

# Are refillable beer bottles again possible in Australia?

By Robert Kelman

SURELY THE holy grail of the circular economy when it comes to wide-scale use of refillable drink containers has been written off as a possibility in Australia. But perhaps the old may become the new again.

When single-use drink containers such as aluminium cans and plastic bottles became common in the 1970s, refillable containers and the systems developed to recover and refill those containers went by the wayside. The environment bore the brunt of this change, with beverage container litter in states, aside from South Australia, generally considered to make up around 40 per cent of the litter stream by volume.

The re-emergence of drink container deposit schemes (CDS) across Australia outside of SA, beginning with the Northern Territory in 2011, NSW in 2017, the ACT and QLD in 2018, and WA by 2020, is good news in and of itself. The NSW deposit/refund scheme is proving yet again that CD schemes increase recycling rates and reduce litter, but it also presents a great opportunity for the return of refillables.

Canada, with deposit schemes across all provinces, retains a 30 per cent market share of refillable beer bottles. On average, these containers are returned for refilling 15 times. The EU similarly retains around 32 per cent market share in refillables, both plastic and glass; the Middle East has 21 per cent and the Asia Pacific region

*"We already getting good resource savings – virgin material reductions of 37 per cent across the board – but there are additional energy and greenhouse gas savings from glass recycling."*

market share of refillable containers is 30 per cent.

Glass recovery and recycling generally, extending from the advent of CDS, particularly in NSW and QLD, is on the up. Industry sources advise that the general average quantity of recycled glass in your beer bottle is now around 37 per cent. This recycled-content is much higher at up to 62 per cent in Queensland manufactured bottles.

So, not only are we already getting good resource savings – virgin material reductions of 37 per cent across the board – but there are additional energy and greenhouse gas savings from glass recycling. For this reason, the glass bottle industry wants cullet (glass pieces for recycling) and glass like aluminium is endlessly recyclable – i.e. unlike PET, which loses its fibre-durability (PET can however be used in a composite for things like outdoor furniture etc).

For every 10 per cent increase in cullet going into the bottle manufacturers furnace three per cent less energy, and five per cent less greenhouse gas emissions result. This

The Oregon bottle scheme coordinator worked with O-I to design a standard refillable beer bottle.



A shift back to refillable drink containers would be in keeping with the public momentum for waste and resource recovery solutions.

is due to the fact the temperature of the furnace is reduced. All these savings in virgin resources, energy and greenhouse gas emissions in turn of course save producers money.

The same and primary mechanism required to facilitate large volumes of recycled glass being available to bottle manufacturers could now also be used to develop a refillable container supply-chain in Australia.

That is, the system and infrastructure needed to get the empty bottles back for recycling can also be used to get empty bottles back for refilling. A deposit/refund scheme provides this. Consumers return their one-way or refillable containers for

the 10-cent refund through either retail or depot outlets.

It's estimated that Coca Cola's existing beverage supply includes seven per cent refillable PET and 12 per cent refillable glass. That's a total of 21 per cent of Coca Cola's products sold globally being housed in refillable containers.

All that's required now are willing producers – most likely starting with those bearded boys and hipster girls from the craft beer brewing sector – a bottle washing machine (costs about \$150,000); a bar code to discriminate between refillable containers and single-use containers; and a reverse logistics system to get the empty



"A shift back to refillable drink containers would be in keeping with the public momentum and hunger for waste and resource recovery solutions; and aligns well with the trend to food and beverage provenance/sustainability, to which the craft brewing sector aspires."

refillable containers from the collection point back to the brewer.

What's more, there are plenty precedents, so Australia doesn't have the burden of being a leader on this issue.

The US state of Oregon, for example, through the Oregon Beverage Recycling Cooperative (OBRC), has recently launched a multi-brand refillable beer bottle and logistics service under the existing 10-cent deposit/refund scheme. So far, the volumes are small at only around two million beer bottles per annum, but the resource savings are enormous, and interest is growing.

OBRC estimates that the trippage rate for each refillable beer bottle is 25 times; in other words, their aim is that the average refillable beer bottle that goes through its system is filled, returned, washed and refilled 25 times before breakage and recycling. The standardised refillable bottle, which is produced by O-I, is thicker and heavier than other bottles, and utilised by multiple breweries with separate labelling.

While the original bottle is marginally more expensive than the non-refillable container (as it's thicker and production volumes are lower), it's a one-off purchase and the only additional cost after initial supply is the washing.

Consumers can pay a \$3 deposit

for a waxed cardboard box to carry and return their empty refillable bottles. To date, 10 individual brewers are utilising the bottle service and a cider maker is coming on board soon. Additional discussions are occurring with a kombucha label and a clear glass bottle is also in development.

As outlined above, a number of EU states have maintained both refillable glasses and plastic drink containers (primarily PET containers above 1.25L size). Again, these PET units are slightly thicker than their single-use counterparts.

Bringing back the 10-cent deposit on single-use containers is the first part in the equation to bringing back refillables to Australia.

A shift back to refillable drink containers would be in keeping with the public momentum and hunger for waste and resource recovery solutions; and aligns well with the trend to food and beverage provenance/sustainability, to which the craft brewing sector aspires – but let's hope refillables don't just reside with that sector.

Robert Kelman is director of Reloop Pacific, contracted by EU-based advocacy organisations the Reloop Platform, promoting a circular economy including refillable containers, single-use plastic bans and increasing recycled content. [iw](#)



Bottle Box is a waxed reusable box for storing a carton of reusable beer bottles.

# We've shredded the price, not the quality.

## Now that's Applied Thinking.



- Heavy duty, reliable, cost effective recycling solutions
- Australia's favourite solution for all kinds of waste/materials reduction applications
- Extensive range available:
  - Vision Series Shredders
  - Gran-Calibur Series Granulators
  - Complete recycling lines; tyres, e-waste, cable, plastic washing & drying.



**Applied**  
MACHINERY AUSTRALIA PTY LTD

To find out more:

Call: 03 9706 8066, Email: [sales@appliedmachinery.com.au](mailto:sales@appliedmachinery.com.au)  
or visit: [www.appliedmachinery.com.au](http://www.appliedmachinery.com.au)