

Second edition, 2011

Turning Rubbish into Community Money

The benefits of a 10¢ deposit on drink containers in Victoria.

By the office of Colleen Hartland MLC

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Note from Colleen Hartland

This year I will re-introduce my Bill for a 10¢ refundable deposit on drink bottles, cans and cartons in Victoria.

In 2009, my Private Member's Bill passed in Victoria's upper house (the Legislative Council), where it gained support from all opposition parties. The (then) government famously refused to debate the Bill in the lower house, where they had an absolute majority.

This report is an updated version of the report I released with the 2009 legislation. My aim for this report now, as it was then, is to help other MPs and the community see the benefit of a 10¢ deposit system using ideas that we all hold in common, no matter our political background.

In the Northern Territory this year, 10¢ deposit legislation passed unanimously. It was not a party-political issue. Nor should it be.

We all want to create jobs in existing and new local industries. We all want to reduce litter in our parks, creeks and streets. We all like to make fundraising opportunities for community and sports groups.

The Victorian MPs who supported my 10¢ deposit legislation in 2009 are now in government.

If they continue to support Victoria acting now, rather than waiting for a national scheme, the Bill will pass.

To this end, I have added a new section that sets out reasons for MPs who prefer a national scheme to support state-based legislation, both as an interim measure and as a powerful mechanism to bring about national change.

I have met school kids campaigning for 10¢ deposits who weren't even born when discussions for a national scheme commenced.

We can be a catalyst for a national scheme, without losing the financial, social and environmental benefit to Victoria of getting in 'on the ground floor'.



Colleen Hartland MLC

Western Metropolitan Region

Victorian Greens spokesperson for
Recycling and Waste Management

01 Introduction

Significant environmental, financial and social benefits

This report provides a snapshot of the likely financial and environmental impacts of a Drink Container Deposit System in Victoria, based on the model proposed by Colleen Hartland MLC in her Private Member's Bill Environment Protection Amendment (Beverage Container Deposit and Recovery Scheme) Bill 2011.

This is an updated edition of the report released in conjunction with Ms Hartland's Private Member's Bill in 2009.

It does not present a full economic analysis; rather it looks at the broad changes in financial flows and costs, and the associated environmental benefits from increased recycling of drink containers.

Like the 2009 report, this edition draws significantly from Boomerang Alliance data and focuses on the benefit to local councils and shires in Victoria.

Executive Summary

Ms Hartland proposes a 10¢ returnable deposit on all drink bottles, cans and cartons in Victoria.

The deposit would be incorporated in wholesale prices, and redeemed by the consumer at depots, with no administrative burden on retailers.

The system is based on a 'hub and spokes' model, with a large scale 'Hub' geared to handling bulk container returns, to consolidate materials and act as administrators for the depots and collectors in their region. Each Hub will report back to a small administrative team in the Environment Protection Authority (EPA).

The scheme is self-funding, using the sale of recovered drink containers (recyclate) and unredeemed deposits for running costs, including promotion of recycling.

Significant environmental, economic and social benefits will result from the introduction of the system. Beverage container recycling rates would increase dramatically from the current 49.5% to 83%, while also providing over \$21.5 million in annual savings to ratepayers.

This is derived from an increased recovery of over 124,000 tonnes of packaging materials for recycling, a reduction of over 10% in packaging waste sent to landfill, and a 12-15% reduction in litter.

Victoria's Greenhouse Gas emissions would reduce by over 456,000 tonnes of Co2-e (carbon dioxide equivalent) per year. That's about the same as switching more than 65,000 Victorian homes over to 100% renewable energy. Enough water would be saved to permanently supply over 4,700 homes. Air quality improvements would be similar to taking over 32,000 cars off the road.

300 - 400 new jobs would be created in Victoria, and more than 300 recycling centres. Victorians would see incentives for new recycling for cafes, restaurants and offices, where recycling is presently poor.

Implementing a container deposit system would achieve these benefits at \$38.90 per tonne less than the current cost of kerbside and drop off recycling. Importantly, it would enhance the economic viability of kerbside recycling.

Every local council and shire in Victoria would benefit financially from the scheme, and some would benefit from the provision of recycling services and new recycling industries.

WHAT'S IN:
All disposable drink bottles, cans and cartons.

This includes water, milk, juice, fizzy drinks, beer, wine and spirits.

WHAT'S NOT:
Bottles that are made for refilling, food containers, drink cups.

The Waste Problem

Why Victoria needs fresh recycling ideas

Victorians are amongst the greatest consumers of packaging in the world. Some materials are recycled, but a staggering 103 kilograms of packaging waste per person is landfilled every year.

Victorian waste

Victorians consume almost a million tonnes of packaging each year. Drink containers represent about 30% of this packaging, but only half of all used containers are recovered for recycling.

Of the 49.5% of used containers that are recycled, most are recovered through residential kerbside collections organised and financed by local governments. There is little or no recycling available for food and drink containers that are discarded away from home, so they end up as litter or in landfill.

An increasing amount of drinks are consumed away from home whether it is at the office, a restaurant or pub, take-away food, or relaxing outdoors. The increased consumption of bottled water has led to an increase in the amount of PET plastic in the waste stream that ends up in landfill. Office workers are now significant purchasers of drink containers. While they would recycle at home, they often don't have this option at work.

Victorian local governments pay for the cost of collecting and recycling waste from households. This cost amounts to a hefty \$121 million per annum to ratepayers¹.

Local Government in Victoria also spends over \$74 million to combat litter². Drink containers comprise about 30% of the total volume of litter³.

7.8% of all materials collected for recycling in household recycling bins is 'contaminated' and has to be treated as rubbish⁴. A major source of contamination is broken glass containers.

Victorian trends

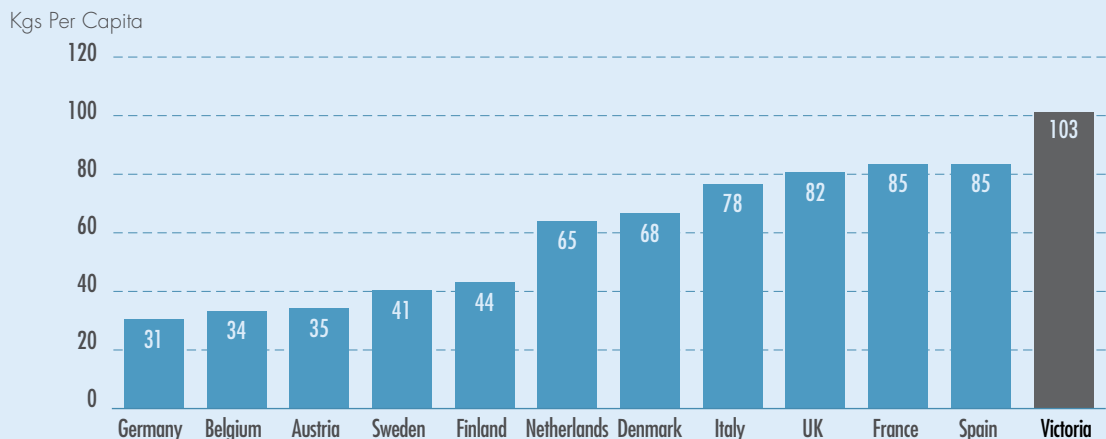
Over the last 3 years the costs of kerbside recycling in Victoria have increased at an average annual rate of 13.85% for only a modest increase in material recovered (approximately 4%).

The ratio of yield to cost demonstrates that the kerbside recycling system is now overstretched as it attempts to recover a range of materials far exceeding the purpose for which it was designed. Governments have not been able to provide a reason for continuing

"I'm taking the lead and hope that other states will follow."

PAUL HENDERSON,
NT Chief Minister
announcing a container
deposit system,
11 March 2009

Figure 1 | Annual Consumption of Packaging (Net of Resource Recovery)



Note: Victoria's per capita consumption of packaging is more than Germany, Belgium & Austria combined.⁵

¹ National Environment Protection Council 2009-10 Annual Report p291

² Sustainability Victoria 2008-09 Local Government Annual Survey

³ Keep Australia Beautiful: 2006 National Litter Index

⁴ National Environment Protection Council 2009-10 Annual Report

⁵ Assure 2004 for European figures

⁶ Boomerang Alliance presentation to the TEC/Environment Victoria 'State of Waste' forum.

to increase costs at triple the inflation rate for little benefit while ignoring viable alternatives.

These increases are not surprising. When the National Packaging Covenant was renewed in 2006 the Boomerang Alliance warned that the NPC strategy locked local government into an approach that would dramatically increase recycling costs for only marginal gains.

Extending recycling services to public rubbish bins has seen costs rise at well above inflation, as it is much more expensive per tonne to create and maintain public place recycling than kerbside.

Parks, beaches and tourist hot-spots are a great asset to Victoria, and they are also places where drinks in containers are consumed away from home.

Councils and shires that contain tourist areas and natural open space shoulder a greater burden for the cost of public place recycling and litter collection than other councils, including rubbish and litter from visitors who do not pay rates.

These shires often have a comparatively low rate base, smaller annual budgets and face the other challenges of rural and regional areas. It is to their credit that they so often take pride in the value of prioritizing environmental services.

The costs of municipal recycling are increasing at 3 to 4 times the rate of inflation in Victoria⁶. Similar trends are evident across much of Australia.

One of the most important determinants of good financial returns for recyclate is a reliable supply of high quality (low contamination) recyclable materials.

While the price of secondary materials will always fluctuate, governments can help stabilize the local market by adopting long term sustainable instruments to underpin packaging recovery.

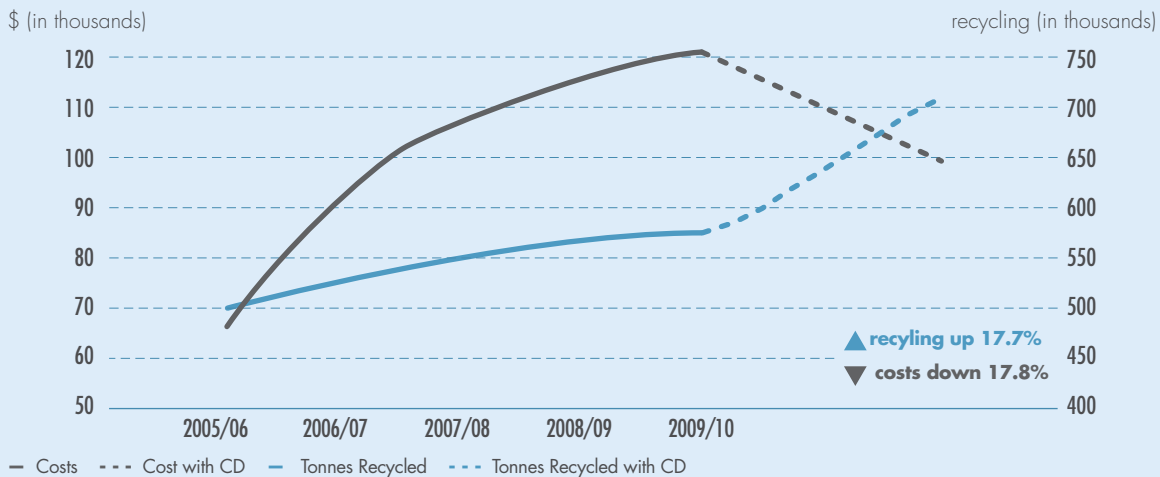
The price of recyclate in Victoria remains lower than in South Australia where a 10c deposit system provides cleaner materials (see p.6).

While new technology has enabled more efficient and cost-effective separation and re-use of materials from mixed bins in Victoria, it is hampered by problems such as glass bottles breaking under compaction before they reach the gate of the recovery plant.

For example, glass bottles are expensive to recover as a resource, provide a low return for the cost of separation and contaminate other recyclable materials. Broken glass wears out expensive grinders in organic materials recycling plants and reduces the value of the compost that is produced.

Figure 2 | Victorian Municipal Recycling Trends & Projection (with CD)

Municipal kerbside and drop-off, not including green waste



► Recycling costs have risen by 13.85% over the past 3 years whilst recycling rates have increased by about 4% at the same time.

With container deposits costs will drop by 17.8% while recycling will increase by 17.7%.

03

Global Container Schemes

Jurisdictions that apply deposits and refunds to achieve better resource recovery

1 United States

In the USA, 12 States and one territory have “bottle bills”.

California “California Refund Value”, “Cash Refund Value” or “CRV” (5¢; 10¢ for bottles 24 fl oz or greater). The CRV scheme has been in place since 1987, but a refund value increase in January 2007 led to a 16% increase in recycling. Beer, malt, wine & distilled spirits coolers, all non-alcoholic beverages, except milk. Beverage container recycling rates have grown from 52% in 1982 to 82% in 2009. The CRV is funded by unredeemed deposits, at no cost to the state. Surplus funds provide grants for recycling programs and promotion.

Connecticut (5¢), 1980; not charged on milk. Bottled water added in 2009.

Delaware (5¢), 1983. Beer, malt, ale, soft drinks, mineral water, soda water.

Guam (5¢). Legislation passed 2011. All drink containers up to 64oz, except milk.

Hawaii (5¢), 2005. Limited alcoholic drinks containers, but all soft drinks except milk. 76% redemption rate in 2010.

Iowa (5¢), 1979. Beer, fizzy drinks, mineral water, wine coolers, wine & liquor. 86% redemption rate.

Maine (Wine/liquor 15¢, otherwise 5¢), 1978. All drink containers to 4 litres, except dairy and unprocessed cider.

Massachusetts (5¢), 1983. Beer, malt, carbonated soft drinks, & mineral water. American Journal of Public Health (October 1986) attributed a sixty per cent decline in reported childhood glass lacerations in Massachusetts to their bottle deposit system.

Michigan (10¢), 1978. Beer, soft drinks, carbonated & mineral water, wine coolers, canned cocktails. Highest deposit/refund and highest redemption rate in USA at 96.9%. 75% of unredeemed deposit fund goes to environment programs.

New York (5¢), 1982. Bills currently before New York State Assembly to expand scheme and provide incentive for refilling bottles.

Oregon (5¢), 1972. Originally included fizzy drinks and beer. Water bottles were added to the scheme in 2007, and wine and juice bottles in 2009.

Vermont (Liquor 15¢, otherwise 5¢). Beer, malt, carbonated soft drinks, mixed wine drinks, liquor. 85% redemption rate in 2010.

2. Canada

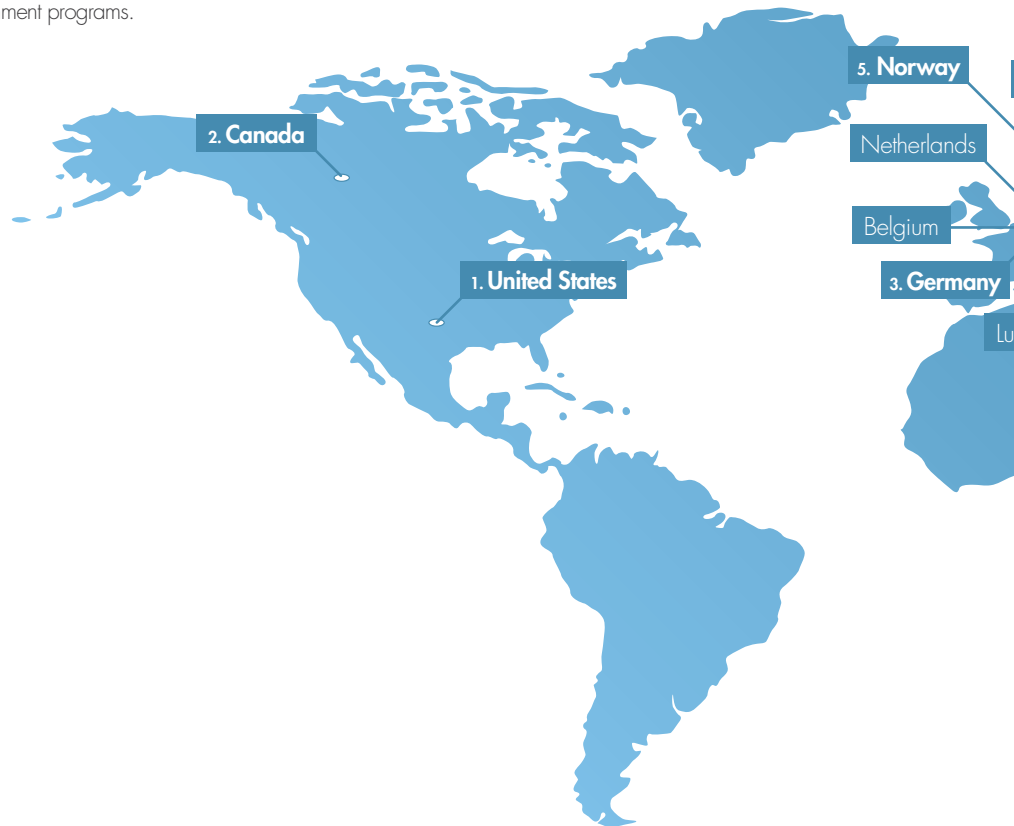
In Canada 12 of the 13 provinces have some form of container deposit system:

- Eight provinces have deposit refund systems on a wide variety of drink containers except those containing milk products.
- The other four have refund systems for all containers, beer only, alcohol only and beer and soft drink only.

Deposits range from 5¢ to 40¢ per unit, depending on the size of container and whether it is refillable.

Ontario recently celebrated the one billionth container returned since its program started in 2007.

The program is enthusiastically promoted by big retailers like The Beer Store, together with government and NGOs.



3. Germany

The German government fought lobbyists and the bottling industry in order to implement its *Einwegpfand* (single-use deposit) scheme, which became effective in 2003. The scheme does not cover containers for fruit juice, wine, spirits/liquors and certain dietary drinks. €0.25 deposit on cans, single-use glass and plastic bottles, with a lower voluntary deposit on refillables, which are a big part of the beverage market.

4. Denmark

All domestic beer and soft drink sold in refillable bottles (97% of market share). Metal containers are effectively banned. Deposit/return system for imported containers made of glass and plastic. Return rates of 99.5% for beer and soft drinks, 99% for refillable PET, 60% for liquor, 80% (reuse and recovery) for wine.

5. Norway

The scheme is run by industry. The excise tax on containers is levied in inverse proportion to the return rate (higher tax return rates lead to lower rates). Refillable containers with greater than 95% return rate are exempt from the tax. Beer and soft drinks in refillable containers comprise 99% and 98% of the market respectively, and have a recovery rate of 98%. The system includes 9,000 depots. There are 3,000 reverse vending machines giving vouchers in return for empty containers at retail stores.

6. Sweden

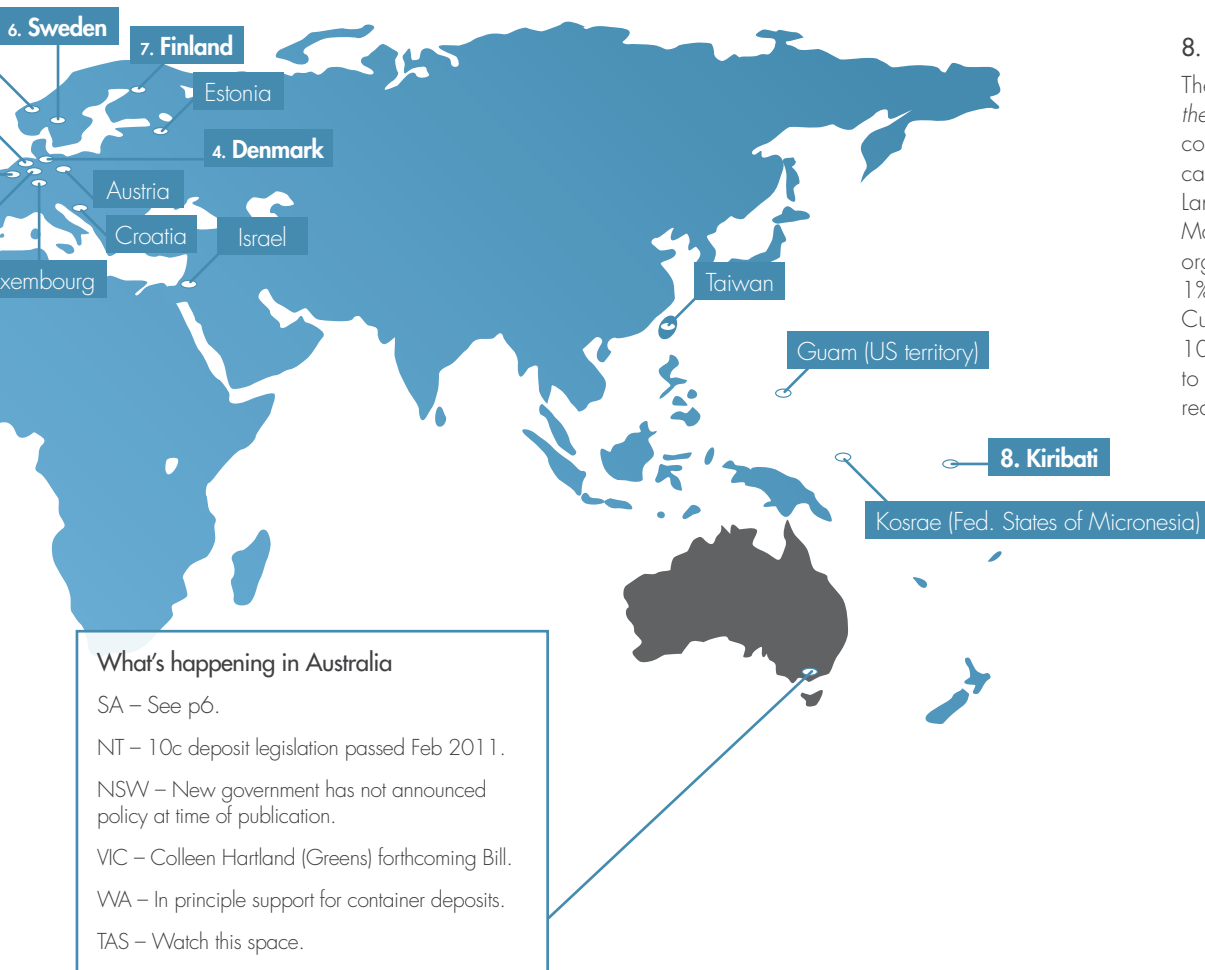
Most drinks in containers are included in deposit system, which has expanded since its introduction in 1984. Provisions include a mandatory recycling rate for aluminium cans. There is now a 91% return rate for aluminium cans in Sweden - the highest in the world. The deposit price varies from 0.50 SEK to 2 SEK.

7. Finland

Levy on non-refillable containers, with a refundable deposit as an alternative to the tax. Includes soft drinks, wine and spirits. Recovery rates of 95-98% for refillable (95% and 98% of the beer and soft drink market respectively and a major part of the wine market). 75% recovery for single use containers.

8. Kiribati

The *Kaaki Mange!* (*Send back the rubbish!*) project includes drink container and battery deposits, car recycling and organic waste. Landfill has reduced by 60% since March 2004, with recyclable and organic waste reduced to less than 1%. The drink bottle levy is paid to Customs Service by the importer. 10% of levy moneys are retained to fund the scheme and provide recycling infrastructure.



South Australia has operated a container deposit/refund system since 1977. Since then, it has expanded services to include kerbside collection, expanded the range of containers to which the deposits/refunds apply and increased the deposit to 10¢.

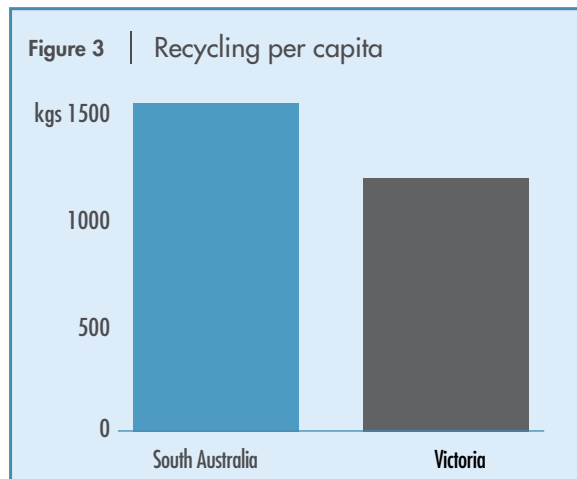
Comparison between South Australia and Victoria¹

“Since the refund was increased [Sept 2008], approximately 1.125 billion beverage containers have been returned to recycling depots for a refund, representing more than \$112.5 million going back into the pockets of the community.

“Since the refund was increased we have also seen more than 91,300 tonnes of containers diverted from landfill.”

PAUL CAICA, SA Environment and Conservation Minister, 22 July, 2010

South Australia has a drink container recovery rate of over 80% and a noticeable lack of litter on highways, parks and beaches.



South Australians recycle over 1.5 tonnes per person per year compared to Victorians' 1.2 tonnes. Even then, Victorian figures are inflated by the inclusion of some pre-consumer industrial waste recovery. This is not widely accepted as “recycling” and is not included in South Australia’s estimates.

Further, the cost of kerbside recycling in SA is comparable to Victoria, even though they face considerably higher costs to transport recyclate to reprocessing facilities – many of which are in Victoria.

Table 1. Price comparison per tonne.

Type	Vic Kerbside	SA CDS
Glass	\$72	\$90
Aluminium	\$2,000	\$2,500
Plastic	\$550	\$750
Steel	\$120	\$150
Paper	\$120	\$150

Kerbside collections in South Australia are supported by the container deposit system in several ways:

1. When householders elect to use the kerbside collection system for deposit-bearing materials, local governments derive income from forfeited refunds. South Australian councils have reported incomes of up to \$90,000 per year from unredeemed deposits².
2. The deposit/refund system improves the economic viability of kerbside recycling by reducing volumes and, therefore, reducing the number of collection services and sorting operations which are needed and reducing landfill and associated levy costs.
3. South Australian recycling collectors report that the clean materials sourced through the Container Deposit System are sold at a premium. Comparative reported recyclate prices for glass, aluminium, mixed plastic, steel and paper are shown in the Table 1³. Prices paid for paper and newsprint are also higher. Local recyclers claim this is due to the paper being cleaner and of higher quality as there is less contamination from residual organics and glass.

While these higher prices are justified, we have not used higher prices for steel and paper in our estimate of costs, as we are unable to confirm the South Australian experience will be repeated in Victoria.

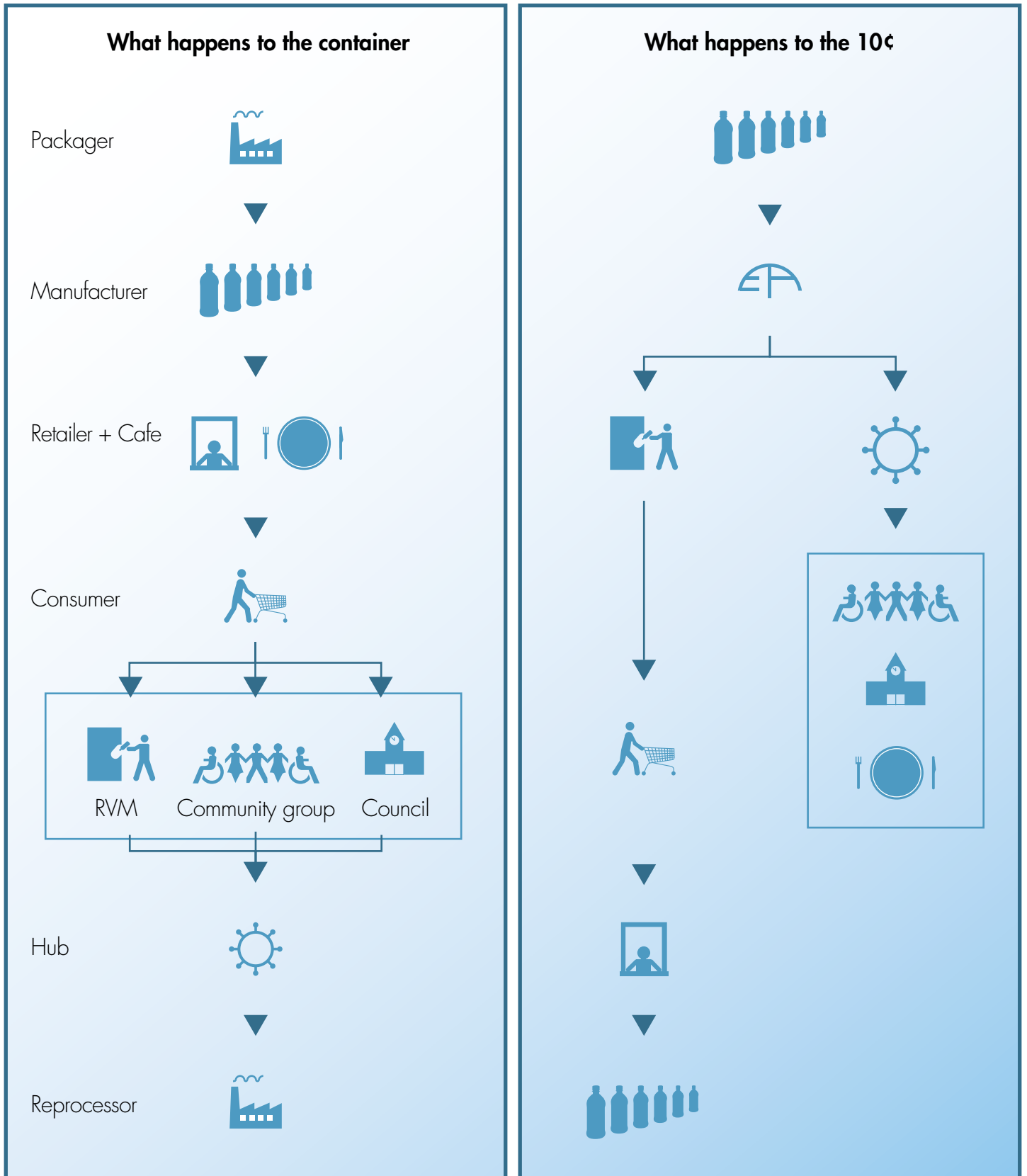
The container deposit system in South Australia also benefits community organisations such as the Scouts groups that operate collection depots. They earn approximately \$9 million each year from this recycling activity.

92% of South Australians report a high level of support for their container deposit system⁴.



- 1 Zero Waste South Australia (2008) *Review of Recycling Activity in SA 2006-07* prepared by Hyder Consulting.
- 2 Boomerang Alliance (2007) *Container Deposits: The Common Sense Approach* pp28 viewed at http://www.boomerangalliance.org/000_files/Final_Container_Deposits_the_common_sense_approach.pdf
- 3 Discussions between Boomerang Alliance and Statewide Recycling, East Waste and Zero Waste South Australia
- 4 SA Environment Protection Authority, Tom Whitworth presentation to 2007 Municipal Association of Victoria Forum on Container Deposit and Extended Producer Responsibility.

05 The Proposed Victorian Container Deposit System



The recovery rates, costs and benefits of any Container Deposit System will vary depending on the design chosen. While the South Australian system has many benefits, Ms Hartland's proposed system is more comprehensive, and incorporates features of other systems that are operating successfully around the world.

The EPA



The EPA administers the scheme, but should have very low operating costs as the Hubs do most of the administration and data collection.

The EPA receives the 10¢ levy for each item sold to market into its "Environment Protection Waste Levy Fund", into which landfill levies are presently paid. The EPA refunds 10¢ per item via Hubs and Depots. However, we estimate that 14.4% of deposits¹ will not be redeemed, creating a surplus of \$56.3 million per annum. These unredeemed deposits cover all operating and wages costs, plus increased promotion of recycling.

The EPA then pays surplus funds from unredeemed deposits to the Hubs (on a per container basis), to subsidise the transaction fees to the Depots. However, the EPA may instead choose a model where it pays the full transaction fee to the Depots, and charges an administration levy per item to the Hubs. Either way, a combination of the EPA's surplus from unredeemed deposits, plus income from the sale of materials, meets the cost of transaction fees to the Depots.

The EPA will report to the government on material and financial flows. This will create, for the first time in Australia, accurate, detailed data on the drink container component of the waste system.

The 'Hubs'



'Hubs' would be large recycling centres authorised by the EPA, established in each region to minimise transport costs. Some 60 of these centres would be established, acting as decentralised administrators of the scheme. Hubs will be owned and operated by local governments, private operators or the community sector.

Typically, Hubs will be in industrial areas, and near regional centres in Victoria. They will act as a collection depot for large scale redeemers such as businesses, councils and scouts, who return containers in bulk. Hubs also receive all containers collected by Depots in their regions and then compact, bale and transport containers to the nearest materials recycler.

Hubs process deposits and handling fees across their regions, audit the collectors, gather reporting data and perform other administrative functions for the scheme. They will receive most of their income from the sale of recyclate.

The Hubs under this scheme may be expanded in the future for extended producer responsibility on items such as compact fluorescent light bulbs, batteries, electrical and electronic appliances and computers, mattresses, gas bottles etc. We recommend such expansion.

"It gets litter off the streets and money into the pockets of people who do the right thing."

ALISON ANDERSON
NT Environment
Minister announcing
a container deposit
system, 11 March
2009

¹ There will be an 83% recovery of material by weight, which equates to an 85.6% refund of deposits.

The Proposed Victorian Container Deposit System (cont)

“Community groups are missing out on millions of dollars for charity work because Victoria does not have refunds on cans and bottles like in South Australia.”

PETER COOK
Australians for Refunds on Cans and Bottles
at launch of AFROCAB Community Litter Report

Collection Depots / Reverse Vending Machines



Depots are authorised by the EPA under Ms Hartland’s scheme. They are the “spokes” in the “Hub and Spokes” analogy.

We estimate that around 320 depots¹ would initially be established throughout the state, via a competitive tender process.

Most Depots would be “Reverse Vending Machines” (RVMs). Typically placed in a supermarket or service station car park, an RVM receives empty containers and refunds 10¢ per item, usually in the form of a voucher that may be redeemed at a nearby shop.

An RVM reads the bar code on the empty container, which tells it whether the item is part of the Victorian container deposit scheme, and what materials the item is made of. The RVM crushes the items, sorts the materials and stores them in fully enclosed containers. The materials and the data are then delivered to the Hub, for a transaction fee. The 10¢ refund is reimbursed by the EPA.

There will be new jobs created in manufacturing, maintaining and administering RVMs, and in the delivery to the Hubs.

International experience indicates that RVMs could operate in service stations, shopping centre parking areas, and convenience stores where the additional passing trade creates sufficient commercial opportunity.

Depots may also operate manually. Small companies, charities and individuals who operate ‘can cages’ would be able to tender to run as a depot, and would have the advantage of already being well known as a return point for drink containers in their area.

In rural and regional Victoria, it is likely that many shopkeepers will want to add a depot as a way of securing ancillary income.

The depots / RVMs should be convenient for most people. After deposit value, this will be the most important factor affecting recovery rates. One of the limitations of the South Australian Container Deposit system is the limited number of collection points, which are often located some 5kms from major retail beverage points of sale (supermarkets).

Reverse vending machines are more viable in areas with large enough populations to warrant



¹ About 260 at points of convenience, and about 60 at Hubs.

their use. In smaller centres depots will generally be manual operations.

Drive-through depots will offer container redemption services to the public but also handle larger volumes from hotels, restaurants etc. and accordingly receive a lower handling fee. These centres will often act as the Hubs in each region. These may be placed in existing facilities such as transfer stations or would be built to specification. These centres would also become a focal point to collect other recyclables like electronic wastes, batteries and used tyres.

The Retailer



The retailer sells the drinks as usual.

They don't collect deposits separately, as the deposit price is factored into the price of the item. There is no need for them to store empty containers, which would take up space and create potential health and safety problems. There is no administrative burden on retailers.

Retailers can choose to make a commercial arrangement with a nearby "reverse vending machine" depot to accept refund vouchers in payment for goods, or to put a "reverse vending machine" near the shop.

Cafes, Restaurants, Food Courts, Offices and Events



There is little available recycling for the many drinks consumed away from home.

This presents the greatest opportunity for the creation of new recycling in the scheme. The 10¢ refund creates incentives for companies to make new waste recovery arrangements. Their contractors will deal directly with the Hubs and deposits will be refunded based on standard material weights to allow for more efficient redemption.

The Consumer



When a consumer finishes a drink, the empty bottle, can or carton in their hand is worth 10¢, so they are less likely to treat it as rubbish. They can swap the empty container for 10¢ at a nearby Depot, or "donate" the container to a community group, or to their local council via kerbside recycling.

Even if they do throw away the container, it is more likely to be picked up by someone who wants the 10¢ refund.

Councils and Shires:



Councils and shires are the real winners in this scheme. They will have less volume of rubbish to collect, but with a greater value.

They gain new income from refunds, have less contamination of valuable waste paper, pay less landfill fees, less gate fees at recyclers, and less need to find new landfill. The benefit to local councils can be found on pages 15 to 17 of this report.

Community Groups



Scouts, sports clubs, "friends of" groups etc can collect empty containers as a fundraiser, either at "clean up" days or at sporting events and festivals, or by placing bins for empty containers at their clubs.

Most groups will simply return the containers and collect the cash refund at a "Hub". However some groups might take it more seriously. Scouts in South Australia earn \$9 million per year collecting containers. The role they play in SA is similar to running a Depot in Ms Hartland's scheme, except that many of the containers are donated.

The Manufacturer / Bottler



The Manufacturer / bottler pays 10¢ for every drink container that they put onto the market, into a fund operated by the EPA. The deposit is passed on in the wholesale price of the drink to the consumer, via the retailer. The product label must state "10¢ refund at collection depots when sold in Vic".

Recyclers and Reprocessors



Recycling collectors, materials reprocessors and the waste management industry will receive significantly increased incomes (see page 15).

"CDL consistently presents as the preferred option both in terms of recovery rates and cost of operation."

CLAYTON FORD,
Manager,
External Affairs,
Diageo Australia

06

Benefits of Container Deposits

Less Waste: More Recycling

Decreasing waste

Less than half the drink bottles, cans and cartons in Victoria are presently recycled.

Based on the Newspoll survey results, with the introduction of deposits on drink bottles the amount of recyclable containers picked up at kerbside will drop and the amount returned through collection depots, private companies and reverse vending machines will increase more than proportionally. The result will be an increase of over 124,000 tonnes.

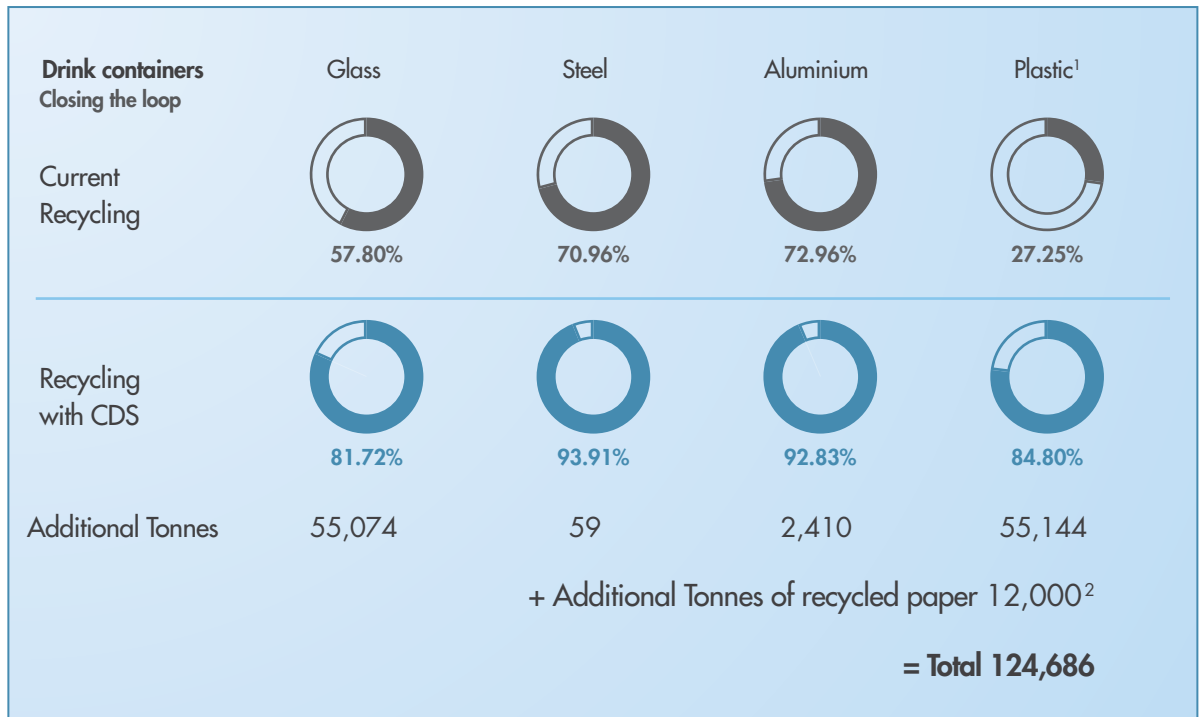


Table 2. Existing (Drink) Container Consumption and Recycling in Victoria (per year).

Containers in Victoria (Tonnes P.A.)	Consumption			Container Recycling	
	Tonnes of Drink Containers Consumed	Average Container / Tonne	Estimated Total Containers Consumed	Total recycling (Tonnes)	Rate (%)
Glass bottles	230,253	4,784	1,101,530,352	133,087	57.80%
Steel drink cans	272	13,875	3,774,000	193	70.96%
Aluminium cans	12,124	66,821	810,116,773	8,845	72.96%
Plastic bottles	68,235	29,205	1,992,803,175	18,596	27.25%
Liquid paperboard cartons ¹	15,880	25,609	406,670,920	2,312	14.56%
Other composite containers ¹	2,847	10,472	29,813,784	0	0.00%
Total drink containers	329,611	N/A	4,344,709,004	164,141	49.80%

¹ This report does not consider the financial and environmental benefits of improved recycling for liquid paperboard (LPB) or composite drink containers, due to the difficulty of separating drink from food containers in aggregate data. The calculated benefits are lower than they would be if these items were included.

² Less paper contamination leads to more recycling (see p15).

Environmental Benefits

Environmental benefits from increased container recycling include reductions in greenhouse gas emissions, decreased consumption of water to manufacture packaging, and increased air quality.

Recycling for reuse of container packaging uses less energy and water and creates less air pollution than manufacturing the same materials from virgin sources. By using estimations¹ of the environmental impact of manufacturing different packaging materials, the benefits of Ms Hartland's scheme are shown in Table 3.

In summary, the environmental benefits of container deposits in Victoria are as follows:

› Litter

12–15% reduction in litter, potentially saving local government \$8.8 million annually.

› Material saved from landfill

136,686 tonnes of material saved from landfill for recycling, potentially saving local government \$5.1 million annually.

› Greenhouse Gas Emissions

Over 456,000 tonnes of Co2 equivalent emissions will be saved by Victorians, which represents a possible saving of \$11.86 million at \$26 per tonne². That's like 65,191 Victorian homes switching to Green Power.

› Drinking Water

Victorians could save 1,637 mega litres of drinking water through the introduction of a Container Deposit scheme, with a saving of \$8.3 million @ \$5.09 per kilolitre to \$22.23 million at \$13.58 per kilolitre³. That's like supplying 4,784 Victorian homes with water saved by the scheme.

› Air Quality

140 million units of air pollution saved. This is the equivalent of taking 32,434 cars off the road.

	Materials Savings (Tonnes)	GHG Reductions (Tonnes Co2-e)	Water Conserved (Litres)	Smog Precursors (gC2H4-e)	Embodied Energy savings (MJ)
Glass	55,074	68,842	112,239,884	-5,342,134	207,957,704
Aluminium	2,410	45,300	4,136,424,338	643,354	428,582,473
Steel Cans	59	158	51,661	50,314	1,647,602
Plastic	55,144	330,863	-2,880,890,916	144,863,020	2,712,087,184
Paper	12,000	11,172	269,796,000	396,000	29,328,000
Total Minimum Savings P.A.	124,686	456,335	1,637,620,967	140,610,555	3,350,274,963

“Container Deposit Systems are popular with the public, require no government funding and provide funding for the necessary recycling infrastructure.”

REVIVE RECYCLING
Submission to Senate Environment, Communications and the Arts Committee Report on its inquiry into Management of Australia's Waste Streams (including consideration of the Drink Container Recycling Bill 2008)

¹ RMIT (2001) *Life Cycle Assessment for Paper and Packaging Waste Management Scenarios in Victoria and Warrken ISE* (April 2007) Carbon Abatement Proposition for Container Deposit Recycling Report for Ecos Corporation.

² Based on Ross Garnaut's recommended starting price of \$26 per tonne. (The Garnaut Review; Final Report, 31 May 2011). At time of printing this report, the Prime Minister has not announced a carbon price.

³ “True cost per kilolitre of water” annexed to Premier Baillieu's media release “Revealed: The True cost of John Brumby's desalination plant”, <http://premier.vic.gov.au> 28 Feb 2011.

07 Financial Impacts

“... I think the legislation has the potential to be a great boon for the state.

“I saw first hand the rubbish littering our city on Clean Up Australia Day. The legislation would encourage people to pick up their litter and give community groups an opportunity to make some money.”

NICK WAKELING MP
(FERNTREE GULLY)
quoted in Knox Weekly, 9 March 2011

New Jobs

A container deposit system in Victoria will have considerable employment benefits creating around 300 – 400 jobs in four main areas:

- › 120 – 180 jobs at the Hubs (metro and regional areas)
- › 120 – 180 jobs at Regional and Rural Depots (which are less likely to be automated)
- › 40 – 60 jobs servicing and maintaining Reverse Vending Machines (mostly in metro areas)
- › 10 jobs administering the scheme.

Savings to State Government

A container deposit system will create a significant cost saving to the State.

Currently the Victorian Government bears a significant share of the cost of the operation of the National Packaging Covenant. Along with other states, it makes contributions to the cost of administering the Covenant (i.e. the Covenant Secretariat) and to the cost of Covenant funded projects.

The EPA presently allocates one full-time staff member, plus additional staff for representation on the National Packaging Covenant Council, participation in working groups and committees,

data reporting and supporting Covenant participation through enforcement of the National Environment Protection Measure and its role in the Environment Protection and Heritage Council. Victoria's contribution to the Covenant would be about \$1.5 million per year. A container deposit system would potentially subsidise these costs, if Victoria remains a member.

As the Hubs would undertake much of the auditing, reporting and administrative roles, there would be minimal staff required at the EPA to administer the scheme.

The EPA's Environment Protection Fund would be bolstered by \$56.3 million p.a. in unredeemed deposits. \$31.1 million of the unredeemed deposits would be put towards handling fees to Depots (net of recyclate sales - see page 9). This will leave a surplus of around \$25.2 million p.a. for staffing and administration costs, promotion of recycling, education, infrastructure and market development, in a similar way to how the unredeemed deposit fund has been used in California. It could also be used as a direct rebate to local government to promote kerbside recycling.



Recyclers and Reprocessors

Recycling collectors, materials reprocessors and the waste management industry will receive significantly increased incomes.

- › The price of recyclable materials collected is likely to be worth as much as 30% more than current payments for recyclate;
- › Increased materials recovery and lower levels of contamination will see recyclers income from material sales grow by an estimated \$93 million per annum;
- › Reprocessors may be eligible for grants worth millions of dollars via bounties and incentives to establish new regional reprocessing facilities.

Overall the recycling and reprocessing industries will grow by an estimated \$217 million per annum.

Local Government (Rate Payers)

Local governments and their rate payers are major financial beneficiaries of a container deposit/refund scheme in Victoria. Councils will save an estimated \$12.77 million per year on their provision of waste and recycling services, even without taking into account any savings from decreased litter. Cost savings in every local council and shire in Victoria are set out at pages 16 & 17.

Further to those savings, kerbside recycling costs could be reduced by over 30%, if the State Government targets the estimated \$32.6 million p.a. in surplus unredeemed deposits towards recycling expenses presently paid by ratepayers.

A drink deposit/refund system would have the following benefits for local government:

- › Fewer materials sent to landfill, both containers and paper, saving \$5.07 million per annum in landfill fees (gate fee and levy)
- › Reduced tonnage of recyclables being processed through Materials Recycling Facilities (MRF) will also lead to substantially less gate fees, saving local governments around \$6.5 mill p.a. (as there is also a gate fee when recyclate is delivered to an MRF)

FOR EXAMPLE:

- › 1 tonne of glass recyclate typically contains about 4,784 bottles and is worth around \$72. Under a container deposit scheme, it is worth \$478.40 in refunds. A kerbside operator needs just 2.1% of glass drink containers to remain in their system to be revenue neutral.
- › 1 tonne of PET recyclate typically contains about 29,205 bottles, and worth about \$500. Under a container deposit scheme, it is worth \$2,920.50 in refunds. A kerbside operator needs just 1.9% of PET drink containers to remain in their system to be revenue neutral.

“The simple fact is, that until it becomes economic to do so, there is no incentive for many organizations to recycle, to reduce landfill or to change their operational practices to reduce or reuse their waste products.”

MIKE RITCHIE
National Marketing
Manager
SITA Australia

- › Fewer glass bottles in kerbside collections will lead to less broken glass contamination (and loss in value) of recyclable paper collected. In South Australia, just 3.3% of paper and cardboard is sent to landfill due to contamination, compared to 7% in Victoria¹. This represents a potential saving of \$1.2 million per year in Victoria.
- › While we have not costed the benefit, the reduced volumes of material would allow kerbside recyclers to service a higher number of households per collection run, reducing operating costs.
- › Less litter in public streets and parks. Drink bottles and cans presently comprise almost 30% of litter by volume. With a 10 cent refund, these will be retrieved from beaches, parks, public thoroughfares and gutters and presented to collectors. This could reduce litter collection costs by about 12% -15%, or approximately \$8.8 million in Victoria.

Savings on kerbside services occur because the redemption of deposits on remnant containers in kerbside bins is more lucrative than any revenues lost through the decrease in materials to sell. In addition, other (non drink container) recyclable materials left in kerbside recycling increase in market value due to reduced contamination.

¹ NEPC 2009-10
Annual Report

08

Savings to Victorian
local councils

Table 5

Local Government Area	Lost Commodity Sales Income	New Income from 10¢ refunds	Additional income from paper sales*	Savings in landfill fees**	Savings in lower gate fees at recyclers ***	Reduced landfill (in tonnes)	Total savings, based on Local Gov't Survey
Alpine Shire	-\$63,361	\$69,882	\$8,101	\$18,444	\$15,252	410	\$48,317
Ararat Rural Council	-\$58,126	\$64,109	\$7,431	\$17,338	\$13,992	385	\$44,744
Ballarat Council	-\$377,367	\$416,206	\$48,245	\$123,471	\$90,837	2744	\$301,392
Banyule Council	-\$700,477	\$772,571	\$89,554	\$170,899	\$168,613	3798	\$501,160
Bass Coast Shire	-\$85,064	\$93,819	\$10,875	\$39,893	\$20,476	887	\$79,999
Baw Baw Shire	-\$155,907	\$171,953	\$19,932	\$52,226	\$37,529	1161	\$125,733
Bayside Council	-\$486,720	\$536,813	\$62,225	\$132,112	\$117,159	2936	\$361,590
Benalla Rural Council	-\$73,479	\$81,041	\$9,394	\$21,242	\$17,687	472	\$55,886
Boroondara Council	-\$1,043,723	\$1,151,143	\$133,436	\$228,255	\$251,236	5072	\$720,348
Brimbank Council	-\$717,690	\$791,556	\$91,754	\$210,362	\$172,757	4675	\$548,738
Buloke Shire	-\$38,011	\$41,923	\$4,860	\$11,584	\$9,150	257	\$29,505
Campaspe Shire	-\$158,515	\$174,829	\$20,266	\$52,682	\$38,156	1171	\$127,418
Cardinia Shire	-\$188,116	\$207,477	\$24,050	\$62,767	\$45,282	1395	\$151,460
Casey Council	-\$874,936	\$964,984	\$111,858	\$232,258	\$210,607	5161	\$644,772
Central Goldfields Shire	-\$42,939	\$47,358	\$5,490	\$20,712	\$10,336	460	\$40,957
City of Greater Geelong	-\$1,038,253	\$1,145,111	\$132,737	\$290,214	\$249,920	6449	\$779,729
Colac Otway Shire	-\$91,893	\$101,351	\$11,748	\$31,154	\$22,120	692	\$74,479
Corangamite Shire	-\$68,621	\$75,683	\$8,773	\$25,295	\$16,518	562	\$57,649
Darebin Council	-\$649,794	\$716,671	\$83,074	\$196,604	\$156,413	4369	\$502,969
East Gippsland Shire	-\$224,866	\$248,010	\$28,748	\$61,036	\$54,128	1356	\$167,056
Frankston Council	-\$665,435	\$733,922	\$85,074	\$167,181	\$160,178	3715	\$480,920
Gannawarra Shire	-\$61,268	\$67,573	\$7,833	\$18,340	\$14,748	408	\$47,227
Glen Eira Council	-\$592,534	\$653,517	\$75,753	\$193,872	\$142,630	4308	\$473,239
Glenelg Shire	-\$106,815	\$117,809	\$13,656	\$30,566	\$25,712	679	\$80,927
Golden Plains Shire	-\$34,273	\$37,801	\$4,382	\$19,682	\$8,250	437	\$35,841
Greater Bendigo Council	-\$377,014	\$415,817	\$48,200	\$133,722	\$90,752	2972	\$311,476
Greater Dandenong Council	-\$536,523	\$591,742	\$68,593	\$173,528	\$129,147	3856	\$426,488
Greater Shepparton Council	-\$272,893	\$300,979	\$34,888	\$81,401	\$65,689	1809	\$210,064
Hepburn Shire	-\$70,535	\$77,795	\$9,018	\$21,731	\$16,979	483	\$54,987
Hindmarsh Shire	-\$44,507	\$49,087	\$5,690	\$10,350	\$10,713	230	\$31,334
Hobsons Bay Council	-\$409,825	\$452,004	\$52,395	\$121,815	\$98,650	2707	\$315,039
Horsham Rural Council	-\$92,793	\$102,343	\$11,863	\$28,177	\$22,336	626	\$71,927
Hume Council	-\$555,222	\$612,366	\$70,983	\$165,033	\$133,649	3667	\$426,808
Indigo Shire	-\$45,907	\$50,632	\$5,869	\$20,613	\$11,050	458	\$42,257
Kingston Council	-\$699,848	\$771,876	\$89,473	\$202,322	\$168,462	4496	\$532,285
Knox Council	-\$739,372	\$815,468	\$94,526	\$195,656	\$177,976	4348	\$544,255
Latrobe Council	-\$361,010	\$398,165	\$46,154	\$105,086	\$86,899	2335	\$275,294
Loddon Shire	-\$33,720	\$37,191	\$4,311	\$13,364	\$8,117	297	\$29,262
Macedon Ranges Council	-\$172,262	\$189,992	\$22,023	\$49,800	\$41,466	1107	\$131,018
Manningham Council	-\$595,568	\$656,864	\$76,141	\$150,075	\$143,360	3335	\$430,873
Mansfield Shire	-\$33,237	\$36,658	\$4,249	\$9,708	\$8,000	216	\$25,379
Maribyrnong Council	-\$238,201	\$262,717	\$30,453	\$93,092	\$57,338	2069	\$205,399
Maroondah Council	-\$538,395	\$593,807	\$68,832	\$146,138	\$129,598	3248	\$399,980

Local Government Area	Lost Commodity Sales Income	New Income from 10¢ refunds	Additional income from paper sales*	Savings in landfill fees**	Savings in lower gate fees at recyclers ***	Reduced landfill (in tonnes)	Total savings, based on Local Gov't Survey
Melbourne City Council	-\$82,236	\$90,700	\$10,514	\$82,643	\$19,795	1837	\$121,415
Melton Shire	-\$225,137	\$248,309	\$28,783	\$67,875	\$54,193	1508	\$174,023
Mildura Rural Council	-\$199,799	\$220,362	\$25,544	\$72,077	\$48,094	1602	\$166,278
Mitchell Shire	-\$129,754	\$143,108	\$16,589	\$37,256	\$31,233	828	\$98,432
Moira Shire	-\$127,377	\$140,487	\$16,285	\$39,243	\$30,661	872	\$99,299
Monash Council	-\$772,693	\$852,219	\$98,786	\$228,867	\$185,996	5086	\$593,176
Moonee Valley Council	-\$520,446	\$574,011	\$66,537	\$166,416	\$125,278	3698	\$411,795
Moorabool Shire	-\$107,284	\$118,326	\$13,716	\$33,542	\$25,825	745	\$84,124
Moreland Council	-\$596,998	\$658,441	\$76,324	\$209,111	\$143,704	4647	\$490,583
Mornington Peninsula Shire	-\$598,526	\$660,127	\$76,520	\$195,077	\$144,072	4335	\$477,270
Mount Alexander Shire	-\$85,845	\$94,680	\$10,975	\$26,256	\$20,664	583	\$66,730
Moyne Shire	-\$57,430	\$63,341	\$7,342	\$22,654	\$13,824	503	\$49,731
Murrindindi Shire	-\$61,484	\$67,812	\$7,861	\$19,810	\$14,800	440	\$48,798
Nillumbik Shire	-\$357,932	\$394,771	\$45,760	\$75,162	\$86,159	1670	\$243,919
Northern Grampians Shire	-\$48,944	\$53,981	\$6,257	\$19,769	\$11,781	439	\$42,845
Port Phillip Council	-\$732,780	\$808,198	\$93,683	\$147,632	\$176,389	3281	\$493,123
Pyrenees Shire	-\$21,575	\$23,796	\$2,758	\$10,118	\$5,193	225	\$20,290
Queenscliffe Borough	-\$11,409	\$12,584	\$1,459	\$5,043	\$2,746	112	\$10,422
South Gippsland Shire	-\$95,120	\$104,910	\$12,161	\$38,055	\$22,896	846	\$82,902
Southern Grampians Shire	-\$77,297	\$85,253	\$9,882	\$26,417	\$18,606	587	\$62,861
Stonnington Council	-\$444,316	\$490,045	\$56,804	\$151,238	\$106,952	3361	\$360,724
Strathbogie Shire	-\$33,124	\$36,533	\$4,235	\$15,364	\$7,973	341	\$30,981
Surf Coast Shire	-\$88,077	\$97,142	\$11,260	\$28,707	\$21,201	638	\$70,233
Swan Hill Rural Council	-\$210,058	\$231,678	\$26,855	\$30,520	\$50,564	678	\$129,558
Towong Shire	-\$31,909	\$35,193	\$4,079	\$9,385	\$7,681	209	\$24,430
Wangaratta Rural Council	-\$117,714	\$129,830	\$15,049	\$40,394	\$28,335	898	\$95,894
Warrambool Council	-\$160,548	\$177,071	\$20,525	\$43,718	\$38,646	972	\$119,413
Wellington Shire	-\$155,605	\$171,620	\$19,894	\$59,169	\$37,456	1315	\$132,534
West Wimmera Shire	-\$28,213	\$31,116	\$3,607	\$7,489	\$6,791	166	\$20,791
Whitehorse Council	-\$803,647	\$886,359	\$102,744	\$220,260	\$193,447	4895	\$599,163
Whittlesea Council	-\$518,750	\$572,140	\$66,320	\$144,523	\$124,869	3212	\$389,103
Wodonga Council	-\$130,923	\$144,398	\$16,738	\$45,859	\$31,515	1019	\$107,586
Wyndham Council	-\$432,765	\$477,305	\$55,328	\$112,062	\$104,172	2490	\$316,101
Yarra Council	-\$677,991	\$747,771	\$86,679	\$193,355	\$163,201	4297	\$513,013
Yarra Ranges Shire	-\$414,775	\$457,464	\$53,028	\$114,798	\$99,841	2551	\$310,356
Yarriambiack Shire	-\$31,289	\$34,509	\$4,000	\$12,577	\$7,532	279	\$27,329

Notes: The Victorian Government reporting to the National Environment Protection Council does not break materials down by local government area, so we used the Victorian Local Government Annual Survey 2008-2009 as a reference for this table. The discrepancy between local government reporting to the Victorian Government and Victorian Government reporting to the NEPC is significant and warrants further investigation.

Expected savings are based on a typical composition of the recycling stream across Victoria. It was not possible to adjust for variations in bin composition in different councils.

* Lower contamination
** Gate fee + waste levy
*** \$40/tonne

Litter Reduction

Rubbish in the environment is ugly and can be hazardous to humans and wildlife

“Who would walk past a silver coin lying on the ground?”

IAN KIERNAN
Chairman of Clean Up Australia
quoted in Sunday Age
2/3/08

Plastic soft drink containers are the most littered item by volume in Victoria, continuing an upward trend.¹

The Keep Australia Beautiful 2009-10 National Litter Index lists the most prevalent litter items by volume for each State.

In Victoria this “Dirty Dozen” includes seven different types of beverage containers that would be covered under Ms Hartland’s legislation.

In South Australia, no items fully covered by the SA refund scheme, and three partially exempt categories, are in the “dirty dozen”. The bigger the exemption, the greater the litter.

“Refunds on drink containers can bring about a 12 to 15% reduction in litter.”

The volume of littered drink containers was more than three times higher per 1000m2 in Victoria than South Australia.

Recovery of litter represents a significant cost to local governments. Table 5 sets out the costs of different litter collection activities undertaken by local government².

The Boomerang Alliance estimates that deposit/refunds on drink containers can bring about a 12–15% reduction in litter³.

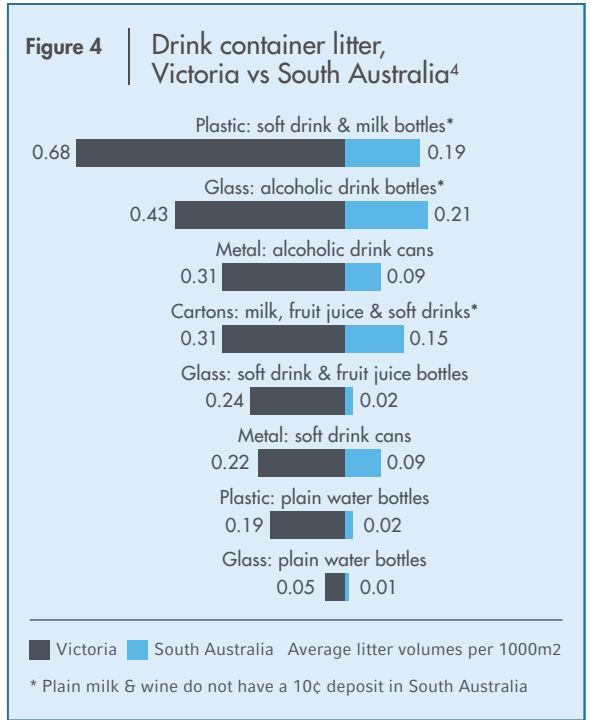
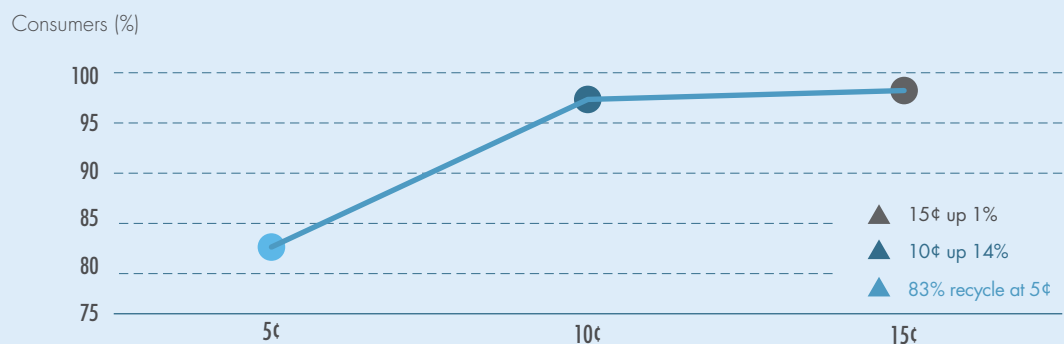


Table 5. Cost to local Govt of Cleaning up Litter

Type	2006 – 07 \$ million
Emptying street/park bins	16.8
Cleaning litter traps	1.9
Illegal dumping	4.0
Roadside litter	1.9
Street sweeping	49.6
Total	74.2

Figure 5 | Proportion of consumers likely to return containers at different deposit amounts



¹ Keep Australia Beautiful (2009-10) National Litter Index.

² Sustainability Victoria Victorian Local Government Annual Survey 2008-09 pp 47-49.

³ Boomerang Alliance Financial analysis of costs and benefits of a national Container Deposit System May 2008 p4.

⁴ McGregor Tan Research, KAB national Litter Index 2009/10 tabulations.

Public support for container deposits

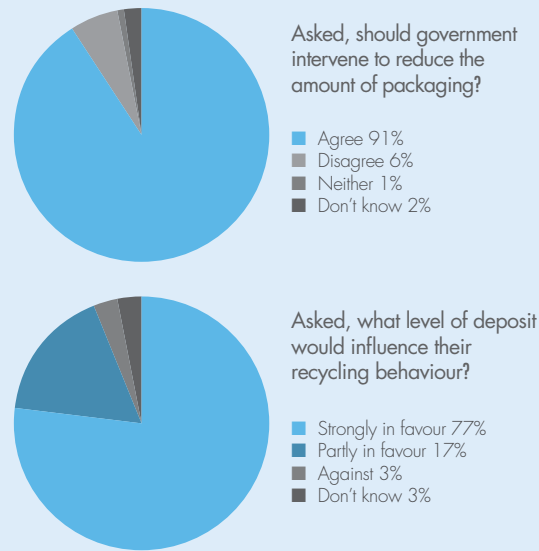
The public is calling for better government policy to reduce packaging waste and litter.

A national Newspoll survey conducted in December 2004 showed that 91% of respondents thought governments should intervene, making those responsible for packaging waste deal with the mess.

Subsequent research undertaken by Newspoll in Victoria in October 2006 indicated that 94% of people wanted deposits on drink containers with just 3% against.

When Victorians were asked what level of deposit would influence their recycling behaviour, 97% said that for 10¢ they would be likely to return empty containers.

Figure 6 | Public support for container deposits



“Clean Up Australia is right behind the move - it’s a system that has proven to work and work well. ...

South Australia, which has a similar legislation, has an 87 per cent recovery rate on their recyclable rubbish. The rest of Australia is at 35 per cent.”

IAN KIERNAN
Chairman of Clean Up Australia, quoted in Knox Weekly, 9 March 2011



10

Victoria should act now

The benefits to Victoria of a state-based scheme, rather than waiting for a national scheme

If a Victorian scheme precedes a national scheme, we can retain the Unredeemed Deposit Fund in Victoria rather than committing it to Canberra.

"I have been a long-time supporter of container deposit legislation for Victoria. ...

This scheme works well in South Australia and should be introduced into Victoria and then become a national scheme. ...

The State Liberal and National coalition strong supports the introduction of a Victorian and national drink bottle and can refund scheme."

DENIS NAPTHINE MP
quoted in Portland
Observer, 19 July 2010

Benefits to Victoria of acting now

Our own Victorian councils and shires can apply for grants from our own Fund, to improve recycling in Victoria. The State government will use it to advertise and promote recycling right here in Victoria. We retain control of the money generated in Victoria.

Ms Hartland's legislation is different to the SA and NT schemes. In her scheme, the state administers the Fund, whereas in SA and NT, the bottle industry administers the Fund.

A Victorian scheme could provide a better model for a national scheme with the Funds administered by the states and territories, rather than by the bottle industry, which has less incentive to create convenient and effective recycling measures.

For example, Reverse Vending Machines are common throughout the world, but not yet in South Australia.

Victoria already has the benefit of an existing recycling industry. A Victorian scheme would encourage new investment in the recycling industry here. This would lead to more jobs in Victoria, including regional areas, if a national scheme should commence.

Won't there be start-up costs?

The potential value of Victoria's Unredeemed Deposit Fund is estimated at \$56.3 million per year, based on the full 83% recovery rate.

But it will take 12-18 months for a new scheme to achieve a full recovery rate.

In the first year, with an estimated 70% recovery rate, the Fund will gain a once-off buffer of about \$61 million to offset any start-up costs.

A Victorian scheme will pay for itself, from go to whoa, even if a national one follows. In fact, the financial, social and environmental benefits to Victoria start on day one.

National Investigation

Under new commonwealth legislation, state-based container deposit schemes will not be over-riden by any new national scheme. But is a national scheme forthcoming?

Since 2002, The Environment Protection and Heritage Council (EPHC) has had an investigation of drink container deposits on its agenda.

Nine years later, it has only progressed as far as deciding to undertake a Regulatory Impact Statement (RIS) investigation.

The delays have been caused by a number of factors, including a lack of political will from the Federal Government and Federal Opposition and strong opposition from industry front groups who advocate for voluntary measures as an alternative to regulation.

A container deposit system is just one of a number of national approaches that will be considered by the RIS investigation.

No matter how much we support a national scheme, it isn't going to happen any time soon without a catalyst.

And that's where we come in.

How do we encourage a national scheme?

Recycling advocates say that the best catalyst for a national scheme is for a big state like Victoria to pass state-based legislation.

In fact, they say that once Victoria takes the lead, it will create a domino effect for other states to consider state-based legislation and a national scheme will be almost inevitable.

Who dares, wins

We have everything to gain and nothing to lose by starting a Victorian scheme ahead of a national scheme.

11

Benefits to Victoria, data sources and assumptions

The table below reflects an ongoing recovery rate of 83%. In the first year, with an estimated 70% recovery rate, the Fund will gain a once-off buffer of about \$61 million to offset any start-up costs.

Ongoing costs and benefits

Table 6. Summary of Overall Financial Costs & Benefits in Victoria	\$ P.A.
Costs to operate all Hubs and Depots (net of recyclate sales)	-\$31,147,183
EPA: Staffing costs to administer system	-\$1,000,000
Savings to local government recycling operations	\$6,577,919
Savings to local government waste operations	\$5,070,851
Surplus incomes for Government to invest in recycling (derived from the \$56.3 million unredeemed deposits)	\$24,126,556
Value of greenhouse gas abatement @ \$26 per tonne	\$11,864,710
Value of water savings ²	\$8,332,330
12% Reduction in litter @ \$50,000 cost of litter abatement	\$8,800,000
Net Annual Benefit to Victoria	\$32,625,183

“Recently, Victorian Greens MP Colleen Hartland, proposed [container deposit] legislation for our State, and while fully supported by the Liberal/Nationals Coalition, it was dismissed by the Labor Government.

I would like to congratulate Ms Hartland for bringing this matter to Parliament. ... The Coalition and I will continue to support this legislation if it is brought to Parliament again.”

RYAN SMITH MP
Newsletter distributed in Warrandyte Electorate prior to 2010 State Election
Mr Smith is now the Environment Minister

Data sources and assumptions in this report

- › For packaging consumption and disposal figures - commissioned studies for the National Packaging Covenant Council (NPCC) with proposed adjustments as agreed by the NPCC Data Working Group.¹
- › For costs relating to kerbside collections and Municipal Solid Waste recycling - reports issued under the National Environment Protection Measure (Used Packaging Materials).
- › The costs of litter cleanup are based on assumptions used in the Australian Government’s Regulatory Impact Statement: Investigation of Options to Reduce the Impacts of Plastic Bags.
- › Costs of landfill are conservative (\$30 a tonne + \$9 Waste Levy / tonne) and do not include any estimates for transport or collection costs.
- › For estimated costs and charges of the proposed Container Deposit System - written quotations from existing recycling companies (provided confidentially to Dave West).
- › The time taken in drop off activity has not been counted as a cost due to the convenience of the return system proposed.
- › The income to local government from rates paid by authorised transfer stations has not been included in the calculation of benefit to local government and rate payers.

¹ As advised by NPCC Community Representative, Jeff Angel of TEC

² Based on the lowest cost in the range set out on page 13.

12 Glossary

“But at the federal level... we have seen very, very little action. ‘We sent it off to COAG and we’re now sending it off to a ministerial council.’

We all know that, if there is one issue that you know you need to talk about but you do not really want to act on, you send it off to COAG, otherwise known as the black hole of government bureaucracy. Let us face it: if we think this is a good idea, we need to get on and do it. Thankfully there are states that are seriously considering the need to take further action and to move on this.”

SENATOR SARAH HANSON-YOUNG
Debating a national Container Deposit Bill,
Parliament Hansard 4 March 2011

C & I - Commercial & Industrial:	C&I waste is generally disposed of through commercial contracts with private waste companies. Any separation of recyclables is discretionary and involves separate contracts for recyclables, such as office paper.
CDS - Container Deposit System:	A refundable deposit on drink containers.
CDL - Container Deposit Legislation:	Legislation of a container deposit system.
EPA - Environment Protection Authority:	Statutory authority that administers Victoria’s legislation and policies in relation to environment and waste management.
EPHC - Environment Protection and Heritage Council:	An intergovernmental council of federal, state and territory environment ministers. The EPHC was created in 2001.
EPR - Extended Producer Responsibility:	A policy of extending the producer’s responsibility for a product to the post-consumer stage of a product’s life cycle.
Landfill Levy:	A levy applied by the Victorian Government at differential rates for municipal, commercial and industrial and prescribed wastes disposed of at licensed landfills in Victoria. The Levy funds the activities of Waste Management Groups, Sustainability Victoria and EPA Victoria, in helping to establish waste management infrastructure, industry waste reduction programs, education programs, regulatory controls and enforcement regimes. Levies provide an incentive to minimise the generation of waste.
MRF - Material Recycling Facility:	A council depot or private business site for the receiving and sorting of recyclables.
MSW - Municipal Solid Waste:	Solid waste generated from municipal and residential activities, including waste collected by, or on behalf of, a municipal council.
NEPC - National Environment Protection Council:	Statutory body with the power to make NEPMs. The members of the NEPC are State, Territory and Federal Ministers.
NEPM - National Environment Protection (Used Packaging Materials) Measure:	The regulation underpinning the National Packaging Covenant (see below) giving each State jurisdiction the power to take action against brand owners over a certain size that do not sign onto NPC obligations, or who sign up but are non compliant.
NPC - National Packaging Covenant:	A voluntary agreement between government and industry aimed at reducing the environmental impact of consumer packaging in Australia. It was first established in August 1999, renewed as the NPC Mark II in 2005 and will expire in 2010.
NPCC - National Packaging Covenant Council:	The governing body for the NPC, made up of state, local and commonwealth government, and industry and community representatives. The Council meets quarterly.
PET - Polyethylene Terephthalate:	A type of plastic. Identification code “1”. Rigid, clear containers for (relevantly) bottled water, soft-drink and fruit juice. It is recyclable.
Product Stewardship:	A concept of shared responsibility by all sectors involved in the manufacture, distribution, use and disposal of goods and services.
Unredeemed Deposits:	A fund created when deposits are paid on drink containers, but forfeited by the purchaser (when the container is thrown away and not retrieved).
Recyclate:	General term for the aluminium, glass, plastic or other materials retrieved when (relevantly) a drink container is recycled.



Note from Dave West

I have been asked to provide data to assess the merits of the Greens' plan for container deposit legislation, and verify that the application of this data is presented in a manner that reflects my understanding of the costs and benefits of a container deposit system.

Ms Hartland requested that I use formal Victorian Government reporting to the National Environment Protection Council (NEPC) to source information regarding the fees charged to ratepayers for the provision of recycling services and tonnage collected. Consumption data has been based on reporting by the National Packaging Covenant Council (NPCC). I believe this approach represents the most optimistic view regarding the current state of recycling in Victoria, so the projected increases in recycling and financial savings in this report are most likely significantly understated. It is my personal view, based on alternative sources of information than those relied on in this report, that a container deposit system will recover significantly more tonnes than the estimates outlined in this report.

It is also my view that the financial analysis is conservative. The potential premiums gained from the sale of cleaner recyclate to reprocessors and the fact that plastics from MSW recycling are generally sold as mixed plastics rather than separated by material (as happens with a container deposit system) means the savings are likely to be considerably better than those contained in this report.

Cost estimates are based on written quotations from recycling companies, but in a competitive tendering environment it is likely additional savings will occur.

While I congratulate Ms Hartland for taking a cautious position to ensure the proposed benefits of a container deposit system will be realised, my analysis and opinion is that the container deposit system outlined in her proposed legislation will produce significantly better results than projected in this report. Victoria will experience bigger savings, more tonnage and lower overall costs leading to greater social and environmental benefits.



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