the White Report using life-cycle assessment. The estimated environmental benefits include emissions of greenhouse gases reduced by about 120,000 – 180,000 tonnes pa, embodied water use down about 5.5 – 8.1 gigalitres pa, embodied energy use down about 1.9 – 2.8 petajoules pa and recovery of about 180,000 tonnes pa of packaging material. These benefits were valued using recognised conservative environmental values at about $100 million - $150 million pa.

The indicative potential environmental benefits of a national CDS can be broadly estimated by extrapolating from these findings and include reduced emissions of greenhouse gases by about 360,000 – 540,000 tonnes pa, embodied water use down by about 16.5 – 24.4 gigalitres pa, embodied energy savings of about 5.7 – 8.4 petajoules pa and recovery of about 540,000 tonnes pa of packaging material. Indicative national environmental benefits are valued at about $300 million - $450 million pa.

Impacts on Beverage Producers and Retailers

For beverage producers and retailers, the biggest concern regarding CDS is the possibility of reduced sales as a result of higher prices. Given that deposits are refundable and the generally high return rate on deposit containers, it is appropriate to assess the impacts of CDS on demand, net of deposit redemption (ie exclude the deposit itself from the analysis). It is therefore, the inclusion of handling fees in retail prices that can affect demand.

On the basis of available evidence regarding the sensitivity of demand for beverages to price movements, the White Report concluded that a CDS would reduce revenue to producers by about 0.33% - 0.65% under the various options considered. However, even these estimates of a modest impact on sales are likely to overstate the impact of a CDS due to the effects of economic and population growth.

Impacts on Consumers

Container deposit schemes impact on consumers via prices and effort required to return containers for deposit redemption. The White Report argued that a value for consumers' time should not be included as a CDS cost, as people, when given an opportunity in relation to widely supported issues such as waste minimisation and recycling tend to think like citizens rather than merely as self-interested consumers. In support of this view, the White Report noted that kerbside recycling benefits from a large input of unpaid labour and that CDS enjoys strong support in SA. The argument for excluding a cost estimate of consumers' time for participation in a CDS is also supported by studies that have identified a willingness to pay for drop-off recycling and kerbside recycling and also to spend more time recycling. This reflects the fact that for some households there is an incentive to recycle because garbage disposal yields negative utility, while recycling yields positive utility.

Both Nolan-ITU and Access Economics argued that the value of consumers' time should be incorporated into analysis of CDS. However, even if it was considered reasonable to include this cost in any analysis, the offsetting utility derived by consumers from participating in CDS should also be incorporated, while based on experience in SA, the number of visits to return facilities would be substantially less than assumed by Access Economics and Nolan-ITU.

Container Recycling Infrastructure as a Basis for Other Product Stewardship Schemes

SA's container deposit legislation has encouraged the establishment of over 100 recycling centres across the State. Buy and drop-off services are provided for a broad range of materials in addition to deposit containers. These centres account for about 66% by weight of all commodities returned through recycling centres and kerbside recycling combined in South Australia.

The Boomerang Alliance (Australian Conservation Foundation, Arid Lands Environment Centre, CleanUp Australia, Conservation Council of South Australia, Conservation Council of Western Australia, Environment Centre of the Northern Territory, Environment Tasmania, Environment Victoria, Friends of the Earth, Greenpeace Australia Pacific, NSW Nature Conservation Council, Queensland Conservation Council, Tasmanian Conservation Trust and Total Environment Centre) recognises that per capita collection of recyclables in SA is well above other States and that its deposit system plays an important broader role in recycling by providing a base for collection centres to be established and expand to collect other materials and making people more aware of the value of recycling in general. In remote areas where there is limited or no kerbside recycling, it has helped facilitate the establishment of collection depots.

Economic Impacts and Opportunities

The White Report found that the environmental benefits of increased recovery and recycling of used containers exceed the costs of a combined kerbside-CDL system in NSW by about $70 million - $100 million depending on the type of CDS chosen. It also concluded that the net environmental benefit of recovering used containers is about 8 – 9 cents per container, while the recovery cost of combined CDL and kerbside recycling would be about 2 – 3 cents per container.

The Boomerang Alliance concluded that its proposed CDS for WA would operate with a surplus of 0.97 cents per container after sales of recovered materials and the environmental benefits would be about $45 million pa.

Nolan-ITU acknowledged that its assessment of CDS only considered financial impacts and did not investigate environmental impacts. It acknowledged however that other studies have found that the environmental benefits of recycling both through kerbside or CDS or both exceed costs.

A national CDS also has the potential to provide a boost for recycling in Australia by significantly increasing the supply and quality of raw materials for reprocessing. The importance of CDS as a mechanism for encouraging resource efficiency has also been recognised by Diageo, a major producer of alcoholic beverages with operations in over 180 countries including Australia.