This short paper seeks to explain the benefits and impacts of a container deposit system (CDS) on the recycling and waste management sectors. Obviously the estimates provided herein are somewhat generic and the resource recovery sector is advised to undertake their own advocacy to ensure that any CDS is designed to ensure they receive the maximum benefit.

KEY ISSUES

PARTICIPATION: Most modern CDS have specific requirements where the system operator must allow kerbside recycling and waste collection services to redeem deposits on any residual containers – this increases the value of remnant materials and general profitability of the system. For example 1 tonne of glass bottles are currently sold to a reprocessor for around $72 a tonne. On average there are 4,784 bottles to a tonne – meaning that 1 tonne of glass bottles redeemed for a 10 cent deposit are worth $478.40. This means that if just 15% of material currently collected remains in the kerbside bin (and modelling indicates that the remnant CD material will be around 20% of current volumes) revenue actually increases. In particular, MRF, Green Waste AWT collectors will receive significant savings.

The most recent analysis of a CDS by BDA/Wright Corporate Strategy (2010) showed that a national CDS would save the resource recovery sector at least $32 million per annum (in avoided landfill costs and savings to kerbside recycling).

Obviously, there is also a downside with BDA/Wright Corporate Strategy estimating that landfill fees (not including state government levies) would be reduced by around $13 million a year.

The Resource Recovery Sector will need to ensure they will be able to share in the increased revenues and should advocate they can make returns based on the average weight of bottles rather than a manual count – reducing sorting costs.

NEW COLLECTION INFRASTRUCTURE: A container deposit system will require drop-off centres to be established around the country to collect some 950,000+ tonnes of used beverage containers. This represents around 10.5 billion containers – earning collectors a fee of around 3¢ per container. This translates into some $315 million per annum in new revenues to establish and operate collection infrastructure – the single largest investment made in recycling in Australian history.

Based on the experience in South Australia and internationally these centres can service a wide range of materials with many depots in South Australia collecting batteries, used tyres, scrap metals, cardboard and e-waste. If the amount of non-CD material collected at South Australian depots is extrapolated nationally this infrastructure would recover an additional 494,000 tonnes of materials a year – representing a further $102 million in new revenues (scrap value alone). Many existing MRFs, and transfer stations operated by private collectors will also be able to operate as collection points under a CDS.

Resource Recovery operators should advocate that their existing infrastructure will be among the first collection points established under a CDS. Private sector operators should also consider opportunities to expand their current collection activities.

CONTAMINATION: Many resource recovery operations complain about the cost of dealing with glass in their operations. In particular:

1. Visy Recycling has reported that glass fines embedded in cardboard recovered via the kerbside stream requires significant capital investment to reduce glass contamination and maintain equipment.

2. Operators processing green waste or running Advanced Waste Treatment facilities also report significant problems with glass contamination with small glass shards embedding in compost and mulch - restricting opportunities to sell it as high grade source of organic fertiliser. SITA Environmental Solutions testified to a Senate Enquiry in 2009 that glass fines were the single greatest source of contamination in the organic waste stream.

A 5% reduction in processing costs at MRFs, green waste composting operations & MSW AWT facilities (including loss of revenue for contaminated recyclables...
and subsequent disposal costs) would represent a saving of around $5 million per annum on a 150,000 tonnes per annum facility.

EFFICIENCY: There are two key impacts operators should consider:

1. Compaction restrictions on glass and plastic provide significant limitations to the payload of recyclables that can be loaded onto each truck. Operators can expect to significantly increase their payload per vehicle, carrying much more cardboard – one of the few materials that are profitable to collect under a kerbside recycling system.

2. Boomerang Alliance estimates that the average collection per home will be some 20% lower once a CDS is introduced. This means that operators can extend the collection run of each vehicle and significantly reduce the transport costs for kerbside collection.

If the two initiatives above deliver a saving of just 5% on the estimated $360 million (a conservative figure) to operate kerbside recycling, collection costs would be reduced by around $18 million per annum.

BOUNTIES: Boomerang Alliance advocates that if a CDS was adopted in Australia it should have two particular features that are not currently part of the system in South Australia:

1. Unredeemed deposits (estimated by BDA to be about 20% of beverage containers and worth $250 mpa) should be placed in an independently administered fund to pay for the handling fees.

2. Surpluses to this fund should be reinvested into a bounty scheme rewarding every tonne of material reprocessed in Australia.

These initiatives create a strong incentive to expand domestic recycling producing significant greenhouse abatement results within our economy and providing a much needed assistance to Australian reprocessors and packaging manufacturers.

SUMMARY

It is clear that there are substantial savings to waste and recycling operators who will receive substantial net benefits from a national container deposit system:

- $32 million per annum from redemption of CDS material and avoided landfill costs;
- A -$13 million per annum impact on landfill operators in reduced gate fee revenues;
- $315 million in revenue per annum in new collection centres and infrastructure operations;
- Largely eliminate the major contaminant of cardboard and compost;
- $18 million per annum in efficiency gains from kerbside recycling.

Overall the adoption of a national CDS would see the largest single investment in recycling made in Australian history. Combined with significant efficiency savings, reduced costs to deal with contaminants it makes sense for waste and recycling operators to support the adoption of a Container Deposit System.

1 Calculated to be around $80 million per annum: 2.1¢/container [average materials sales] + an average 2¢/container [unredeemed] – an average 3.4¢ cost of handling = surplus of 0.7¢ per container.