Inquiry - Improving Queensland's Container Refund Scheme

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Dear Health, Environment and Innovation Committee,

TOMRA recognises and appreciates the Queensland Government's intention to improve the Queensland Container Refund Scheme and are grateful for the opportunity to provide feedback via this Parliamentary Inquiry.

TOMRA shares our insights as a global leader in sorting, collection and reverse-vending technology that facilitates real circular economic outcomes, and provides our feedback based on 53 years' experience in the design, operation and administration of container refund schemes around the world.

TOMRA was founded in 1972 with the invention of the world's first Reverse Vending Machine (RVM) for the collection of returnable beverage containers. We now have over 80,000 RVM installations globally, operating in approximately 50 international markets, collecting over 48 billion used beverage containers for recycling every year. Altogether, TOMRA employs over 5,000 people worldwide with 2024 total revenues of $2.25 billion AUD.

TOMRA plays an active and integral role in Australia's CRS sector and wider circular economy. We are a major CRS collection point operator in Queensland with significant RVM and depot installations in southern Queensland, along with being appointed Network Operator (in partnership with Cleanaway) for the NSW Container Refund Scheme 'Return and Earn', Victoria's Container Refund Scheme 'CDS Vic' and the soon to be established Tasmanian Container Refund Scheme 'Recycle Rewards'.

Naturally, we would be very happy to discuss any and all of what we have outlined in our submission in greater detail if required.

Yours sincerely, and with approval of the TOMRA Collection Australia Executive Leadership Team,

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Recommendations

Through our global CRS experience over the course of the last 50+ years, TOMRA knows first-hand that well-designed international container deposit refund schemes achieve container return rates of over 85% (and many in excess of 90%). It is entirely appropriate, therefore, for Queensland to target a return rate of 85%+ and, with the right policy settings, design and management, such a target is perfectly possible to achieve.

While TOMRA could make comment on a range of governance, design, operational and considerations within the current scheme, this submission will focus on the two key levers that can help achieve the targeted return rate:

- A meaningful 'Deposit Refund Value' of at least 20c
- A higher density of convenient retail located collection points (such as Reverse Vending Machines)

In reality, it is only these two fundamental design factors that are capable of shifting return volumes by the required +27% (i.e. from a rate of 67% to the targeted rate of 85%). Other initiatives – increased education and marketing, piecemeal focus on poorly performing regions or demographics (e.g. muti-unit dwellings, commercial premises) can produce some marginal gains but will be insufficient to bridge this large gap in performance, particularly now that the scheme has already been in existence for over 6 years (by contrast, with the right design and policy settings, Lithuania was able to achieve a return rate of 92% within 2 years of its 2017 start date).

A meaningful 'Deposit Value' of at least 20c

The biggest driver of return rates is the deposit value, with Queensland (and other Australian schemes) having one of the lowest deposit values (10c) of any globally established container refund schemes. This is the primary reason that the Queensland scheme sees such low return rates, as the 10c deposit is an increasingly meaningless financial incentive for consumers to return their containers, thus depressing overall return rates. In layman's terms, 10c is just not enough of a financial incentive for a large proportion of Queenslanders (especially middle- and high-income Queenslanders) to go to the effort of returning containers.

It's worth noting that the value of the original deposit in Australia's first CRS (South Australia in 1977) was the equivalent of around 35 cents in today's money (https://www.rba.gov.au/calculator/annualDecimal.html). This is outlined in the below graph that shows how South Australia's declining return rate is directly correlated with the inflationary erosion of the deposit value over time:

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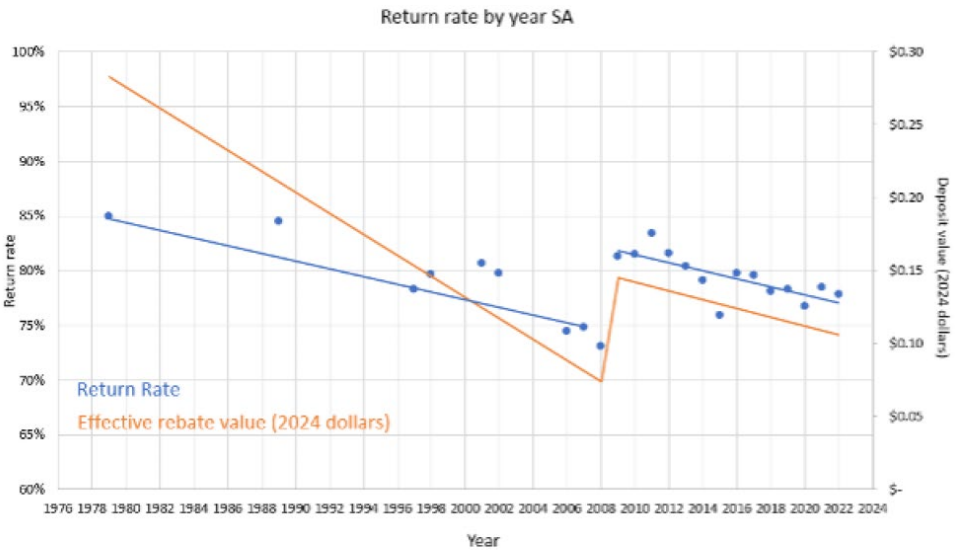


Source – MRA Consulting (How much should container deposit schemes be worth? - Inside Waste 10 Sept 2024)

South Australia's initial deposit value of $0.05 in 1977 was equivalent to roughly ***$0.35 in 2024.***

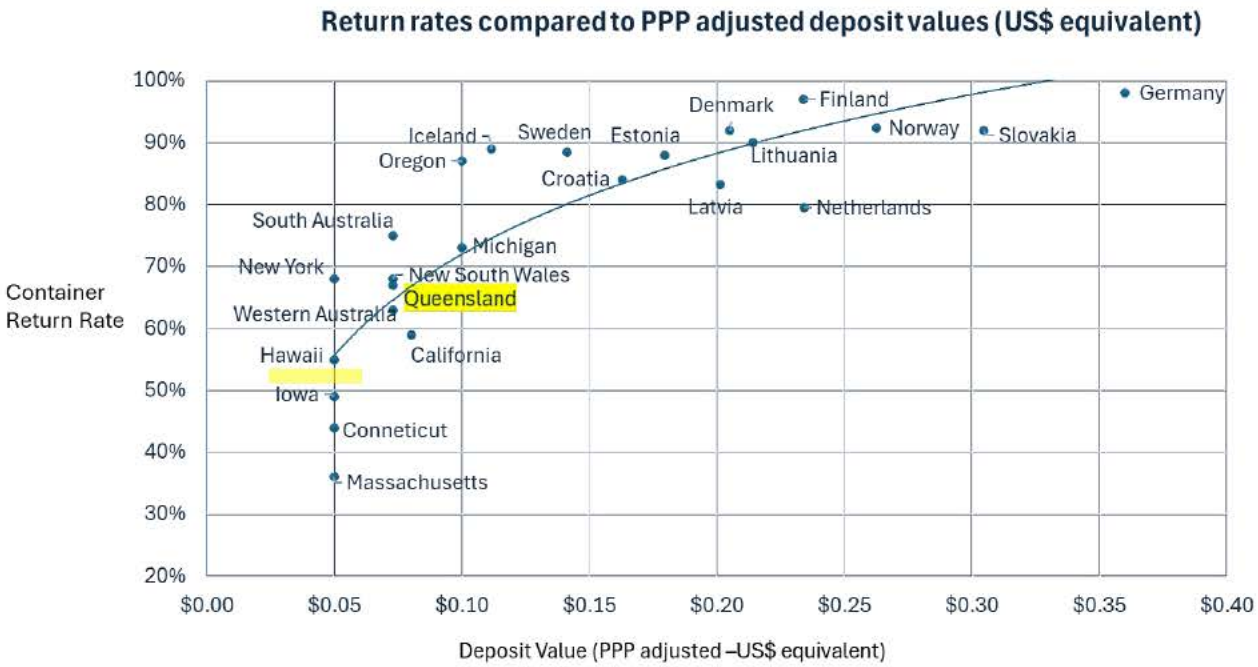
An increased deposit to $0.10 in 2008 equated to a deposit equivalent of roughly ***$0.15 in 2024.***

The declining return rate in South Australia is reflective of the reduced financial incentive to return.

In comparison to the low deposit value in Queensland, Germany's CRS achieves a 98% return rate due largely to the meaningful deposit value of 0.43c AUD equivalent, whist Denmark's CRS sees a return rate of 92%, with a deposit value between 0.22c and 0.68c AUD *(the deposit value in Demark differs by container material type and size).* Even in Slovakia, which is less economically developed than Germany or Denmark, the deposit is 0.25c AUD resulting in a return rate of 92%.

Alternatively, the only markets with lower deposit values are certain states within the US that achieve even lower return rates than Queensland.

The correlation between meaningful deposit value and high return rates can be seen succinctly in the below graph that compares established international scheme's deposit values (purchasing price parity adjusted to USD benchmark) with their overall return rates:



To get to a return rate of 85% or more, the graph implies that a deposit value of USD equivalent 17.5 cents (**or AUD 24 cents**) would be required.

Opponents of increasing the deposit value as a policy lever to achieve higher return rates argue that a higher deposit value may negatively affect beverage sales volumes. However, as COEX's annual report indicates, 87% of Queenslanders are aware of the scheme and therefore of the fact that any additional refund amount is refundable when a container is returned for recycling. Consumers that are price sensitive are generally the very ones that return their containers (and others' containers) for a refund. Indeed, due to the fact that the deposit is itself refundable, there is no evidence that deposit return systems cause a decline in beverage sales (see Evidence from new study debunks myth that Deposit Return Systems (DRS) cause declines in beverage sales - Reloop Platform).

Of course, it would be ideal if Queensland lifted its deposit refund value in harmony with other states and territories. However, this is far from necessary. South Australia had deposits on beverage containers independent of other states for 34 years (from 1977 to 2011 when the Northern Territory established its scheme), and in fact Tasmania still does not have a scheme established as of writing. It is also important to point out Queensland's leadership in moving ahead of other states with the inclusion of glass wine and spirit bottles into the Queensland CRS. These containers currently attract a 10c refund in Queensland but not in neighbouring states / territories, but have nevertheless been successfully integrated into the Queensland scheme independent of other states. As such, there are strong precedents showing that a deposit increase in Queensland independent of other states is achievable and manageable.

In addition to an immediate rise in the deposit refund value, policy makers should take the opportunity to ensure that the refund value keeps up with inflation in future. There are a number of options for this: for example annual reviews such that the refund is increased by suitable increments (e.g. 5c) when required to compensate for inflation; or the approach adopted in Oregon, where the refund value is automatically increased if the return rate target is not met for two years in a row.

A higher density of convenient retail-located collection points (such as Reverse Vending Machines)

It is widely acknowledged and understood that the more convenient it is for consumers to return their empty eligible containers, the more they will do so. Convenience is a key driver of return rates, and in most international schemes, this convenience is provided by providing return points at retail locations which consumers are already frequently visiting. This serves two purposes: it enables consumers to easily return their containers as part of their existing daily habits, and to do so without any additional travel (or associated carbon emissions).

Of the top 10 containers deposit refund systems globally as measured by return rate, 9[1] include so called "return-to-retail" legislation, in which retailers over a certain size that sell beverage containers are mandated to act as return points for eligible containers.

What this means in practice is that retailers that sell beverages in eligible containers, are legally obligated to accept retuned empty eligible containers and pay back the deposit to consumers. It results in a high density of collection points given that every supermarket and large food retailer is a part of the network, i.e. a collection point is never too far away. In 'Return-to-Retail' schemes, supermarkets and large food retailers meet their mandated takeback requirements by installing Reverse Vending Machines (RVM) in their stores, which serve as convenient collection points for the scheme. This inbuilt consumer convenience of a return point at every supermarket is a crucial factor (along with a meaningful deposit value) in high return rates of 85%+.

The current scheme design in Queensland likely limits the possibilities for a legislated "return-to-retail" system, in the short to medium term though there remain important opportunities for a re-examination of the consumer convenience levels offered and ways to establish more smaller format retail based return points as described below (e.g. through consideration of legislated planning requirements for retail locations / shopping centres over a certain size).

A more strategic, system-wide, approach to network design is required in the Queensland CRS. Currently the CRS is designed mainly around large-format depots rather than small format convenient retail based RVMs such as seen in international 'Return-to-Retail' schemes and other Australian states such as New South Wales.

[1] The exception is the tiny island nation of Palau (population: 18,000)

Due to capital and operational cost structures, depots require larger volumes to be financially viable than smaller format return points such as RVMs. In addition, the potential locations for depots are more limited and are constrained to industrial areas due to zoning requirements (also making them less convenient to access).

Adding more depots into the network does not solve the issue of low consumer convenience, but as importantly it undermines the financial viability of new entrants and existing operators (a significant portion of which are operated by charities and small businesses) by reducing their share of returned container volumes below the numbers required to remain viable. This loss of market share will in turn perversely see some depot-based refund points closing down in Queensland due to no longer being commercially viable, thus reducing consumer convenience even further.

To increase return rates in a financially sustainable way instead requires the addition of small format convenient locations (such as RVMs or RVM kiosks) that can be financially viable at smaller volumes, meaning larger numbers can be added to the network while reducing "cannibalisation" of existing operator volumes.

Such an approach will lessen the impact on existing operators but will not avoid it entirely. Indeed, any improvement in consumer convenience through the addition of new return points will inevitably have an impact on other competing return points.

Nevertheless, greater convenience through an increased number of return points is clearly necessary. **To increase overall return rates and consumer convenience, without widespread disruption and the potential failure of existing return points, therefore, it is highly recommended that a deposit increase is introduced in parallel**. This will lift the overall return rate and the volume per collection point, offsetting volume declines from an increased density of return points.

It is for this reason that any policy mechanism that increases the number of collection points in Queensland needs to go hand-in-hand with an increase in the deposit value to ensure a higher volume of containers are being returned by consumers (due to the more meaningful financial incentive to do so) thus ensuring the commercial viability of all collection point operations, better consumer experience and overall improved performance of the scheme. Both an increase in consumer convenience and an increase in the deposit value are required, not one or the other, to see return rates improve in Queensland.

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The intersection between a meaningful deposit value, consumer convenience and return rate

To clearly illustrate the intersection of '*Meaningful Deposit Value + Convenience = High CRS Return Rate*', we have compared international container refund deposit schemes and their performance on these key metrics in the table below.

	Collection Point Per Person (i.e. Convenience)	Median Deposit Value (AUD equivalent)	Return Rate
Germany	642	43c	98%
Finland	1,401	43c	97%
Slovakia	1,659	25c	92%
Denmark	448	45c	92%
Norway	370	36c	92%
Lithuania	1,110	17c	92%
Sweden	4,659	24c	89%
Iceland	6,649	22c	89%
Estonia	1,718	17c	89%
Latvia	1,345	17c	83%
Netherlands	3,562	29c	80%
Malta	1,628	17c	80%
Croatia	1,839	8c	79%
Ontario	9,377	15c	75%
South Australia	14,468	10c	75%
New South Wales	12,977	10c	68%
Queensland	15,617	10c	67%
Western Australia	11,198	10c	63%
California	30,300	11c	59%
Hawaii	27,078	8c	55%
Iowa	8,202	8c	49%
Connecticut	846	8c	44%
Massachusetts	965	8c	36%

Sources: Reloop Platform Global Deposit Book 2024 (https://www.reloopplatform.org/global-deposit-book/) / Packaging Europe Feb 7 2024 (Latvia's deposit return system yields 80% return rate in two years | Packaging Europe) / NL Times Feb 27 2025 (More plastic bottles returned for deposit; Target still far out of sight | NL Times

As can be seen in the above table, those schemes that have a meaningful deposit value and a high density of return points (i.e. high levels of consumer convenience) see return rates above the 85% Queensland legislated return rate target. As can also clearly be seen, there is a high correlation between "convenience" (as measured by "residents per return point", with a lower number indicating a higher number of return points and higher convenience) and return rate, and between deposit refund value and return rate.

CRSs, such as Queensland's, which have a very low deposit value and a very low level of consumer convenience see return rates significantly lower than the 85% legislated return rate target.

Conclusion

Container refund schemes are a low hanging fruit for resource recovery, diverting a relatively homogenous material stream away from landfill to productive economic use, and with multiple proven examples from around the world. If the Queensland CRS is not capable of reaching 85%+ recovery rates, then there is little prospect for more complex material streams. With the right policy settings and scheme design, Queensland's CRS can reach these target levels, as is widely proven in international schemes, yet this can only be achieved through the integration of the following policy tools:

A) An increase in deposit value to 20c+, with policy mechanisms in place for the deposit value to automatically increase in line with CPI to ensure it remains consistent and meaningful.

B) Increase in consumer convenience, in particular via an increase in small-format retail-based return points (potentially assisted via planning regulation intervention).

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