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Office of the Minister for the Environment

Cabinet Environment, Energy and Climate Committee

Driving recovery within a New Zealand Container Return Scheme

Proposal

- 1 This paper is the second in a series of four Cabinet papers on the option of a proposed beverage container return scheme (CRS) for Aotearoa New Zealand (NZ CRS).
- 2 This paper builds on a previous Cabinet paper which provided an overview of the problem of away-from-home recovery and litter, and the role of a CRS to address these problems. Cabinet agreed in principle to progress the development of a NZ CRS, subject to further advice to Cabinet on key design considerations [CAB-21-MIN-0300].
- 3 Specifically, this paper focuses on key design options for ensuring a proposed scheme is effective and successful in increasing recovery rates of beverage containers and reducing litter. In addition to this paper, you will receive separate advice on the proposed scope of containers that could be included in a NZ CRS.

Relation to government priorities

- 4 The Labour Party's 2020 Election Manifesto noted a commitment to investigate a NZ CRS. Implementing a NZ CRS is also a recommendation of the Prime Minister's Chief Science Advisor's 2019 *Rethinking Plastics* report. Further, work on a CRS aligns with the New Zealand Labour Party and Green Party of Aotearoa's Cooperation Agreement.

Executive Summary

- 5 In Aotearoa New Zealand, beverage container recovery rates remain relatively low and litter rates high compared to many countries with schemes in place.
- 6 A CRS is a recycling scheme and form of product stewardship that incentivises people to return beverage containers for recycling or refilling in exchange for a refundable deposit. It shifts the costs of recycling away from councils and ratepayers to the responsible supply chain (i.e. manufacturers, retailers, and consumers).
- 7 The aim of a CRS is to increase recovery and recycling of single-use beverage containers and reduce litter. A CRS also helps to reduce emissions by reducing the use of virgin materials in container manufacture.
- 8 The core principle underpinning a CRS is the use of incentives to change behaviour. The most important CRS design considerations to incentivise behaviour change and influence and drive recovery rates are the refundable deposit level and convenience of the return network (network design).
- 9 Schemes with high deposit rates (e.g. over NZD 30 cents) almost always have higher return rates. However, a number of exemplary schemes with lower deposit rates achieve

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high return rates (over 85 per cent), typically through mandatory 'return-to-retail' requirements because this ensures the scheme's return point network is convenient.¹

- 10 Other important design choices that can also influence recovery include the scheme's financial model and governance arrangements. Other regulatory options, such as recovery targets, can also be used to manage scheme performance.
- 11 I am proposing to consult on a CRS design that includes a sufficient deposit to incentivise consumers to return their containers, combined with a network design that will ensure access and convenience for those returns, while balancing costs to consumers and businesses. For the purpose of public consultation, I propose:
- 11.1 to seek feedback on a deposit level of either NZD 15 or 20 cents;
- 11.2 that retailers are mandated to take back beverage containers (with feedback sought on the level of retail participation as directed by Cabinet).
- 12 In addition, the consultation document would propose that the scheme's financial model is a 'deposit model' requiring beverage producers to pay a deposit on all eligible containers sold to market, regardless of whether these containers are returned or not (this aspect is further discussed in paragraphs 62-67).
- 13 With a proposed CRS framework involving sufficient financial incentive and access to return points, I am comfortable that a scheme could be industry-led, enabling industry to manage scheme efficiency within these parameters. To ensure the success of a scheme I propose an 85 per cent recovery target by year three, and a 90 per cent target by year five (assuming characteristics of a high performing scheme).
- 14 The scope of containers included in a CRS is also a key design consideration. Globally, most schemes include plastic, glass, and metal, and exclude fresh milk containers. Alongside this paper (2a), you will receive advice on the proposed scope of containers (Cabinet paper 2b) that could be included in a NZ CRS.
- 15 Pending Cabinet direction on key CRS design elements in these two papers (2a and 2b), I intend to seek Cabinet agreement in December 2021 to consult on the proposed option of a NZ CRS.
- 16 This paper does not have an accompanying Regulatory Impact Statement (RIS) attached. Officials will provide a full RIS with the next Cabinet paper and the draft consultation document, in line with Cabinet direction on proposed design considerations.

Background

- 17 Approximately 1 billion beverage containers are stockpiled, littered, or landfilled annually in Aotearoa New Zealand. By weight, it is estimated that 55 per cent of the over 2 billion beverage containers sold to market in 2019 were recovered for recycling.
- 18 A CRS is a recycling scheme and type of product stewardship that incentivises consumers and businesses to recycle through the application of a refundable deposit at purchase. Containers are 'redeemed' in exchange for the deposit refund at designated collection points.
- 19 On 5 August I presented a paper to the Cabinet Environment, Energy and Climate Committee (ENV) on the problem of away-from-home resource recovery and litter, and

¹ Schemes that include mandatory return-to-retail requirements use regulations to require retailers that sell beverages to take back post-consumer beverage containers.

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the role a NZ CRS could play in increasing recovery and reducing litter [ENV-21-MIN-0039 refers]. This included initial advice on costs and benefits and financial modelling of a CRS.² Cabinet invited me to provide further information on key design considerations for a NZ CRS.

- 20 There are key design elements in a CRS that are universal, however the way in which they are applied varies considerably across schemes globally. The following key design considerations work together to influence the recovery of beverage containers:
- 20.1 refundable deposit level;
 - 20.2 network design (convenience, accessibility and degree of retail participation);
 - 20.3 scheme financial model;
 - 20.4 scheme governance.
- 21 Effective schemes balance incentives and interests through interconnected design settings (such as the deposit level and network design). While individual policy setting options can be more or less influential, it is the overall combination of scheme design considerations that determines the recovery rate and success of a scheme.
- 22 For example, a scheme with fewer regulatory controls may require a higher deposit level (to further incentivise the return of containers) and more government involvement in the scheme's managing agency function to ensure that recovery targets are met. Alternatively, a scheme that is well regulated (such as one that requires retailers to take back used beverage containers) may achieve high recovery rates with a lower deposit level and less government involvement.
- 23 This paper seeks Cabinet direction on key design considerations in a NZ CRS that would drive the recovery of beverage containers. Specific advice on the scope of containers for a NZ CRS will be provided in CRS Cabinet paper 2b.

Analysis

Refundable deposits incentivise consumers to return their containers for recovery

- 24 In a CRS, eligible beverage containers are labelled and include a refundable deposit in the purchase price. If consumers return their beverage container(s) to a designated scheme drop-off point for recycling, the deposit is refunded. Deposit refunds can include cash, supermarket vouchers (for cash or credit), donation to charity, and electronic funds transfer (through an account or mobile phone app).
- 25 The refundable deposit creates a direct financial incentive to return eligible containers. The Organisation for Economic Co-operation and Development notes that a deposit level should be high enough to incentivise consumers to put in the extra effort to return their used beverage containers and encourage litter avoidance and collection.
- 26 High-performing international schemes, such as some of those in the European Union (EU) with return rates above 85 per cent, have deposit levels equal to or greater than NZD 30 cents.
- 27 Australian schemes have a consistent deposit level of AUD 10 cents, do not require retailers to take back eligible containers, and range between 48-78 per cent recovery. Australian officials noted that an AUD 10 cent deposit level is too low. s 9(2)(ba)(i)

² A cost benefit analysis and initial financial modelling on a NZ CRS was undertaken during the CRS co-design project in 2020.

s 9(2)(ba)(i), s 6(b)

- 28 Modelling based on international schemes suggests a relationship between the deposit level and recovery rates, and that the deposit level has the greatest impact on returns, i.e. a NZD 30 cent deposit is more likely to reach and exceed an 85 per cent recovery rate than NZD 10 cents.
- 29 There are some exceptions - seven exemplary schemes globally (red dashed box, below in Figure 1) have lower deposit levels (NZD 12-21 cents) and achieve return rates above 85 per cent. Six of these exemplary schemes have mandatory 'return-to-retail' regulations (blue dot series) and very high network convenience (such as one return point to 300-500 people).³ This emphasises the importance of balancing design considerations within a scheme, for example the balance between network convenience and the deposit level.

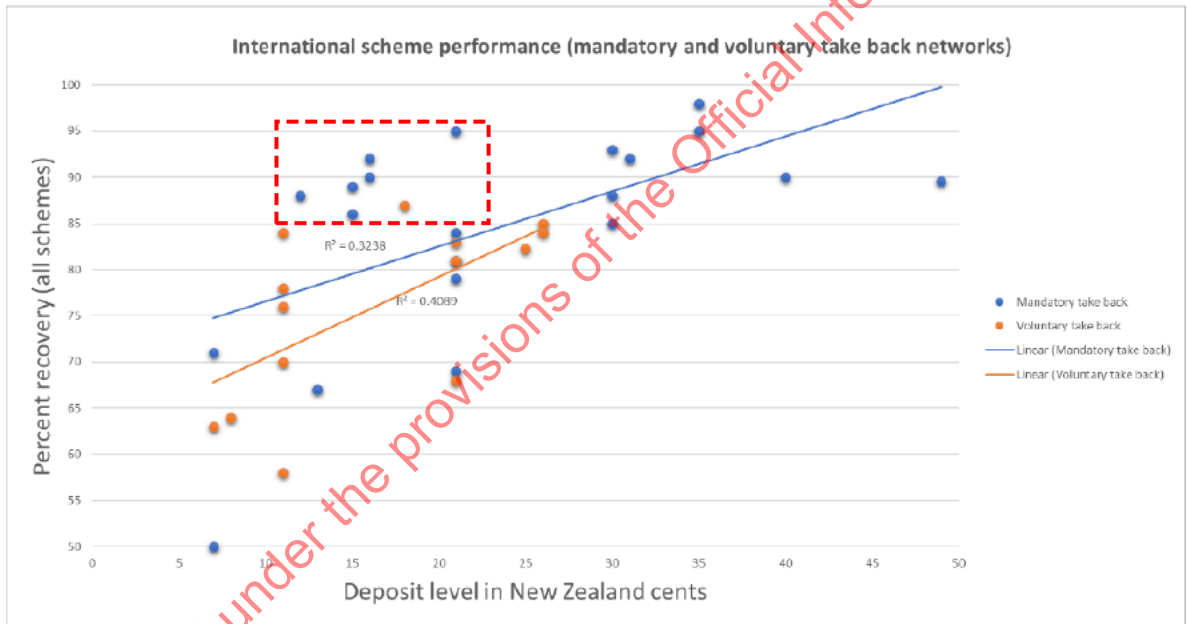


Figure 1: International scheme performance

- 30 Based on modelling, in New Zealand current recovery is approximately 55 per cent by weight and at least 47 per cent by count (noting that glass is heavy and skews the overall weight recovered upwards). 47 per cent is equivalent to 957 million containers recovered of the over 2 billion sold in 2019.
- 31 If a scheme were implemented, a NZD 10 cent deposit is likely to achieve a return rate of approximately 70 per cent (1.7 billion containers) and a NZD 20 cent deposit is likely to achieve a return rate of approximately 80 per cent (1.9 billion containers)⁴. However, if the proposed scheme design aligns more towards the exemplary scheme design

³ The outlier in the red hashed box with a voluntary take back network (orange dot series) is Iceland, which has very low population (356,991). Other schemes with voluntary networks that perform close to the 85 per cent level and at less than NZD 21 cent also typically have very low populations (e.g. Northern Territory Australia, population 246,500; Northwest Territory Canada, population 44,826).

⁴ See Appendix 1, target recovery rate assumes year 5 of scheme and intervening growth in market; 70% of 2019 sales volume is 1.4 billion containers; 80% is 1.6 billion containers.

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characteristics (such as those schemes in the red box in figure 1), a recovery target of 85 per cent and higher (over 2 billion containers) is considered potentially achievable at a NZD 20 cent deposit level.

- 32 Costs to households vary depending on whether the household participates in the scheme or not (i.e. whether they return their beverage containers for the refundable deposit). In addition to the refundable deposit, a non-refundable 'net cost' CRS 'scheme fee'⁵ of approximately NZD 2-3 cents (plus GST) is likely to be included in the purchase price of beverages (see the section on scheme fees below).⁶
- 33 At a NZD 10 cent deposit level, on average the net cost to households that return their containers would be NZD \$54-65 a year (including GST of \$22-\$25). At a NZD 20 cent deposit level, the net cost to households that return their containers would be NZD \$60-82 (including GST of \$38-\$43). This cost does not reflect the wider benefits or the more direct cost offsets to councils and ratepayers (e.g. through kerbside savings) which is covered in paragraph 60. An overview of wider costs and benefits can be found at Appendix 1.
- 34 A NZD 15 cent deposit level is an alternative to the NZD 10 cent or NZD 20 cent scenarios, however, as 5 cents is not legal tender in New Zealand there are some limitations. A NZD 15 cent deposit level would prevent consumers from receiving a cash refund if they returned only one, or an uneven number of beverage containers. Based on international schemes, cash is often the most preferred refund option.
- 35 This would particularly affect those consumers who purchased one beverage (e.g. from a supermarket, dairy or petrol station), and wanted to return it on the same trip for a cash refund. An unintended consequence may be consumers not returning single containers and instead throwing them away or littering them.
- 36 In 2020, two consumer surveys were undertaken to understand attitudes to a NZ CRS. Of consumers surveyed in February/March 2020 (2114 responses):
- 36.1 58 per cent supported a deposit level up to NZD 20 cents;
- 36.2 23 per cent supported a deposit level greater than NZD 20 cents.
- 37 As the deposit level effectively allocates a financial value far greater than the container material commodity value, higher deposit levels can lead to an increased risk of fraud. The risk and identification of attempted fraud within a scheme can be successfully managed through the scheme's technology and verification process, (eg, barcode scanning of containers at return points, live monitoring of returns, removing manual handling, etc).

Scheme fees would fund a NZ CRS, including the cost of recycling an average container

- 38 The core costs of a CRS (aside from the refundable deposit) are covered by the 'scheme fee'. Scheme fees flow through the system to fund the CRS including the cost of recycling a container, and include the handling fee, transport costs, scheme material consolidation facility costs and scheme administration.
- 39 Scheme fees vary depending on the nature and efficiency of a scheme. They are also proportional to the number of containers returned as the substantive cost is the handling

⁵ The scheme fee flows through the CRS system to fund the scheme including the cost of recycling an average container and includes: the handling fee, transport costs, scheme administration.

⁶ Financial modelling to date is based on over two billion beverage containers sold and includes a broad scope of containers (including fresh milk) in the scheme.

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fee paid per container to return point operators. Depending on decisions on the scheme financial model (see paragraphs 61 - 66), the net costs of a scheme can be reduced.

- 40 Beverage producers pay the per-container scheme fees and deposits to the scheme's managing agency to manage/distribute. This underpins the 'polluter pays' principle embedded in a CRS (i.e. shifting the costs of recycling from councils and ratepayers to producers, retailers and consumers).

Table 1: Gross and net costs per container (deposit level and scheme fee)

Gross and net costs per container	Description	Estimated amount
Deposit level (refundable)	Creates a direct financial incentive to recycle eligible containers.	Likely NZD 15 – 20 cents (depending on design decisions).
Scheme fee (gross cost)	Made up of: <ul style="list-style-type: none"> Handling fee (paid to container return facilities to cover costs of collecting, sorting, storing and packaging empty containers); Additional scheme fees (including transport, administration, consolidation). 	Based on international schemes (mainly Australia), modelled at: <ul style="list-style-type: none"> NZD 6.3 cents (handling fee); NZD 2.1 cents (additional scheme fee). Total gross scheme fee - NZD 8.4 cents (before offset).
Scheme 100 per cent pass through costs (includes offsets – creating lower net costs)	The full scheme fees and/or deposit can be offset using either unredeemed deposits (from containers that have not been returned, deposit model) or by producers only paying out on deposits on containers that come back into the scheme (refund model). See paragraphs 60-65 for more detail.	Modelling of the 'deposit model' shows the net scheme pass through cost to consumers would be approximately NZD 2-3 cents (plus GST) of non-refundable fees per container and NZD 20 cent of refundable deposit plus GST (NZD 20 cent scenario).

- 41 PwC modelling assumes a 100 per cent pass through of scheme costs experienced by beverage producers to the consumer. Under a NZD 20 cent scenario, the additional cost to the purchase price of beverages would be between NZD 22-23 cents (plus GST). Consumers would receive the NZD 20 cent refund upon returning the container, leaving a net cost to consumers who recycle of NZD 2-3 cents per container (plus GST on the increased sale price).

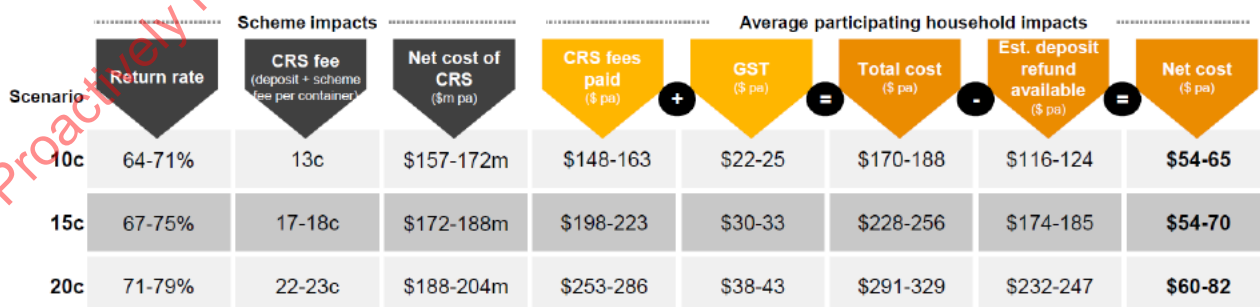


Figure 2: Implications of varying deposit rates on participating households

- 42 Based on Australian schemes, it is assumed that there will be a 6.5 per cent decrease in the volume of containers sold upon initial CRS commencement. However, an estimated

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2.53 per cent growth in beverage sales per annum sees sales recover within three years.

A CRS return network should be accessible and convenient for consumers

- 43 A container return facility (CRF) is where consumers and businesses can return eligible beverage containers to redeem their container to receive the refund. Each CRF type is developed to suit certain situations, container volumes, and customers.
- 44 The main CRF network for a CRS is only established once. While the number and location of CRFs can change over time, the core system effectiveness, efficiency and carbon footprint are all largely locked in at the implementation stage. An efficient, convenient, low-carbon network is one where most people can return containers to places they frequent regularly.
- 45 The main CRF types are:
 - 45.1 'Reverse Vending Machines' (RVM) – an automated vending machine that accepts empty containers (up to 100/min in standard models) using technology to accurately verify, count and sort containers by material type, then provide a refund or donation option. These are typically set up outside (or inside) retail locations and the machines can be sized for low, medium and high-volume sites.
 - 45.2 Depots (manual or automated) – eligible containers are brought to a depot and counted onsite, either manually (by staff) or using automated counting, verification and sorting technology before a refund is given. Depots are generally managed by interested stakeholders such as entrepreneurs, community groups, charities, and waste operators (e.g. scrap metal operators). In particular, depots cater to large private and commercial-scale customers such as collections from charity drives, hotels, bars and restaurants.
 - 45.3 Over-the-counter returns – small volumes of containers are received/redeemed by small businesses (e.g. dairies) and are then on-shipped to a depot for verification and aggregation.
- 46 A CRF's accessibility (hours of operation) and customer convenience (location and travel distance) is critical to the scheme's overall effectiveness and efficiency. The location, number and type of CRF locations per head of population impact operational scheme costs, customer convenience, public engagement in the scheme, and the network's embedded carbon footprint.
- 47 CRF operators receive a handling fee to cover the costs of collecting, storing, packaging and transporting returned containers. The handling fee has been modelled at a gross cost of NZD 6.3 cents per container, based on international schemes. The actual handling fee would be determined by the market-driven costs of the scheme.⁷
- 48 The majority of schemes globally use 'return-to-retail' legislation to some degree to ensure consumers are guaranteed convenient return points for eligible containers. Schemes that legislate for mandatory return-to-retail require retailers to take back used beverage containers and in so doing guarantee conveniently located CRFs for most of the population. As a result, higher return rates are typically achieved. This approach is common to European schemes and is also used in the United States and Canada (but not Australia).

⁷ One potential advantage of a return to retail network is the opportunity for the scheme to leverage reverse logistics within beverage/grocery distribution networks.

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- 49 Depending on scheme design, mandatory return-to-retail may:
- 49.1 only apply to larger supermarkets/retailers (such as those exceeding a specific floor area);
 - 49.2 include small retail stores as well (e.g. smaller convenience stores and dairies);
 - 49.3 provide conditions and/or exceptions for retailers (e.g. for health and safety, or food safety reasons, or where there is another CRF in close proximity).
- 50 Under a return-to-retail model, mandated retailers would face initial costs to establish return points on their premises. This could be done through direct purchase and management of store-owned systems, or more likely the procurement (lease) of a return point provider and technology to establish and manage return points (either partially or entirely). Return point operators would receive some or all the scheme handling fee to cover the costs of collecting, sorting, packaging and transporting returned containers, offsetting the cost imposition on retailers.
- 51 In comparison, voluntary return-to-retail schemes rely on incentivising potential CRF operators (including retailers) to engage in the network procurement process being run by the scheme manager. A scheme would be a disruption to business as usual, so if retail participation is voluntary, uptake would likely be piecemeal at best, affecting the network's overall accessibility, efficiency, and effectiveness.
- 52 The Ministry for the Environment (the Ministry) has undertaken provisional geo-spatial analysis to identify the accessibility and convenience for New Zealanders if, for example, all major supermarkets were required through regulation to take back beverage containers. Typically, consumers can return their eligible beverage containers to any participating retailer or CRF for a refund.
- 53 For large supermarket chains (approximately 680 stores),⁸ on average over 80 per cent of New Zealanders live within a 5-minute drive of a supermarket, 90 per cent live within a 10-minute drive, and over 95 per cent live within a 20-minute drive. In terms of distance, approximately 89 per cent of New Zealanders live within 5km of a supermarket, and 95 per cent live within 10km of a supermarket.⁹
- 54 Additional return options for those not close to a supermarket could include:
- 54.1 depot return points (e.g. run by recyclers, community groups, and/or individuals);
 - 54.2 voluntary retail participation through smaller retailers, such as dairies, petrol stations and bottle stores.
- 55 As per the example above, using both mandatory and voluntary participation would create a 'mixed-return' model, close gaps in the network (e.g. to ensure accessibility for rural communities) as well as provide opportunities for other businesses, community organisations, and charities to participate in a scheme. In a mixed-return model, the majority of return points would be established through regulations, while the scheme's managing agency would procure additional voluntary return points, including depots.
- 56 Feedback from stakeholders has indicated relatively broad support for a strong regulated approach to a NZ CRS such as the EU models, and some level of regulated take-back. Some stakeholders particularly supported the additional role of depots in a scheme to support and leverage their current roles in the resource recovery sector, including the Zero Waste Network and Association of Metal Recyclers.

⁸ Countdown, Four Square, Fresh Choice, New World, Pak'n Save, SuperValue.

⁹ Note that this is the shortest path distance and does not consider the distance travelled on roads.

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- 57 A mixed-return model would provide retailers with benefits (i.e. anticipated increased foot traffic and revenue from the handling fee) however it is likely that a minority of stakeholders (largely beverage industry and retailers) will prefer a voluntary only approach to network establishment.
- 58 Seventy-nine per cent of survey respondents who participated in consumer surveys on a NZ CRS (February/March 2020) identified the need for drop-off points to be convenient and indicated the following return point preferences:
- 58.1 supermarkets (70 per cent);
 - 58.2 collection depots (63 per cent);
 - 58.3 other retail outlets (50 per cent).

A CRS works alongside kerbside recycling collections

- 59 The recovery of beverage containers through a NZ CRS will have implications for kerbside recycling collections and in turn, the optimal kerbside standardisation model for New Zealand. Specifically, a CRS adds a financial incentive (refundable deposit) to return eligible material through the scheme, which will reduce the amount of material that is placed in kerbside bins.
- 60 I have met with recyclers who have noted that they will lose valuable materials if households choose to return beverage containers through a CRS for the refund, rather than putting them out for kerbside recycling.
- 61 This concern is manageable. International experience shows that there is likely still some (10-20 per cent) beverage containers left behind in kerbside which will have value in unredeemed deposits. There are also cost savings for councils and MRFs through reduced kerbside collection overall (as most eligible material is likely to be managed through the CRS). PwC modelling shows benefits to local councils and MRFs of over NZD \$70 million a year (based on a NZD 20 cent deposit level).¹⁰ This benefit alone equates to approximately NZD \$38 per household.
- 62 Contractual arrangements around unclaimed deposits would need to be negotiated between councils and MRFs to manage any unclaimed deposit revenue from kerbside bins. While this would be a private contractual arrangement, I consider that a 50:50 split would be an appropriate starting position for the negotiations.

The financial design of a CRS can influence the efficiency and operations of a scheme

- 63 A CRS shifts the costs of recycling and resource recovery away from councils and ratepayers to the responsible supply chain (i.e. beverage producers/manufacturers, retailers and consumers).
- 64 The financial arrangement of a CRS is dependent on whether the beverage producer pays a deposit:
- 64.1 on all eligible containers sold to market, regardless of whether these containers are returned or not (deposit financial model);
 - 64.2 at an amount determined by the proportion of eligible containers that are returned (refund/redemption financial model).

¹⁰ Modelling indicates that 72 per cent of the benefit is due to revenue from deposit fees, and 28 per cent is due to kerbside and landfill savings.

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65 The financial model of a CRS can influence key aspects of a scheme, including the upfront implementation costs, return rates, network convenience, capacity to invest scheme operations in such a way that delivers co-benefits (e.g. community and/or environmental initiatives), and ability to undertake consumer/customer engagement and education. These variables are also influenced by other scheme design considerations and the financial model chosen.

Table 2: Key elements of deposit and refund models

Deposit Model	Refund Model
<p>Beverage producers pay the relevant deposit to the scheme’s managing agency for every container sold to market, regardless of whether the consumer returns the container or not for a refund.</p> <p>The scheme manager retains any unredeemed/unclaimed deposits, interest accrued on the deposits, and revenue from the sale of scheme materials.</p>	<p>Beverage producers only pay the deposit fee in proportion to the actual number of containers returned to the scheme, with no unredeemed/unclaimed deposits available to the scheme’s managing agency to offset scheme costs.</p>
<p>Revenue from the deposit model becomes available to offset scheme costs including the handling fee to producers and consumers, or scheme enhancement. The deposit model sees the gross ‘scheme fee’ drop from an estimated NZD 8.4 cents per container to NZD 2-3 cents per container as the unclaimed deposits offset the scheme costs for all. In this sense, the scheme is more geared towards ‘polluter pays’.</p>	<p>If only 50 per cent of containers are returned, the beverage producer will only need to pay 50 per cent of the deposit amount and associated scheme fees for each container placed on the market. For example, in a NZD 10 cent deposit and 50 per cent return rate scenario, this would mean a 50 per cent or NZD 5 cent deposit value ‘redemption cost’ is paid into the scheme for 100 per cent of the containers sold into the market. While the scheme fees cannot be offset by unclaimed deposits in the refund model, the deposit cost to producers is less and therefore the pass through of this cost to consumers is also less.</p>
<p>Often cited as being at risk of “generating profit”, a mix of regulation and scheme governance can ensure deposit revenues are managed appropriately, efficiently and that the scheme remains not for profit by using unclaimed deposits to reduce scheme fees.</p>	<p>An often-cited benefit of this model is that scheme start-up costs to beverage producers are lower. However, this only really applies when return rates are very low. As return rates increase, the two financial models become less different.</p>
<p>More strongly applies the ‘polluter pays’ principle and the deposit model is more often associated with higher performing schemes.</p>	<p>Preferred by beverage producers and reduces up-front costs for producers when/if return rates are low.</p>

66 The deposit model does increase the cost to beverage producers at the initial outset of a scheme when recovery rates may be lower, however for high performing schemes the deposit paid on unredeemed containers can be used to offset scheme costs to producers and consumers.

67 At face value a refund model would provide the beverage producer (and therefore consumer) with a scheme that is more cost effective than the deposit model at the outset when return rates are low, as the producer would only pay the deposits on the actual number of containers returned. However, there is a risk that the refund model may create a perverse incentive for beverage producers to limit the recovery of containers and the success of the scheme to keep costs low.

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- 68 If a NZ CRS adopted a refund model, the scheme would need to be accompanied by strong regulatory drivers and/or stronger scheme governance and central government oversight to ensure the scheme would not be susceptible to perverse incentives and would achieve the recovery targets. Alternatively, if a deposit model was chosen alongside a mandatory return-to-retail network there would be less financial incentive (or ability) for an industry-led scheme to limit return rates of eligible containers in order to reduce scheme costs.

Schemes are often industry-led, with different degrees of regulatory or structural controls

- 69 Broadly, the governance leadership for a CRS can be any singular type or combination of key stakeholders, such as beverage producers, retailers, recyclers, government or others. While there may be a dominant group or groups represented in the governance and leadership of a scheme, governance could also be more broadly representative (i.e. including representatives from iwi, community groups, consumers, etc).
- 70 Overall, a CRS would ideally strike a balance between a well-regulated scheme that is industry-led, or a less regulated scheme that is more influenced by government and other interested parties at an operational level.
- 71 The governance model options for a CRS are best considered in light of other landed design considerations, such as the deposit level and network design, in order to ensure overall balance within the design. While there are many high-performing industry-led schemes internationally, strong regulatory drivers and/or scheme structural controls are typically in place where this is the case.
- 72 The structure provided by key regulated design elements outlined in this paper would create the framework necessary for high recovery rates and helps to mitigate the risk of perverse incentives for industry to keep recovery rates low. As such, a NZ CRS could be an industry-led scheme (i.e. led by retailers, beverage producers, recyclers or any such combination of industry representatives), with opportunity for some non-industry representation as well.

I recommend that the Ministry for the Environment consults on a proposed NZ CRS that balances key design considerations to enable high performance/return rates

- 73 There is a clear need for a balance between design elements to ensure that a CRS is efficient and effective and achieves high recovery rates of beverage containers. In light of this, and subject to Cabinet approval to consult on the option of a NZ CRS, I consider the following proposed design elements would create an optimal scheme for New Zealand and should be included in public consultation.
- 74 **Deposit level:** The deposit level incentivises consumers to return empty beverage containers for a refund. I consider that a NZD 10 cent deposit is too low and would not achieve the desired level of recovery. A NZD 20 cent deposit level would recover more beverage containers than a lower deposit, however it does come with higher costs for the beverage industry and consumers. I recommend that the Ministry seeks feedback during consultation on NZD 15 cent and NZD 20 cent deposit level options (noting the practical limitations of a NZD 15 cent deposit level).
- 75 **Mandatory return-to-retail:** I consider that as part of a NZ CRS, retailers that sell beverages for take-away consumption should be required to take back and redeem eligible containers when empty. This puts the onus on retailers to take some responsibility for the products they sell. It would also create the most convenient network of return points for the majority (95 per cent) of New Zealand's population, at places

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consumers already frequent. Network convenience and accessibility, combined with a sufficient deposit level, is likely to support higher levels of recovery than a voluntary return network. Retailer involvement also helps to ensure the scheme does not create 'extra trips' ensuring lower emissions than a depot only based model.

- 76 I recommend that the proposed CRS return network is a 'mixed-return model' where participation is mandated in regulations which would require retailers to take back eligible containers, and that there is additional opportunity for voluntary participation in the scheme for depots and small retailers where there are gaps and opportunities in the network. I recommend that the Ministry seek feedback during public consultation on the level of retail participation (e.g. retailer size). I also recommend a mandated level of automation throughout the system to ensure transparency, verification, reporting, and fraud mitigation; every container redeemed must be electronically verified and counted.
- 77 While modelling suggests a scheme target of 80 per cent recovery could be achieved, this is based on an average of all schemes globally which includes some schemes that are not designed as effectively. As a NZ CRS is proposed to be based on a set of exemplary schemes, I consider a target of 85 per cent recovery by year three, and 90 per cent by year five could be set for the scheme. I do not propose to include penalties for underperformance as some schemes do. However, I do propose to review the scheme at year three to assess performance and whether key parameters, such as the deposit level and return points, need to be adjusted.
- 78 Scheme financial model: I recommend that a deposit model is proposed for the scheme's financial arrangements. There is little difference to the cost to beverage producers between the refund model and deposit model in high-performing schemes, however the refund model may create a perverse incentive within a scheme towards managing costs through less ambitious recovery (recovery rate is the biggest driver of costs within a scheme).
- 79 Considering my recommendations to consult on a proposed NZ CRS that includes regulations to mandate retailers to take-back eligible beverage containers and uses the deposit model to manage the scheme's finances, I consider that a NZ CRS could also be an industry-led scheme (i.e. led by retailers, beverage producers, recyclers or any such combination of industry representatives). The structure provided by key regulated design elements creates the framework necessary for high recovery rates and helps to mitigate the risk of perverse incentives for industry to keep recovery rates low.

Implementation

- 80 Implementing a NZ CRS would require system-level change. CRS Cabinet paper 3 (including a RIS) will outline project implementation details, subject to design direction resulting from this paper and CRS Cabinet paper 2b.

Financial Implications

- 81 There would be costs associated with establishing and implementing a NZ CRS. This would include the establishment of the scheme's managing agency, and the network infrastructure for the return and management of eligible containers.
- 82 While these costs are normally funded by industry or through Government loans, there may be an opportunity to leverage funding through the Waste Disposal Levy to support the initial implementation costs of a NZ CRS, such as an upfront float for the scheme/industry – this could be a grant, a loan, or both.

- 83 Sapere Research Limited (Sapere) undertook an initial cost benefit analysis (CBA) for a NZ CRS. The CBA looked at costs and benefits including reduced litter clean-up costs, reduced contamination of kerbside recycling, and additional value from material recycled. Looking at a 30-year time horizon and a NZD 20 cent deposit level, a NZ CRS would have net benefits of NZD \$1.1 billion and a benefit-cost ratio of 1.49 (glass-in scenario). The Ministry will update the CBA in line with Cabinet's preferred design.
- 84 Cabinet paper 3 will outline the financial impacts of the proposed CRS design (for consultation purposes) and provide CBA details (updated to reflect Cabinet's preferred CRS design). It will also include a RIS.

Legislative Implications

- 85 Introducing a NZ CRS would likely require legislative amendments. The Ministry is progressing a substantive review of the Waste Minimisation Act 2008, with consultation expected later in 2021. This presents a timely opportunity for any legislative changes required to implement a NZ CRS. Subject to scheme design direction, the following Cabinet paper will provide further advice on legislative implications of a NZ CRS.

Impact Analysis

Regulatory Impact Statement

- 86 This paper seeks Cabinet direction on proposed key design considerations to drive the recovery of eligible beverage containers in a NZ CRS to include in a consultation document.
- 87 Cabinet's impact analysis requirements apply to the proposed design considerations for a CRS, but there is no accompanying RIS and the Treasury has not exempted the proposal from the impact analysis requirements. Therefore, it does not meet Cabinet's requirements for regulatory proposals.
- 88 The Ministry for the Environment will provide a RIS when seeking agreement from Cabinet to publicly consult on a proposed NZ CRS.

Climate Implications of Policy Assessment

- 89 The Climate Implications of Policy Assessment (CIPA) team has been consulted and confirms that CIPA requirements do not apply as there is no direct emissions impact at the consultation stage. The CIPA team at the Ministry for the Environment will work with officials developing proposals to assess the emissions impacts of policy proposals as they are advanced, as appropriate.

Population Implications

- 90 No Tiriti ō Waitangi implications have been identified at this stage. Noting the system-level change a NZ CRS would bring, further analysis of Treaty implications and plans to consult with relevant iwi/Māori will be included CRS Cabinet paper 3.
- 91 Depending on Cabinet direction regarding the return network, there may be opportunities for iwi/Māori to be involved in the establishment of the network and participation in the scheme. If the network is designed to ensure wide-ranging participation and resource recovery at the local level, there may be opportunities for iwi/Māori to participate in the

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network through mandatory return-to-retail or through operating voluntary return points (such as depots or over-the-counter return facilities).

- 92 The proposed network design may also impact rural communities, such as those living further than a 20-minute drive from a major supermarket (approximately 5 per cent of the population). This could be mitigated using voluntary retail return points (e.g. dairies) or depots. Feedback would be sought on implications for rural communities during consultation.
- 93 The addition of a deposit level and scheme costs in the purchase price of eligible beverages may impact those in lower-socio economic groups. While the purchase price of the beverage may have some impact, the overall impact of a price increase is likely limited to those who do not return their used containers. Conversely, a CRS provides an opportunity for container charity drives and self-funding litter recovery.

Human Rights

- 94 The option of a NZ CRS as discussed in this paper is consistent with the New Zealand Bill of Rights Act 1990 and the Human Rights Act 1993.

Consultation

- 95 The Department of Conservation, Treasury, Inland Revenue Department, the Ministry of Foreign Affairs and Trade, Te Puni Kōkiri, the Ministry for Primary Industries, the Department of Internal Affairs and the Ministry of Business, Innovation and Employment have been consulted on this paper. The Department of Prime Minister and Cabinet has been informed.

Communications

- 96 Subject to Cabinet approval, following CRS Cabinet paper 3, I intend to announce policy proposals in advance of public consultation on a NZ CRS later this year or in early 2022.

Proactive Release

- 97 Consideration of proactive release of this paper will be delayed to coincide with consideration of subsequent CRS Cabinet papers, and public consultation. Release is subject to redactions under the Official Information Act 1982.

Recommendations

The Minister for the Environment recommends that the Committee:

- 1 Note that investigating a container return scheme for New Zealand (NZ CRS) is a Labour Party Manifesto commitment, was recommend to be implemented by the Prime Minister's Chief Science Advisor in 2019, and aligns with the New Zealand Labour Party and Green Party of Aotearoa's Cooperation Agreement;
- 2 Note that in August 2021, Cabinet invited the Minister for the Environment to prepare further advice for Cabinet on the design considerations of a NZ CRS [CAB-21-MIN-0300];
- 3 Note that the aim of a CRS is to increase the recovery and recycling of eligible beverage containers, reduce litter, and contribute to New Zealand's transition to a low-emissions, sustainable, and circular economy;

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- 4 Note that the following recommendations are in principle, and a proposal for a NZ CRS based on Cabinet direction will be provided in a draft consultation document for Cabinet consideration;

Deposit level

- 5 Note the core principle underpinning a CRS is to incentivise behaviour change using a refundable deposit which is added to the purchase price of eligible beverage containers to encourage consumers to return them;
- 6 Invite the Minister for the Environment to prepare a draft consultation document for Cabinet consideration on a NZ CRS that proposes;
 - 6.1 EITHER: A range of deposit levels including 15 cents and 20 cents (recommended);
 - 6.2 OR: A set deposit level of NZD 20 cents;

Network design

- 7 Note that an efficient, convenient, low-carbon return network is one where the majority of people can easily return containers to places they frequent regularly for other purposes;
- 8 Invite the Minister for the Environment to prepare a draft consultation document for Cabinet consideration on a NZ CRS;
 - 8.1 that proposes to regulate for mandatory return-to-retail (as part of a mixed-return model); and
 - 8.2 EITHER: proposes that retailers that sell beverages for take-away consumption, and are over a certain size would be mandated to take back eligible beverage containers (recommended);
 - 8.3 OR: proposes that retailers that sell beverages for take-away consumption are required to take back eligible beverage containers;
- 9 Note that exemptions could apply to either scenario and include, for health and safety reasons, food safety reasons, or where there is another retail return point nearby;
- 10 Note in addition to mandated return-to-retail requirements, other businesses or organisations could also voluntarily apply to be container return facilities where there are gaps and opportunities in the network (e.g. to provide return points for rural communities and depots to service bulk customers);
- 11 Note a NZ CRS will have impacts on the amount of material collected in kerbside recycling, and that councils and materials recovery facilities will need to negotiate contracts to manage unclaimed deposit revenue recovered through kerbside recycling bins;

Financial design

- 12 Note that a CRS shifts the costs of recycling away from councils and ratepayers to the responsible supply chain (i.e. beverage producers/manufacturers, retailers and consumers);
- 13 Note that a NZ CRS could require beverage producers/manufacturers to pay a deposit on all eligible containers sold to market regardless of whether these containers are

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returned or not (deposit model) or at an amount determined by the proportion of eligible beverage containers that are returned (refund model);

- 14 Note that subject to Cabinet's decision to publicly consult on the proposed option of a NZ CRS, I intend to consult on a NZ CRS based on the deposit model;

Scheme governance

- 15 Note that a CRS can be industry-led or more broadly representative (e.g. including representatives from financial and legal sectors, iwi, community groups, consumers);
- 16 Note that a NZ CRS would ideally strike a balance between a well-regulated scheme that is industry-led, or a less regulated scheme that is more influenced by government and other interested parties at an operational level;
- 17 Note that, subject to Cabinet's direction on other scheme design considerations (and the degree of regulation), I intend to consult on the proposed option for an industry-led NZ CRS;
- 18 Invite the Minister for the Environment to direct Ministry for the Environment officials to prepare a consultation document on the option of a NZ CRS, in line with Cabinet direction on proposed design considerations to drive recovery of beverage containers outlined in this paper.

Authorised for lodgement

Hon David Parker

Minister for the Environment

Appendix 1 – Costs and benefits of a NZ CRS

Proactively released under the provisions of the Official Information Act 1982