## Inquiry - Improving Queensland's Container Refund Scheme

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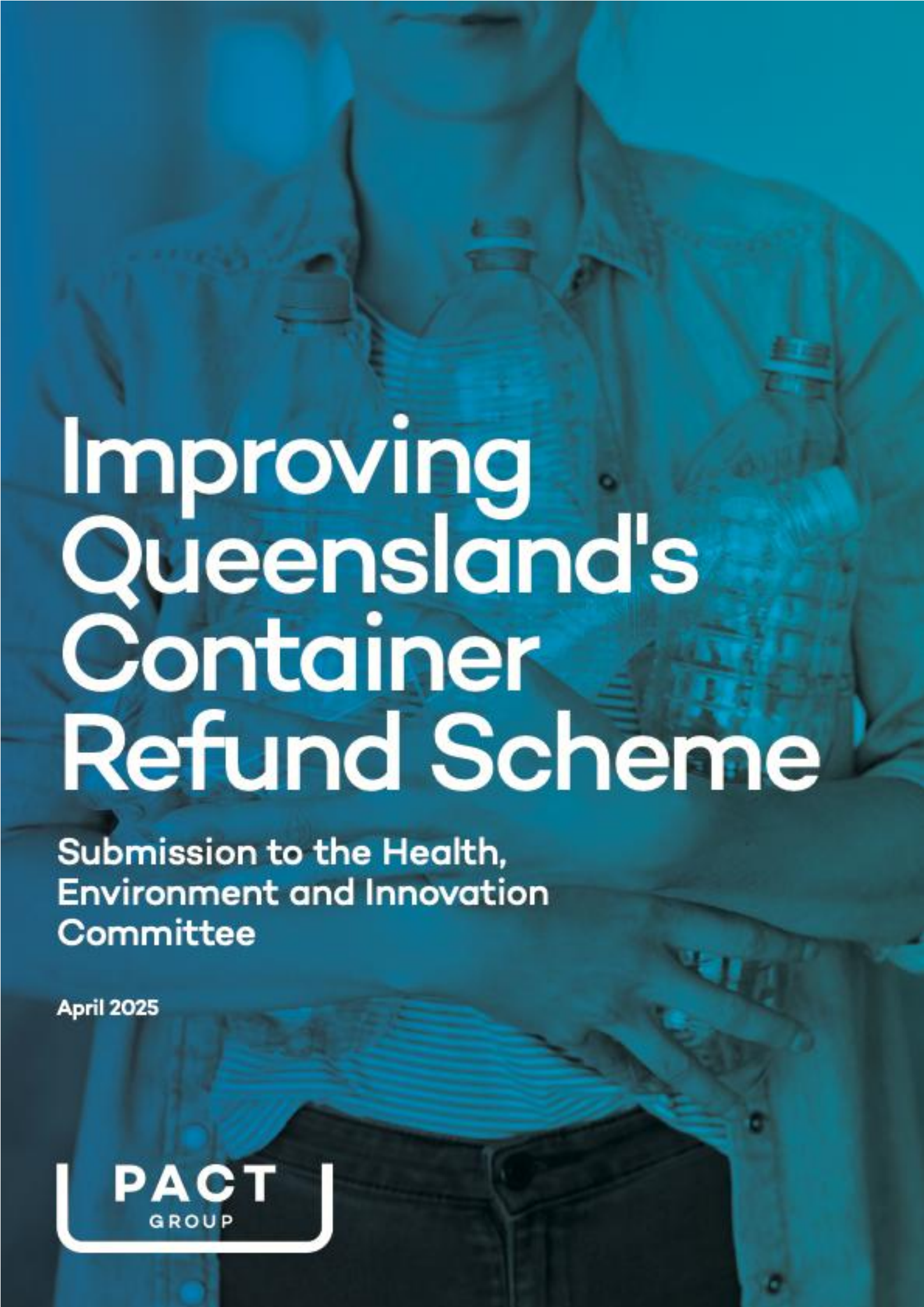
| **Submission No:** | 71 |
| **Submitted by:** | Pact Group |
| **Publication:** | Making the submission and your name public |
| **Attachments:** | See attachment |
| **Submitter Comments:** | |



# Improving Queensland's Container Refund Scheme

## Submission to the Health, Environment and Innovation Committee

April 2025

PACT GROUP

# Executive Summary

**Improving Queensland's Container Refund Scheme**
Queensland's Container Refund Scheme (CRS) has provided modest returns in its five full years of operation. While a collection rate of 67.4% resulted in 2.1 billion containers returned for recycling in FY24, an estimated 1 billion containers were not recycled and instead went to landfill. Achieving the Queensland Government's legislated target return rate of 85% for the State's CRS and reducing the quantity of containers being sent to landfill cannot be achieved without significant policy changes.

The objectives of a successful CRS are to increase the circularity of beverage containers, reduce litter, improve recycling outcomes and reduce emissions. Based on international best practice, the implementation of three key changes will have a meaningful impact and drive the return rate in Queensland toward the desired 85% mark and achieve CRS objectives. Those changes are:

1. **Increase the refund price to at least $0.20**: International data show the higher the deposit amount placed on a beverage container, the higher the collection rate. Incentivising consumers with a more meaningful refund will effectively drive more beverage containers out of the waste stream and into the recycling stream. European schemes which have achieved return rates above 90% offer refunds of between €0.10 and €0.25 (AUD 0.17 and 0.43). Queensland's refund price of $0.10 is inadequate and should be increased to at least $0.20 with a process put in place to review periodically to ensure the refund price keeps pace with CPI increases.

2. **Return-to-retail**: Providing more convenient options for consumers to return containers and obtain a refund is an integral feature of high performing container refund schemes internationally. Most countries in Europe, and the top performing schemes in Canada and the United States require retailers that sell beverages to take back empty containers and provide a refund to consumers. In Europe, the average collection rate is 87%, with the top six countries achieving returns of between 92% and 98%. In those countries, return-to-retail means thousands of return points are available to consumers.

3. **Prioritising bottle-to-bottle recycling for PET plastic:** To achieve genuine circular economy outcomes in Australia, it is incumbent upon Queensland (and other states) to ensure valuable resources collected through the CRS are recycled into the highest possible value products and not downcycled or part processed for export. A PET plastic beverage bottle can be recycled domestically into high quality food grade pellets that can be used to make new PET beverage bottles or food packaging in Australia. Therefore, domestic recyclers with food grade processing capacity should have priority access to CRS PET bottle material. This would be best done by scrapping the current practice of auctioning off baled PET containers to the highest bidder and replacing with a tender process for long term contracts with criteria that supports a domestic circular economy.

## About Pact Group

Pact Group is an Australian-based plastic recycling, reuse and packaging manufacturing company that employs more than 5000 people globally, including approximately 2000 people across 50 packaging and recycling facilities in Australia.

Pact currently operates seven plastic recycling facilities in Australia (three in New South Wales, one in Queensland and three in Victoria). This includes the world-leading Circular Plastics Australia (PET) recycling plants in Melbourne and Albury, NSW, which process PET beverage bottles collected via state Container Refund Schemes and kerbside recycling. Each plant has the capacity to recycle 20,000 tonnes of PET a year, the equivalent of around 1 billion 600ml plastic beverage bottles.

These bottles are recycled into high-quality food grade plastic resin which is used to manufacture new beverage bottles and food packaging, creating a circular economy for plastic beverage bottles. Since 2022, the two Circular Plastics Australia facilities have recycled more than 10,600 tonnes of PET bottles from Queensland – the equivalent of approximately 535 million beverage bottles. Pact's submission makes recommendations related to Queensland's CRS overall, with a particular focus on PET plastic beverage containers.

## Overview

Queensland's CRS has a legislated target return rate of 85% which would place it on a par with the average return rate in European countries with deposit return systems for single use beverage containers.

However, the scheme, administered by Container Exchange (COEX), has provided modest returns since its commencement in November 2018 and the collection rates are among the lowest in the country when compared to schemes in other states.

COEX annual reports reveal collection rates for all materials (aluminium, glass, plastics, liquid paperboard and steel) fall well short of the 85% target.[1] On average, the collection rates in Queensland are also behind the rates in all other states and territories except Western Australia.

**CRS collection rates – Australian States and Territories**

| YEAR | QLD | NT | SA | NSW | ACT | WA |
|---|---|---|---|---|---|---|
| FY24 | 67.4% | 83% | 74.7% | 68% | 65% | 65.37% |
| FY23 | 63.5% | 78% | 76% | 66% | 70% | 63.2% |
| FY22 | 62.9% | 77% | 77.5% | 65% | 75% | 60.6% |
| FY21 | 61.6% | 72% | 76% | 67% | 68% | 52.96% |
| FY20 | 60.1% | 80% | 74.7% | 67% | 50% | - |

Source: State/Territory scheme annual reports 2019-20 to 2023-24.

The stated purpose of the scheme is to reduce the amount of drink containers that are littered and to increase Queensland's recycling rate.

While the scheme has undoubtably increased the amount of material available for recycling, the modest collection rates have meant billions of bottles and containers have not been recovered for recycling and are instead ending up in the litter stream.

Data from the Australian Packaging Covenant Organisation (APCO) estimates that in 2022-23, more than 45,000 tonnes of eligible CRS containers were sent to landfill in Queensland. APCO estimates this is the equivalent of 930,837 million containers.[2]

**Queensland CRS material sent to landfill**

| Material type | Tonnes | No. containers (millions) |
|---|---|---|
| Aluminium cans | 7,870 | 382m |
| Steel Cans | 100 | 2.3m |
| Glass bottles | 22,470 | 78.7m |
| PET plastic bottles | 11,250 | 323.3m |
| HDPE plastic bottles | 1,130 | 32.1m |

Source: APCO Packaging Consumption and Recovery Data 2022-23

[1] Annual Reports - Container Exchange

[2] APCO Australian Packaging Consumption and Recovery Data 2022-23 (p101-102)

## PET Plastic Beverage Bottles

An examination of the COEX data since 2019 provides a stark picture for single use PET plastic beverage bottles (mostly used for soft drinks and water). Figures from COEX annual reports outlined in the below table show annual collection rates averaging below 60% with an estimated 1.9 billion bottles going to landfill since the scheme began.

**Queensland PET Beverage bottle volumes placed on market vs collection**

| YEAR | Volume POM (millions)* | Volume Collected (millions) | Collection Rate (PET) | Estimated loss (millions) |
|---|---|---|---|---|
| FY24 | 893 | 510 | 57.1% | 383 |
| FY23 | 833 | 447 | 53.6% | 386 |
| FY22 | 767 | 413 | 53.8% | 354 |
| FY21 | 747 | 411 | 55% | 336 |
| FY20 | 693 | 381 | 55%^ | 312 |
| FY19 (From 1 Nov 2018) | 255 | 140** | 55%^ | 115 |

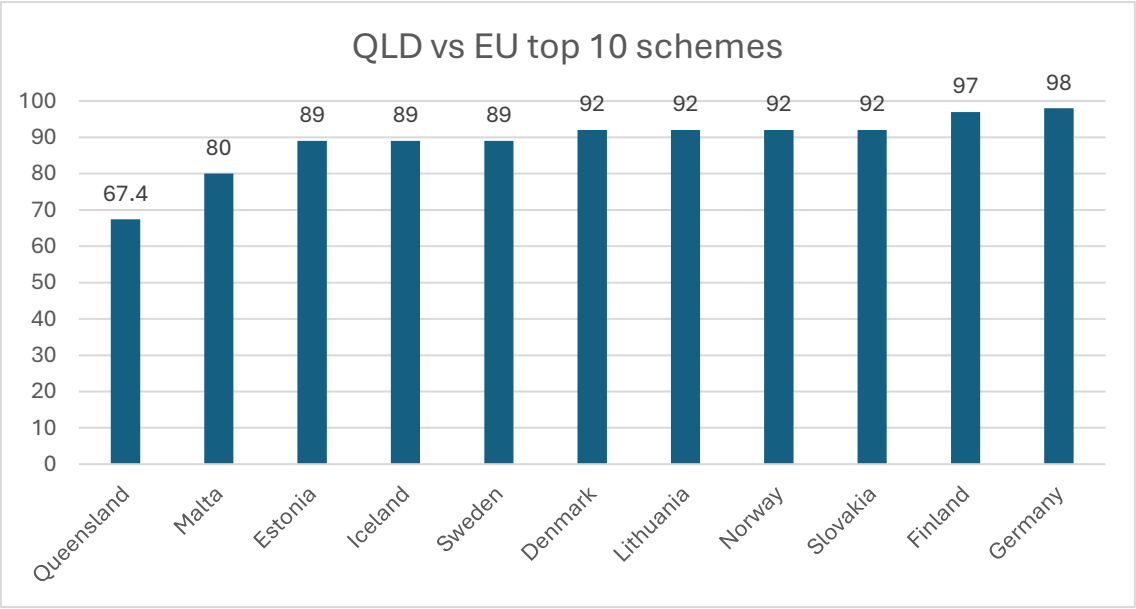
Source: COEX annual reports 2018-19 to 2023-24.

** Data for volumes POM calculated based on % collection rate reported for that year.*
*^ No collection rate for PET reported in FY20 or FY19. Rate estimated at 55%.*
*** Volume collected reported as tonnes in FY19. Estimated volume of PET collected based on 2760 tonnes x 19.8g average weight for a 600ml beverage bottle without a cap.*

To put this in perspective, the Pact-operated Circular Plastics Australia PET recycling facilities in Melbourne and Albury, NSW each have the capacity to process 20,000 tonnes per annum, the equivalent of 1 billion 600ml plastic beverage bottles. It would take one of the CPA facilities two years to recycle all the CRS PET beverage bottles that have been sent to landfill in Queensland.

## International comparisons

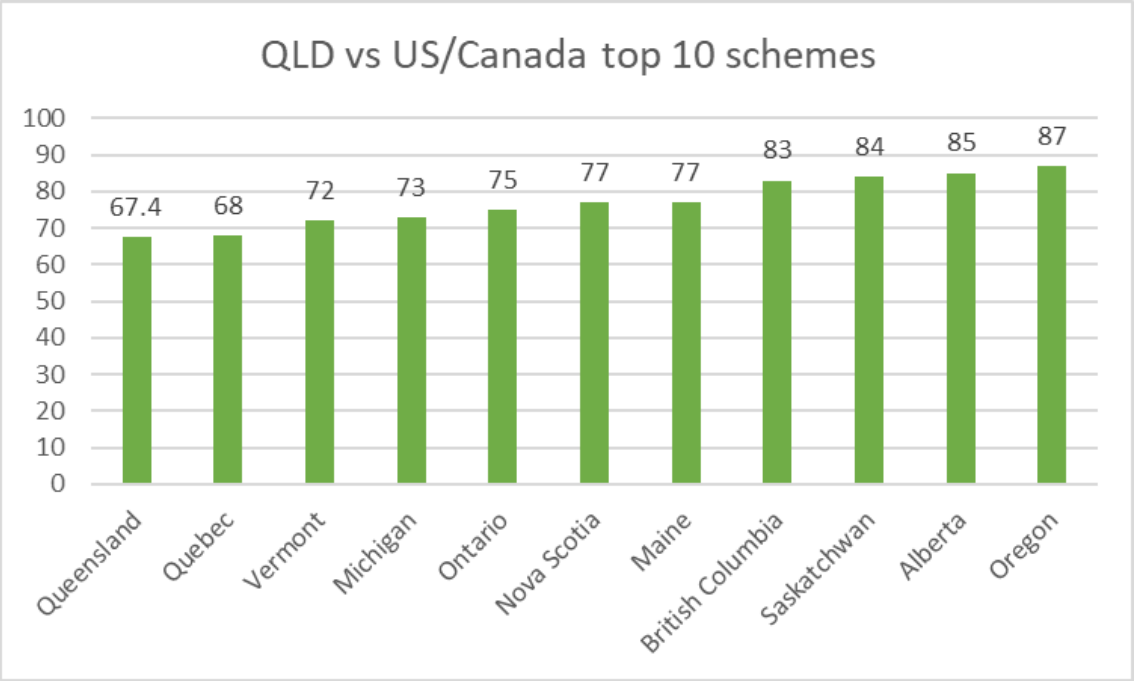
Collection rates in Queensland (and the rest of Australia) are relatively low when compared to return rates internationally. The average collection rate in EU countries is 87%, with six countries reporting return rates above 90%. Germany boasts the highest collection rate with 98%.[3]




Source: Reloop Global Deposit Book 2024

[3] Global Deposit Book 2024

In Canada, return rates average 76% in provinces with collection systems, and the top performing schemes in the US reported collection rates above 72% in 2023.




Source: Reloop Global Deposit Book 2024

The common link between the successful European and North American schemes is the convenience with which consumers can return their containers and the financial incentive. In general, the higher the refund value, the higher the return rate. Although a scheme's performance can be influenced by several factors, there is strong evidence to suggest that the size of the refund matters, and that higher refund values tend to generate higher collection rates.[4]

The highest return rates can be seen in systems that use a return-to-retail approach, where retailers are legally obliged to accept empty containers from consumers and refund their deposit.

## Container Refund Price

It is widely accepted that the higher the deposit value, the higher the return rate. Deposit values in the top performing EU countries vary from €0.09 (AUD 0.15c) in Sweden to €0.25 (AUD 0.43c) in Germany.

To enable higher return rates of containers, the refund price should be set at a level to offer a meaningful incentive for consumers and updated periodically to keep pace with inflation and to mitigate erosion of the incentive to return empty bottles for money.

The $0.10 refund price is low compared to the highly successful schemes internationally and low as a proportion of beverage prices. Further, the refund price has declined over time due to inflationary increases. The dollar had an average inflation rate of 3% per year between 2016 (when Queensland first introduced the scheme) and today, producing a cumulative price increase of 27.5%.

It is recommended that the refund price be increased to at least $0.20 to offer consumers a meaningful incentive in today's terms, with a process put in place to review periodically to ensure the refund price keeps pace with CPI increases.

This is not without precedent. Following a review, South Australia increased its deposit price by $0.05 in 2008.[5] It is worth noting, however, that the $0.05 refund price when South Australia introduced its scheme is now worth $0.34, based on an average annual inflation rate of 4.2 per cent over 47 years.[6]

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[4] The potential of Deposit Refund Systems in closing the plastic beverage bottle loop: A review - ScienceDirect

[5] SA Container deposit scheme | EPA

[6] Inflation Calculator | RBA

## Return-to-Retail

For consumers, convenience is king. Return-to-retail container return models are successful because they make recycling more convenient and accessible for consumers, leading to higher recycling rates and less litter.

The most successful systems in terms of redemption rates are those in the EU where regulations oblige beverage retailers to accept empty containers and provide a refund to consumers. While most common in Europe, return-to-retail systems are also used in some North American markets.

This model is considered best-in-class as it is most convenient for consumers, allowing them to return containers where they shop. In the successful European and North American schemes, there are thousands of return points, or in some cases tens of thousands.

British Columbia, one of the largest provinces in Canada with a similar population to Queensland, reported a return rate of 83% in 2023. Its mandatory return-to-retail model results in more than 2500 refund points, equating to one collection point per 2204 people.

Queensland has just 354 return points which equates to one return point per 15,800 people. As a result, not all Queenslanders have easy access to container collection points – particularly those who live in regional areas. A paper by FTI Consulting stated that while 98 per cent of electorates in Queensland have collection points, someone living in Amaroo would have to drive at least four hours to reach one.[7]

Return-to-retail models vary from country to country. Some mandate all retailers accept containers, others require only larger retailers participate, while retailers in some jurisdictions are only obliged to take back the types of beverages they sell.

**Return-to-retail collection model examples**

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|---|---|
| **Finland** (97% return rate) | All retailers, kiosks, and service stations selling in-scope beverages must take back containers. Small retailers can refuse container returns if the volume is disproportionately high in relation to its size. |
| **Germany** (98% return rate) | Retailers must take back containers of the same type they sell. A retailer that only sells PET beverage bottles is not obliged to take back aluminium or glass containers but must accept all PET bottles regardless of their size or brand. Retailers <200m² are exempt; they only need to take back containers of the products they sell. |
| **Lithuania** (92% return rate) | Retailers that sell eligible drinks must accept containers and return deposits, regardless of whether they sell the products in identical packaging. Collection must occur at the store or nearby sites that are no further than 150m away. Retailers <300m² in bigger cities and <60m² in smaller cities and rural areas are exempt. All other retailers can participate voluntarily. |
| **Oregon, US** (87% return rate) | Retailers >465m² must take back containers of all brands and sizes for each kind of beverage they sell, even if they don't stock that specific brand or size. Retailers <465m² may refuse returns of containers they don't sell but must accept any brand or size they do sell, regardless of where it was purchased. |
| **British Columbia, Canada** (83% return rate) | Retailers selling eligible beverages must take back containers and pay out refunds. Retailers are required to accept up to 24 containers/person/day of the same brand and type they sell. |

Source: Reloop Global Deposit Book 2024

Return-to-retail collection models also form part of schemes that have either recently commenced or are about to commence in Austria, Republic of Ireland, Singapore and the UK.[8]

The New Zealand government's proposed CRS, which has yet to be implemented, mandates return-to-retail for larger retailers such as supermarkets, determined by shop floor area thresholds which may differ for urban and rural communities. Smaller retail stores will not be required to participate unless they wish to.[9]

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[7] Improving Australia's Refund Schemes | FTI Consulting

[8] Deposit Return Scheme - Austria; Deposit Return Scheme - Ireland; Container Return Scheme - Singapore; Deposit Return Scheme - UK

[9] Agreement to implement a New Zealand Container Return Scheme

## Recycling Policy

The final processing and utilisation of recycled products form part of this inquiry's terms of reference. This is an important consideration as it impacts the viability of Australia's plastic recycling sector and the success of a domestic circular economy which supports jobs and reduces the impact on our environment.

Following the decision in 2020 by Federal, State and territory governments to ban the export of plastic waste, the Australian Government established the Recycling Modernisation Fund to support investment in large scale recycling facilities.

Circular Plastics Australia (PET), a joint venture between Pact Group, Cleanaway Waste Management, Asahi Beverages and Coca-Cola Europacific Partners has invested more than $100 million to build two large-scale PET recycling plants, each with the capacity to recycle up to 20,000 tonnes of PET containers a year, about 1 billion 600ml plastic soft drink bottles.

Both facilities were supported by grants from the Australian Government's Recycling Modernisation Fund specifically for the purpose of recycling PET bottles collected from Australia's container return schemes. At least three other large scale PET recycling plants also received RMF grants.

A review of return schemes across Australia shows that redemption rates for PET bottles range from 57% to 66%. The APCO 2022-23 data reveals almost 25,000 tonnes of PET bottles end up in landfill instead of being collected for recycling.

The low redemption rate for PET bottles in Australia has created an imbalance between supply and demand for the recycling sector and inflated the price for baled PET bottles.

The high cost of PET feedstock due to the supply imbalance is threatening the commercial viability of PET recycling facilities and potentially jeopardising government efforts to reduce the amount of drink containers that are littered and end up in landfill.

Although the export of unprocessed plastic waste is banned, waste plastics that have been partly processed (e.g. flaked) can be exported with a waste plastic export licence. There is a concern that PET bottle material which can and should be recycled into food-grade resin and remanufactured into bottles and food packaging in Australia is being purchased specifically for export.

The Queensland government must ensure valuable PET bottle material collected through the CRS is recycled domestically for remanufacture into the highest possible value products by implementing policies that prioritise the allocation of CRS PET bottle feedstock to domestic recyclers with value-add capabilities.

Currently, most of Queensland's PET material collected through Containers for Change is sold by COEX via monthly auctions to the highest bidder. This does little to enhance the domestic circular economy as it gives little regard to the end use of the material.

To encourage domestic recycling and processing of PET into value-add products, the current practice of auctioning off baled PET containers to the highest bidder should be scrapped and replaced with a tender process to be conducted with criteria that supports a domestic circular economy. Consideration should be given to factors including domestic processing capability, end use for the product, employment outcomes and environmental benefits.

Another downside to the monthly auction process is the uncertainty in the market it creates for Australian recyclers. The short-term nature of the auctions makes long term production planning difficult for PET recyclers as there is no guarantee of regular feedstock supply. The monthly auction process also results in price fluctuations which complicate recycled resin supply agreements.

It is recommended that a tender process replace auctions to offer longer term contracts in order to provide certainty for recyclers and in turn incentivise further investment in the domestic circular economy.

The EU's recently implemented Packaging and Packaging Waste Regulation includes measures to encourage and prioritise recycling specifically for collection, deposit and return systems.[10]

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[10] Packaging waste - European Commission

Article 48 of the PPWR states that: *In order to facilitate high-quality recycling, Member States shall ensure that systems and infrastructures for comprehensive collection and sorting are in place to facilitate recycling and to ensure that plastic feedstock is available for recycling. Such systems and infrastructures may provide priority access to recycled materials for use in applications where the distinct quality of the recycled material is preserved or recovered in such a way that it can be recycled further and used in the same way and for a similar application with minimal loss of quantity, quality or function.*

Furthermore, the EU regulation stipulates that member states should improve domestic market conditions to encourage the use of materials obtained from recycled packaging waste for the manufacturing of packaging and other products.

## Conclusion

Queensland's CRS collection rate will fail to meet the legislated target of 85% and continue to lag behind the best performing schemes internationally and in Australia unless meaningful changes are made.

Those changes are:

1. An **increase in the refund price to at least $0.20** and periodic reviews to factor in CPI increases in order to provide a meaningful incentive for consumers now and into the future.
2. A mandatory **return-to-retail** model based on European schemes to provide more options and greater convenience for consumers.
3. Ensure domestic recyclers with food grade processing capacity have **priority access to PET** bottles collected through the CRS and replace the auction system with longer term tenders for baled PET containers.

The suite of changes outlined in this submission are based on international best practice and should be considered as a package which, if implemented, will have a positive impact on Queensland's collection rate.

It would not be advisable to implement one without the others, as is evidenced by experience in other jurisdictions.

**More about Pact Group**

**On the web:** pactgroup.com
**LinkedIn:** @pact-group-holdings-ltd

Version 1: December 2024

# AUSTRALIAN PACKAGING CONSUMPTION & RECOVERY DATA 2022-23

APCO AUSTRALIAN PACKAGING COVENANT ORGANISATION

# APPENDIX E – CONTAINER DEPOSIT ELIGIBLE PACKAGING DATA

This year the project has included the quantification of 2022–23 flows of container deposit (CD) eligible packaging, both POM and recovered by collection pathway.

The CD scheme operational dates covered by the data in this appendix are:

- ACT is full year 2022–23 (launched 30 June 2018).
- NSW is full year 2022–23 (launched 1 December 2017).
- NT is full year 2022–23 (launched 3 January 2012).
- QLD is full year 2022–23 (launched 1 November 2018).
- SA is full year 2022–23 (launched in 1977).
- TAS scheme to commence in 2025 or later (no data in this appendix).
- VIC scheme commenced November 2023 (no data in this appendix).
- WA is full year 2022–23 (launched 1 October 2020).

The data provided in this section includes (in terms of both tonnes and package counts):

- CD eligible packaging POM by jurisdiction (Section E.1).
- CD eligible packaging redeemed via depots and reverse vending machines (Section E.2.1).
- CD eligible packaging redeemed via MRFs (Section E.2.2).
- CD eligible packaging unredeemed packaging recovered via MRFs and other pathways (Section E.2.3).
- Total recovery of CD eligible packaging via all collection routes (Section E.2.4).
- Reprocessing destinations for CD eligible packaging (Section E.2.5).
- CD eligible packaging to landfill (Section E.3).

## E.1 CD eligible packaging POM

**Table E-1 – CD eligible packaging POM in 2022–23 by material type and jurisdiction (tonnes).**

| Material type | ACT | NSW | NT | QLD | SA | WA | Total |
|---|---|---|---|---|---|---|---|
| | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) |
| Beverage aluminium | 860 | 20,880 | 850 | 28,810 | 5,880 | 8,320 | 65,610 |
| Tin-plate steel | 10 | 320 | 10 | 150 | 0 | 80 | 560 |
| Amber glass | 2,350 | 59,190 | 1,630 | 56,130 | 10,900 | 21,930 | 152,130 |
| Flint glass | 2,350 | 59,190 | 1,630 | 56,130 | 10,900 | 21,930 | 152,130 |
| Green glass | 2,350 | 59,190 | 1,630 | 56,130 | 10,900 | 21,930 | 152,130 |
| PET (1) – Natural | 880 | 21,760 | 690 | 26,230 | 4,830 | 6,650 | 61,050 |
| PET (1) – Transparent | 200 | 4,840 | 150 | 2,280 | 1,070 | 550 | 9,090 |
| PET (1) – Opaque | 10 | 270 | 10 | 0 | 60 | 0 | 350 |
| HDPE (2) – Natural | 70 | 1,440 | 90 | 2,410 | 380 | 550 | 4,940 |
| HDPE (2) – Coloured | 10 | 320 | 20 | 530 | 80 | 120 | 1,080 |
| Other plastic (7) | 0 | 10 | 0 | 0 | 0 | 0 | 10 |
| PCPB – Aseptic | 110 | 2,140 | 70 | 2,470 | 970 | 1,210 | 6,980 |
| PCPB – Gable top | 30 | 540 | 70 | 620 | 140 | 300 | 1,690 |
| Other material | 0 | 30 | 0 | 0 | 0 | 10 | 40 |
| **Total** | **9,250** | **230,110** | **6,870** | **231,900** | **46,120** | **83,570** | **607,810** |

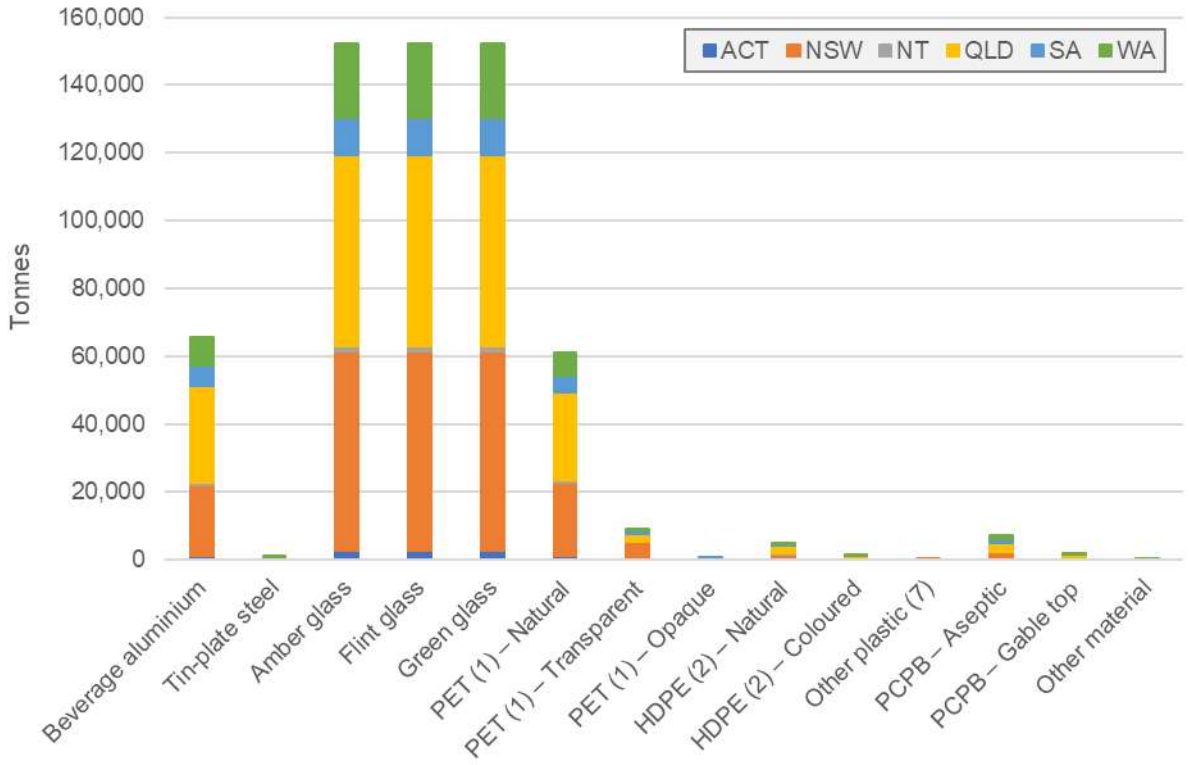


**Figure E-1 – CD eligible packaging POM in 2022–23 by material type and jurisdiction (tonnes).**

**Table E-2 – CD eligible packaging POM in 2022–23 by material type and jurisdiction (million packs).**

| Material type | ACT | NSW | NT | QLD | SA | WA | Total |
|---|---|---|---|---|---|---|---|
| | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) |
| Beverage aluminium | 62.545 | 1,513.047 | 61.880 | 1,398.478 | 430.879 | 610.586 | 4,077.416 |
| Tin-plate steel | 0.253 | 7.166 | 0.152 | 3.485 | 0.000 | 1.890 | 12.946 |
| Amber glass | 10.437 | 262.710 | 7.237 | 196.533 | 49.021 | 108.985 | 634.922 |
| Flint glass | 10.437 | 262.710 | 7.237 | 196.533 | 49.021 | 108.985 | 634.922 |
| Green glass | 10.437 | 262.710 | 7.237 | 196.533 | 49.021 | 108.985 | 634.922 |
| PET (1) – Natural | 37.286 | 918.242 | 29.295 | 753.809 | 182.555 | 390.600 | 2,311.787 |
| PET (1) – Transparent | 8.286 | 204.054 | 6.510 | 65.549 | 40.568 | 32.192 | 357.158 |
| PET (1) – Opaque | 0.460 | 11.336 | 0.362 | 0.000 | 2.254 | 0.000 | 14.412 |
| HDPE (2) – Natural | 2.156 | 46.984 | 2.995 | 68.502 | 19.550 | 19.960 | 160.148 |
| HDPE (2) – Coloured | 0.473 | 10.313 | 0.658 | 15.037 | 4.292 | 4.381 | 35.154 |
| Other plastic (7) | 0.062 | 1.129 | 0.000 | 0.000 | 0.000 | 0.000 | 1.192 |
| PCPB – Aseptic | 8.131 | 155.185 | 5.259 | 118.219 | 40.470 | 64.168 | 391.433 |
| PCPB – Gable top | 2.033 | 38.796 | 5.259 | 29.555 | 11.405 | 16.042 | 103.090 |
| Other material | 0.309 | 2.413 | 0.000 | 0.000 | 0.000 | 0.422 | 3.144 |
| **Total** | **153.305** | **3,696.795** | **134.081** | **3,042.235** | **879.034** | **1,467.196** | **9,372.646** |

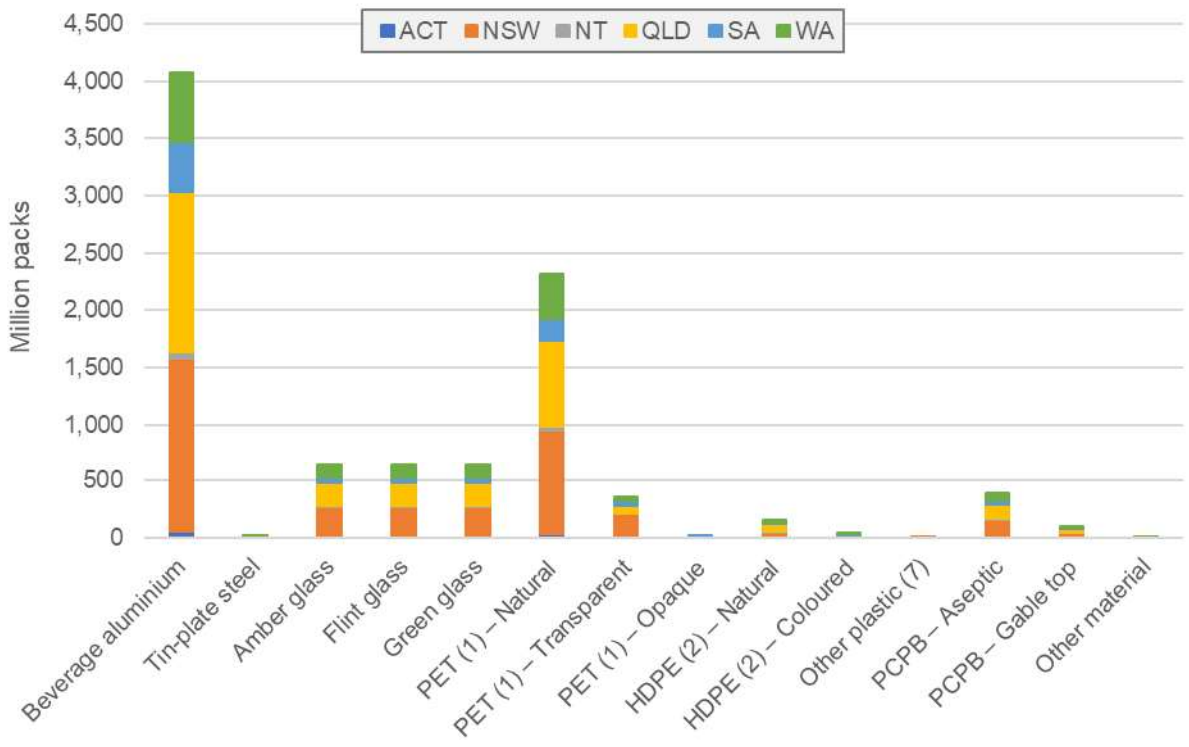


**Figure E-2 – CD eligible packaging POM in 2022–23 by material type and jurisdiction (million packs).**

## E.2 CD eligible packaging recovery

### E.2.1 Redeemed recovery via depots and reverse vending machines

**Table E-3 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Redeemed recovery via depots and reverse vending machines (tonnes).**

| Material type | ACT | NSW | NT | QLD | SA | WA | Total |
|---|---|---|---|---|---|---|---|
| | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) |
| Beverage aluminium | 480 | 11,810 | 740 | 17,320 | 4,490 | 4,710 | 39,550 |
| Tin-plate steel | 0 | 120 | 0 | 40 | 0 | 40 | 210 |
| Amber glass | 1,000 | 33,490 | 1,630 | 33,450 | 9,330 | 13,940 | 92,840 |
| Flint glass | 1,000 | 33,490 | 1,630 | 33,450 | 9,330 | 13,940 | 92,840 |
| Green glass | 1,000 | 33,490 | 1,630 | 33,450 | 9,330 | 13,940 | 92,840 |
| PET (1) – Natural | 310 | 10,960 | 410 | 12,990 | 2,960 | 3,220 | 30,830 |
| PET (1) – Transparent | 70 | 2,440 | 90 | 1,130 | 660 | 270 | 4,650 |
| PET (1) – Opaque | 0 | 140 | 10 | 0 | 40 | 0 | 180 |
| HDPE (2) – Natural | 20 | 540 | 20 | 900 | 240 | 170 | 1,900 |
| HDPE (2) – Coloured | 10 | 120 | 10 | 200 | 50 | 40 | 420 |
| Other plastic (7) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCPB – Aseptic | 20 | 380 | 30 | 590 | 490 | 290 | 1,800 |
| PCPB – Gable top | 10 | 100 | 30 | 150 | 70 | 70 | 420 |
| Other material | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **3,920** | **127,070** | **6,220** | **133,670** | **37,000** | **50,610** | **358,490** |
| **Redemption rate (%)[1]** | **42.4%** | **55.2%** | **90.6%** | **57.6%** | **80.2%** | **60.6%** | **59.0%** |

1. Redemption % is relative to CD eligible packaging POM.

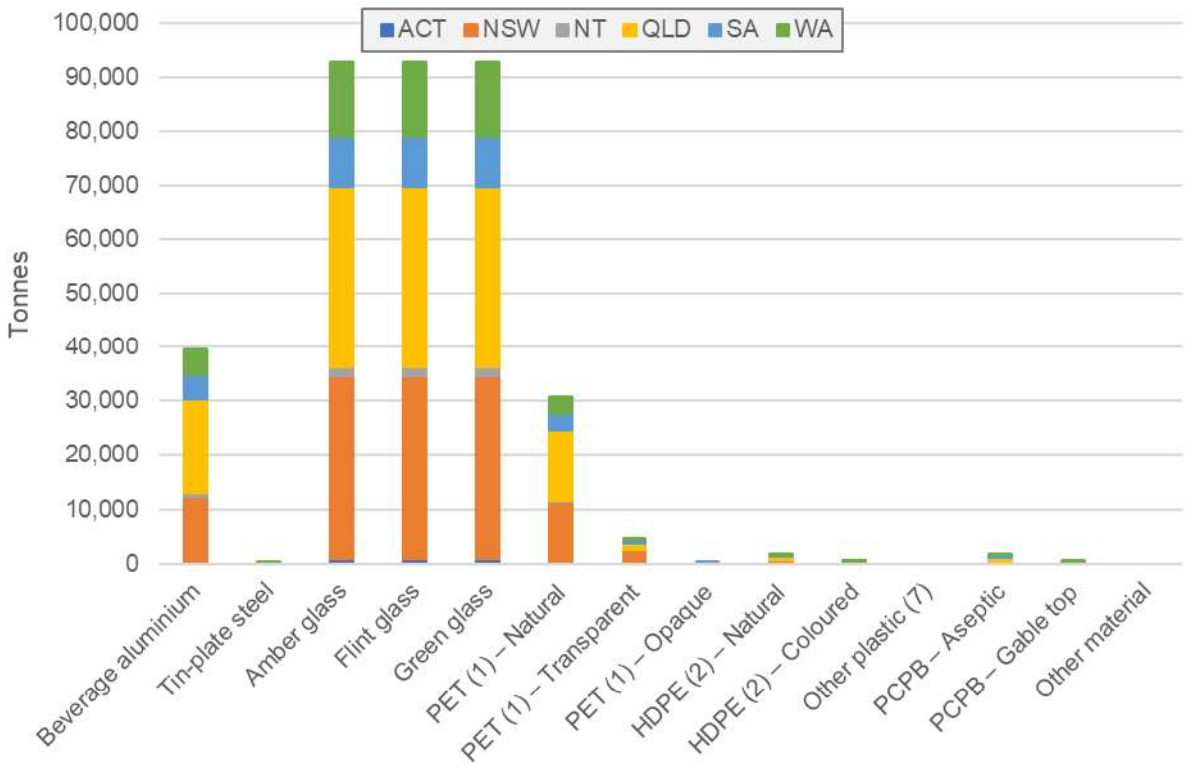


**Figure E-3 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Redeemed recovery via depots and reverse vending machines (tonnes).**

**Table E-4 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Redeemed recovery via depots and reverse vending machines (million packs).**

| Material type | ACT | NSW | NT | QLD | SA | WA | Total |
|---|---|---|---|---|---|---|---|
| | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) |
| Beverage aluminium | 35.003 | 855.902 | 53.752 | 840.762 | 329.047 | 345.287 | 2,459.752 |
| Tin-plate steel | 0.018 | 2.615 | 0.041 | 1.029 | 0.000 | 1.079 | 4.782 |
| Amber glass | 4.438 | 148.651 | 7.237 | 117.129 | 41.962 | 69.271 | 388.687 |
| Flint glass | 4.438 | 148.651 | 7.237 | 117.129 | 41.962 | 69.271 | 388.687 |
| Green glass | 4.438 | 148.651 | 7.237 | 117.129 | 41.962 | 69.271 | 388.687 |
| PET (1) – Natural | 12.892 | 462.461 | 17.104 | 373.202 | 111.829 | 188.933 | 1,166.421 |
| PET (1) – Transparent | 2.865 | 102.769 | 3.801 | 32.452 | 24.851 | 15.571 | 182.309 |
| PET (1) – Opaque | 0.159 | 5.709 | 0.211 | 0.000 | 1.381 | 0.000 | 7.460 |
| HDPE (2) – Natural | 0.799 | 17.671 | 0.755 | 25.565 | 12.383 | 6.084 | 63.256 |
| HDPE (2) – Coloured | 0.175 | 3.879 | 0.166 | 5.612 | 2.718 | 1.335 | 13.885 |
| Other plastic (7) | 0.000 | 0.017 | 0.000 | 0.000 | 0.000 | 0.000 | 0.017 |
| PCPB – Aseptic | 1.670 | 27.742 | 2.147 | 28.250 | 20.427 | 15.233 | 95.470 |
| PCPB – Gable top | 0.417 | 6.936 | 2.147 | 7.062 | 5.761 | 3.808 | 26.132 |
| Other material | 0.000 | 0.178 | 0.000 | 0.000 | 0.000 | 0.118 | 0.296 |
| **Total** | **67.312** | **1,931.831** | **101.833** | **1,665.323** | **634.281** | **785.261** | **5,185.842** |
| **Redemption rate (%)[1]** | **43.9%** | **52.3%** | **75.9%** | **54.7%** | **72.2%** | **53.5%** | **55.3%** |

1. Redemption % is relative to CD eligible packaging POM.

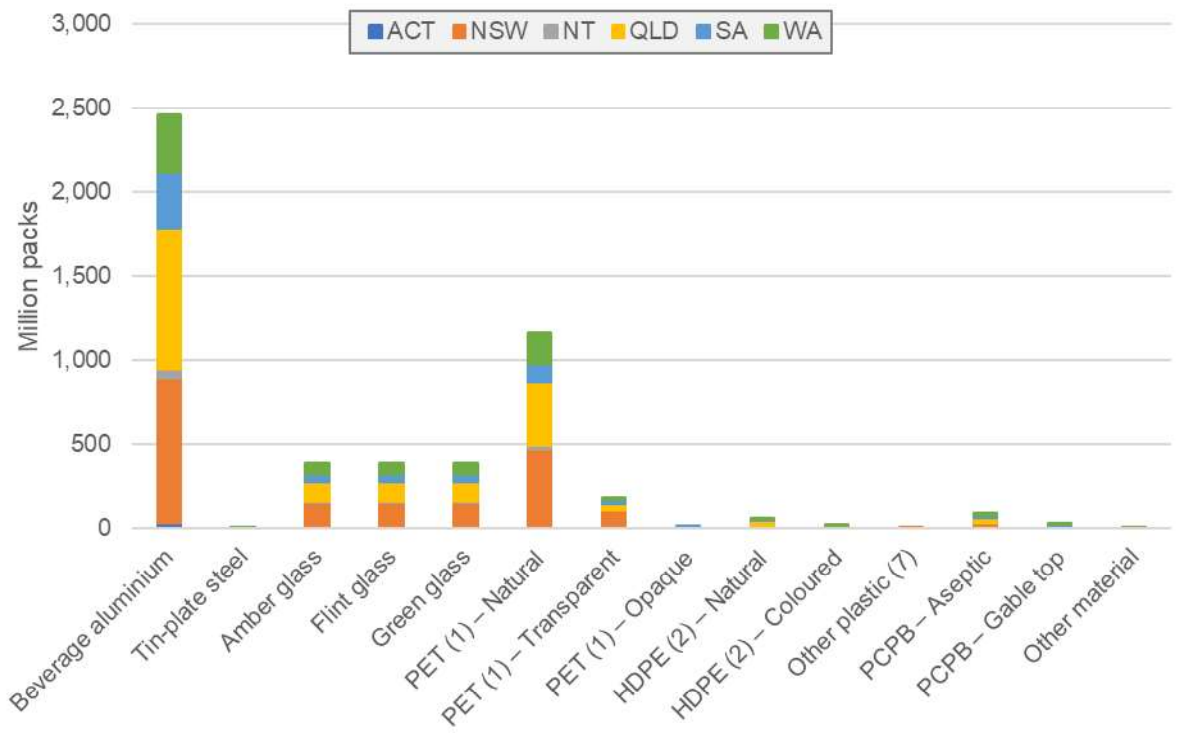


**Figure E-4 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Redeemed recovery via depots and reverse vending machines (million packs).**

### E.2.2 Redeemed recovery via MRFs

**Table E-5 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Redeemed recovery via MRFs (tonnes).**

| Material type | ACT | NSW | NT | QLD | SA | WA | Total |
|---|---|---|---|---|---|---|---|
| | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) |
| Beverage aluminium | 220 | 2,350 | 0 | 1,890 | 160 | 730 | 5,340 |
| Tin-plate steel | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Amber glass | 610 | 10,530 | 0 | 11,820 | 0 | 3,150 | 26,120 |
| Flint glass | 610 | 10,530 | 0 | 11,820 | 0 | 3,150 | 26,120 |
| Green glass | 610 | 10,530 | 0 | 11,820 | 0 | 3,150 | 26,120 |
| PET (1) – Natural | 270 | 2,580 | 0 | 1,320 | 210 | 580 | 4,950 |
| PET (1) – Transparent | 60 | 570 | 0 | 110 | 50 | 50 | 840 |
| PET (1) – Opaque | 0 | 30 | 0 | 0 | 0 | 0 | 40 |
| HDPE (2) – Natural | 30 | 270 | 0 | 440 | 0 | 100 | 850 |
| HDPE (2) – Coloured | 10 | 60 | 0 | 100 | 0 | 20 | 190 |
| Other plastic (7) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCPB – Aseptic | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCPB – Gable top | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other material | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **2,440** | **37,460** | **0** | **39,330** | **410** | **10,920** | **90,560** |
| **Redemption rate (%)[1]** | **26.4%** | **16.3%** | **0.0%** | **17.0%** | **1.0%** | **13.1%** | **15.0%** |

1. Redemption % is relative to CD eligible packaging POM.

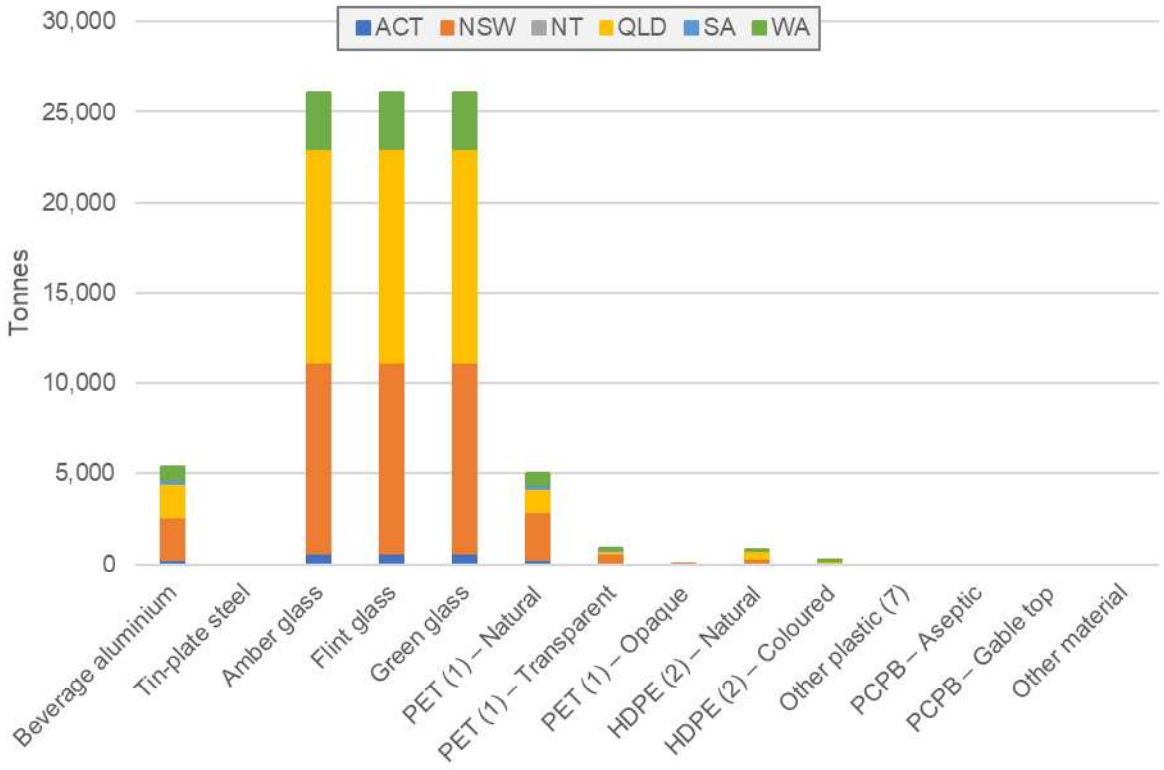


**Figure E-5 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Redeemed recovery via MRFs (tonnes).**

**Table E-6 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Redeemed recovery via MRFs (million packs).**

| Material type | ACT | NSW | NT | QLD | SA | WA | Total |
|---|---|---|---|---|---|---|---|
| | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) |
| Beverage aluminium | 16.023 | 169.984 | 0.000 | 91.784 | 11.664 | 53.304 | 342.759 |
| Tin-plate steel | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Amber glass | 2.727 | 46.757 | 0.000 | 41.389 | 0.000 | 15.639 | 106.512 |
| Flint glass | 2.727 | 46.757 | 0.000 | 41.389 | 0.000 | 15.639 | 106.512 |
| Green glass | 2.727 | 46.757 | 0.000 | 41.389 | 0.000 | 15.639 | 106.512 |
| PET (1) – Natural | 11.365 | 108.792 | 0.000 | 37.953 | 7.767 | 34.060 | 199.938 |
| PET (1) – Transparent | 2.526 | 24.176 | 0.000 | 3.300 | 1.726 | 2.807 | 34.535 |
| PET (1) – Opaque | 0.140 | 1.343 | 0.000 | 0.000 | 0.096 | 0.000 | 1.579 |
| HDPE (2) – Natural | 1.077 | 8.884 | 0.000 | 12.539 | 0.000 | 3.788 | 26.288 |
| HDPE (2) – Coloured | 0.236 | 1.950 | 0.000 | 2.752 | 0.000 | 0.832 | 5.771 |
| Other plastic (7) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| PCPB – Aseptic | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| PCPB – Gable top | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Other material | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **39.549** | **455.401** | **0.000** | **272.496** | **21.253** | **141.710** | **930.408** |
| **Redemption rate (%)[1]** | **25.8%** | **12.3%** | **0.0%** | **9.0%** | **2.4%** | **9.7%** | **9.9%** |

1. Redemption % is relative to CD eligible packaging POM.

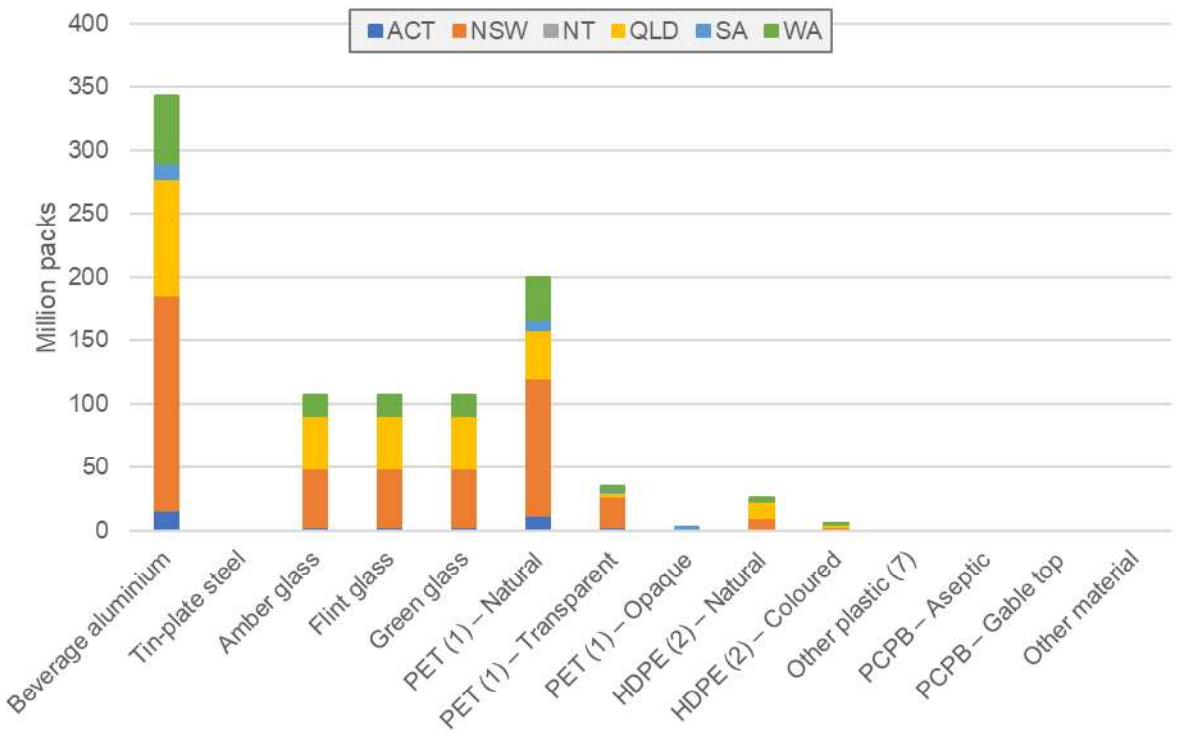


**Figure E-6 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Redeemed recovery via MRFs (million packs).**

### E.2.3 Unredeemed recovery via MRFs and other pathways

While most CD eligible packaging recovery in 2022–23 was via pathways that triggered the payment of a redeemed deposit, this was not always the case. There are a number of unredeemed recovery pathways that exist, with differing levels of applicability to different jurisdictions. These unredeemed recovery pathways included:

- MRF recovery where the MRF operators may not have claimed the deposits for internal operational or administrative reasons.
- MRF recovery where the published methods for claiming deposits in mixed CD eligible / CD ineligible streams did not cover all material types (e.g., LPB packaging), or otherwise had particular exceptions.
- MRF recovery of CD eligible packaging recovered from some C&I sources.
- CD eligible packaging recovered through away-from-home recycling bins or events related recycling, in some circumstances.
- Alternative Waste Treatment (AWT) or Mechanical Biological Treatment (MBT) facility recovery of CD eligible packaging.

Provided here are estimates of the recovery of unredeemed but CD eligible packaging during 2022–23. It is important to note that the earlier estimates of CD eligible packaging POM and redeemed CD eligible packaging are highly accurate as they are based on detailed regulated monthly or quarterly reporting. However, the recovery estimates of unredeemed CD eligible packaging are estimates derived from industry surveys and are less precise.

**Table E-7 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Unredeemed recovery via MRFs and other pathways (tonnes).**

| Material type | ACT | NSW | NT | QLD | SA | WA | Total |
|---|---|---|---|---|---|---|---|
| | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) |
| Beverage aluminium | 0 | 1,250 | 0 | 1,730 | 230 | 500 | 3,710 |
| Tin-plate steel | 0 | 0 | 0 | 10 | 0 | 0 | 10 |
| Amber glass | 0 | 3,550 | 0 | 3,370 | 0 | 1,320 | 8,230 |
| Flint glass | 0 | 3,550 | 0 | 3,370 | 0 | 1,320 | 8,230 |
| Green glass | 0 | 3,550 | 0 | 3,370 | 0 | 1,320 | 8,230 |
| PET (1) – Natural | 50 | 1,310 | 40 | 1,570 | 290 | 400 | 3,660 |
| PET (1) – Transparent | 10 | 290 | 10 | 140 | 60 | 30 | 550 |
| PET (1) – Opaque | 0 | 20 | 0 | 0 | 0 | 0 | 20 |
| HDPE (2) – Natural | 0 | 90 | 10 | 140 | 20 | 30 | 300 |
| HDPE (2) – Coloured | 0 | 20 | 0 | 30 | 0 | 10 | 70 |
| Other plastic (7) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCPB – Aseptic | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCPB – Gable top | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other material | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **70** | **13,620** | **60** | **13,720** | **610** | **4,920** | **33,010** |
| **Recovery rate (%)[1]** | **0.8%** | **5.9%** | **0.9%** | **5.9%** | **1.4%** | **5.9%** | **5.5%** |

1. Recovery % is relative to CD eligible packaging POM.

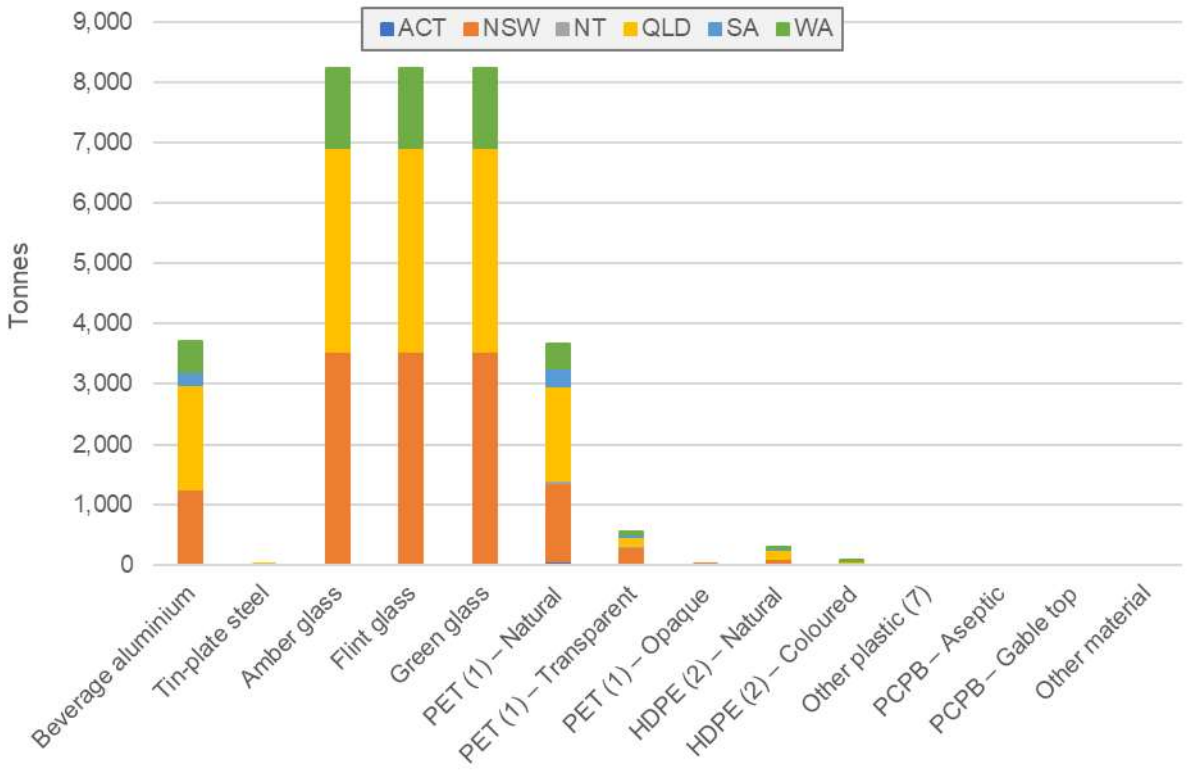


**Figure E-7 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Unredeemed recovery via MRFs and other pathways (tonnes).**

**Table E-8 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Unredeemed recovery via MRFs and other pathways (million packs).**

| Material type | ACT | NSW | NT | QLD | SA | WA | Total |
|---|---|---|---|---|---|---|---|
| | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) |
| Beverage aluminium | 0.000 | 90.783 | 0.000 | 83.909 | 16.592 | 36.635 | 227.919 |
| Tin-plate steel | 0.065 | 0.000 | 0.010 | 0.121 | 0.000 | 0.000 | 0.195 |
| Amber glass | 0.000 | 15.763 | 0.000 | 11.792 | 0.000 | 6.539 | 34.094 |
| Flint glass | 0.000 | 15.763 | 0.000 | 11.792 | 0.000 | 6.539 | 34.094 |
| Green glass | 0.000 | 15.763 | 0.000 | 11.792 | 0.000 | 6.539 | 34.094 |
| PET (1) – Natural | 2.237 | 55.095 | 1.758 | 45.229 | 10.953 | 23.436 | 138.707 |
| PET (1) – Transparent | 0.497 | 12.243 | 0.391 | 3.933 | 2.434 | 1.931 | 21.429 |
| PET (1) – Opaque | 0.028 | 0.680 | 0.022 | 0.000 | 0.135 | 0.000 | 0.865 |
| HDPE (2) – Natural | 0.129 | 2.819 | 0.180 | 4.110 | 1.173 | 1.198 | 9.609 |
| HDPE (2) – Coloured | 0.028 | 0.619 | 0.039 | 0.902 | 0.257 | 0.263 | 2.109 |
| Other plastic (7) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| PCPB – Aseptic | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| PCPB – Gable top | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Other material | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Total** | **2.985** | **209.526** | **2.399** | **173.579** | **31.545** | **83.080** | **503.115** |
| **Recovery rate (%)[1]** | **1.9%** | **5.7%** | **1.8%** | **5.7%** | **3.6%** | **5.7%** | **5.4%** |

1. Recovery % is relative to CD eligible packaging POM.

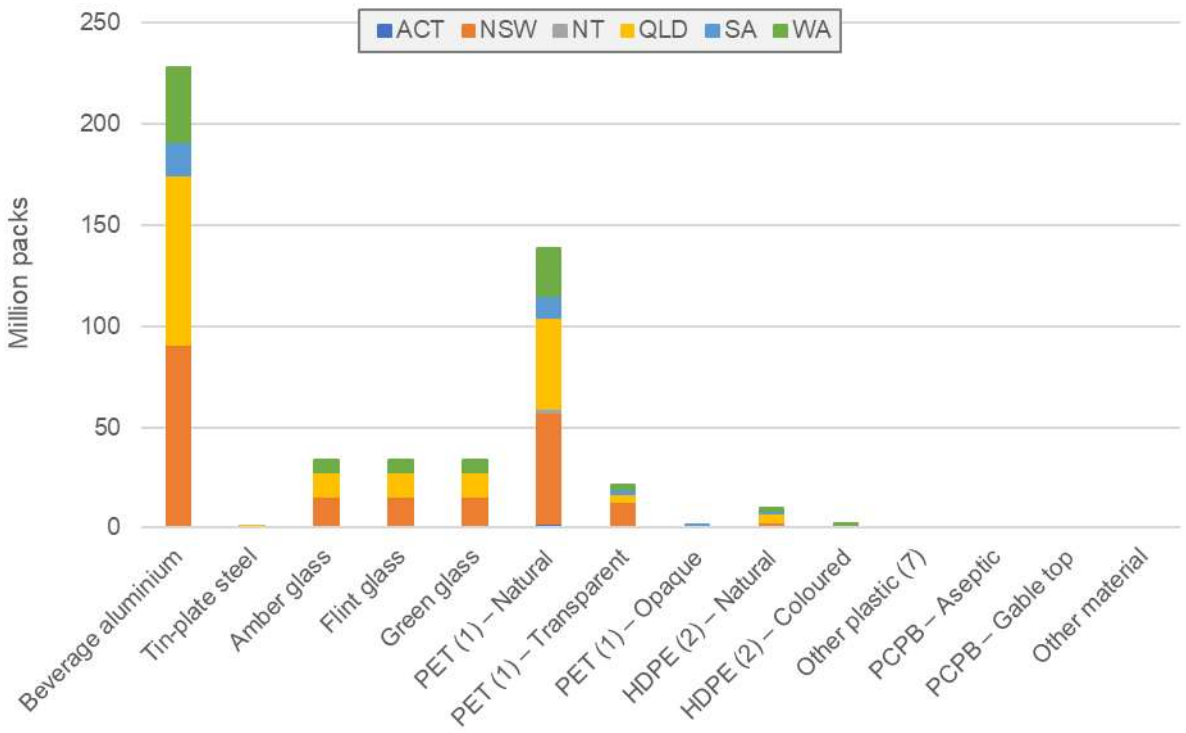


**Figure E-8 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Unredeemed recovery via MRFs and other pathways (million packs).**

### E.2.4 Total recovery via all collection routes

**Table E-9 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Total recovery via all collection routes (tonnes).**

| Material type | ACT | NSW | NT | QLD | SA | WA | Total |
|---|---|---|---|---|---|---|---|
| | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) |
| Beverage aluminium | 700 | 15,410 | 740 | 20,940 | 4,880 | 5,930 | 48,600 |
| Tin-plate steel | 0 | 120 | 0 | 50 | 0 | 40 | 220 |
| Amber glass | 1,610 | 47,580 | 1,630 | 48,640 | 9,330 | 18,400 | 127,200 |
| Flint glass | 1,610 | 47,580 | 1,630 | 48,640 | 9,330 | 18,400 | 127,200 |
| Green glass | 1,610 | 47,580 | 1,630 | 48,640 | 9,330 | 18,400 | 127,200 |
| PET (1) – Natural | 630 | 14,840 | 450 | 15,880 | 3,450 | 4,190 | 39,450 |
| PET (1) – Transparent | 140 | 3,300 | 100 | 1,380 | 770 | 350 | 6,030 |
| PET (1) – Opaque | 10 | 180 | 10 | 0 | 40 | 0 | 240 |
| HDPE (2) – Natural | 60 | 900 | 30 | 1,490 | 260 | 310 | 3,040 |
| HDPE (2) – Coloured | 10 | 200 | 10 | 330 | 60 | 70 | 670 |
| Other plastic (7) | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PCPB – Aseptic | 20 | 380 | 30 | 590 | 490 | 290 | 1,800 |
| PCPB – Gable top | 10 | 100 | 30 | 150 | 70 | 70 | 420 |
| Other material | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **6,430** | **178,160** | **6,280** | **186,730** | **38,020** | **66,450** | **482,070** |
| **Recovery rate (%)[1]** | **69.5%** | **77.4%** | **91.5%** | **80.5%** | **82.4%** | **79.5%** | **79.3%** |

1. Recovery % is relative to CD eligible packaging POM.

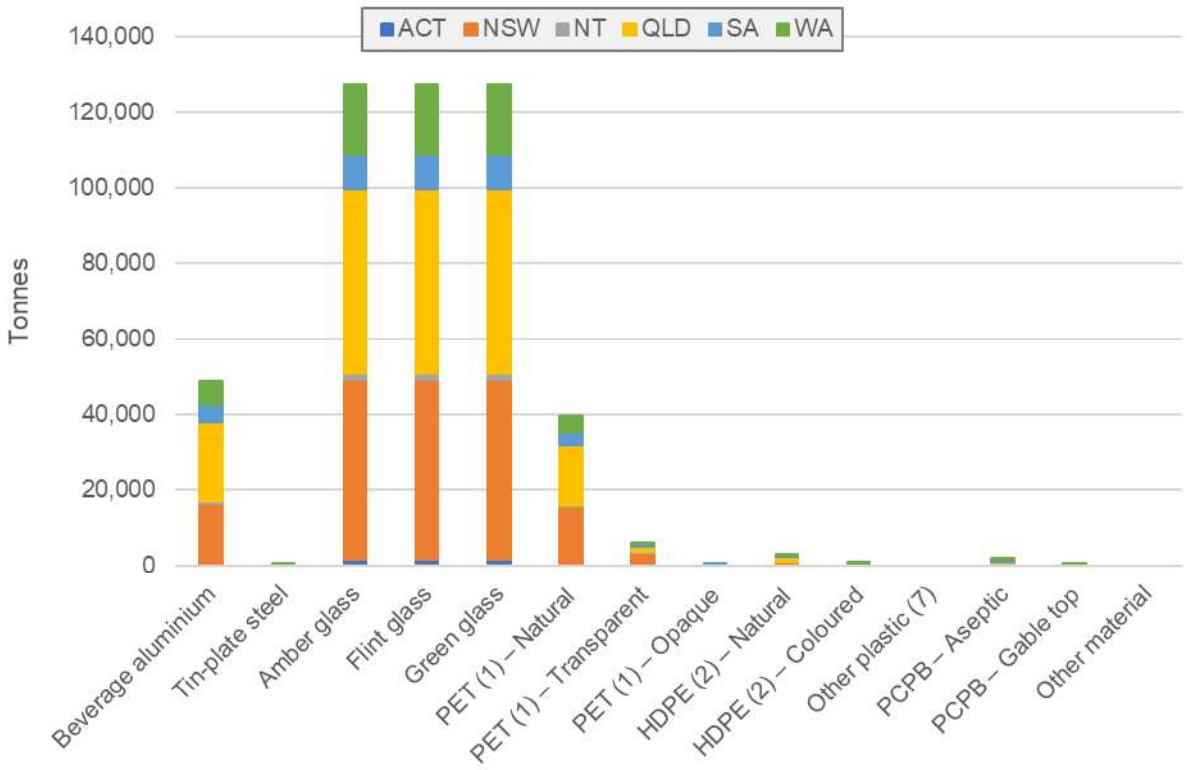


**Figure E-9 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Total recovery via all collection routes (tonnes).**

**Table E-10 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Total recovery via all collection routes (million packs).**

| Material type | ACT | NSW | NT | QLD | SA | WA | Total |
|---|---|---|---|---|---|---|---|
| | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) |
| Beverage aluminium | 51.026 | 1,116.670 | 53.752 | 1,016.454 | 357.303 | 435.226 | 3,030.430 |
| Tin-plate steel | 0.084 | 2.615 | 0.050 | 1.150 | 0.000 | 1.079 | 4.977 |
| Amber glass | 7.165 | 211.170 | 7.237 | 170.310 | 41.962 | 91.449 | 529.293 |
| Flint glass | 7.165 | 211.170 | 7.237 | 170.310 | 41.962 | 91.449 | 529.293 |
| Green glass | 7.165 | 211.170 | 7.237 | 170.310 | 41.962 | 91.449 | 529.293 |
| PET (1) – Natural | 26.494 | 626.348 | 18.861 | 456.384 | 130.549 | 246.429 | 1,505.066 |
| PET (1) – Transparent | 5.888 | 139.188 | 4.191 | 39.686 | 29.011 | 20.310 | 238.274 |
| PET (1) – Opaque | 0.327 | 7.733 | 0.233 | 0.000 | 1.612 | 0.000 | 9.904 |
| HDPE (2) – Natural | 2.005 | 29.374 | 0.935 | 42.214 | 13.556 | 11.070 | 99.152 |
| HDPE (2) – Coloured | 0.440 | 6.448 | 0.205 | 9.266 | 2.976 | 2.430 | 21.765 |
| Other plastic (7) | 0.000 | 0.017 | 0.000 | 0.000 | 0.000 | 0.000 | 0.017 |
| PCPB – Aseptic | 1.670 | 27.742 | 2.147 | 28.250 | 20.427 | 15.233 | 95.470 |
| PCPB – Gable top | 0.417 | 6.936 | 2.147 | 7.062 | 5.761 | 3.808 | 26.132 |
| Other material | 0.000 | 0.178 | 0.000 | 0.000 | 0.000 | 0.118 | 0.296 |
| **Total** | **109.846** | **2,596.758** | **104.232** | **2,111.398** | **687.079** | **1,010.051** | **6,619.364** |
| **Recovery rate (%)[1]** | **71.7%** | **70.2%** | **77.7%** | **69.4%** | **78.2%** | **68.8%** | **70.6%** |

1. Recovery % is relative to CD eligible packaging POM.

Note: These recovery rates may differ from published figures available elsewhere as they included estimates for non-redeemed CD eligible packaging that is collected through MRFs.

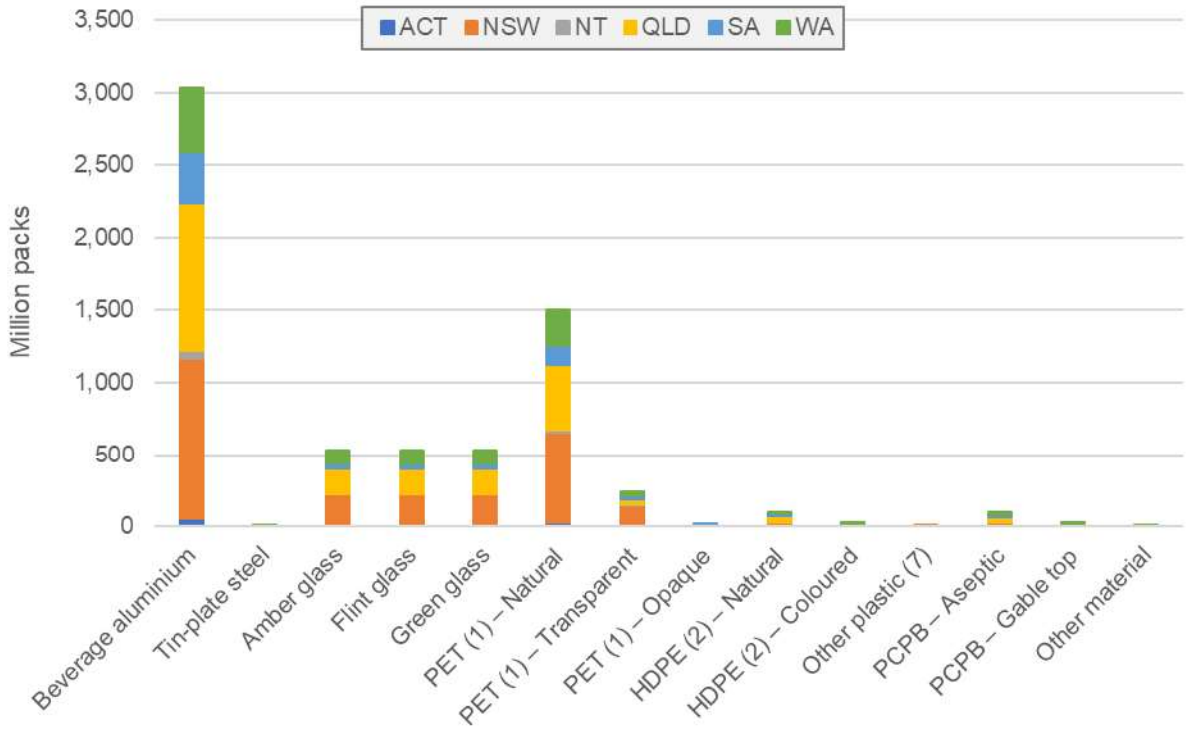


**Figure E-10 – CD eligible packaging recovery in 2022–23 by material type and jurisdiction – Total recovery via all collection routes (million packs).**

### E.2.5 Reprocessing destination

**Table E-11 – CD eligible packaging reprocessing destination in 2022–23 by material type (tonnes).**

| Material type | Local | Overseas | Unknown | Total |
|---|---|---|---|---|
| | (tonnes) | (tonnes) | (tonnes) | (tonnes) |
| Beverage aluminium | 0 | 48,600 | 0 | 48,600 |
| Tin-plate steel | 30 | 180 | 0 | 220 |
| Amber glass | 127,200 | 0 | 0 | 127,200 |
| Flint glass | 127,200 | 0 | 0 | 127,200 |
| Green glass | 127,200 | 0 | 0 | 127,200 |
| PET (1) – Natural | 38,080 | 1,370 | 0 | 39,450 |
| PET (1) – Transparent | 5,920 | 110 | 0 | 6,030 |
| PET (1) – Opaque | 240 | 0 | 0 | 240 |
| HDPE (2) – Natural | 2,630 | 360 | 60 | 3,040 |
| HDPE (2) – Coloured | 580 | 80 | 10 | 670 |
| Other plastic (7) | 0 | 0 | 0 | 0 |
| PCPB – Aseptic | 810 | 970 | 20 | 1,800 |
| PCPB – Gable top | 180 | 220 | 20 | 420 |
| Other material | 0 | 0 | 0 | 0 |
| **Total** | **430,050** | **51,900** | **120** | **482,070** |

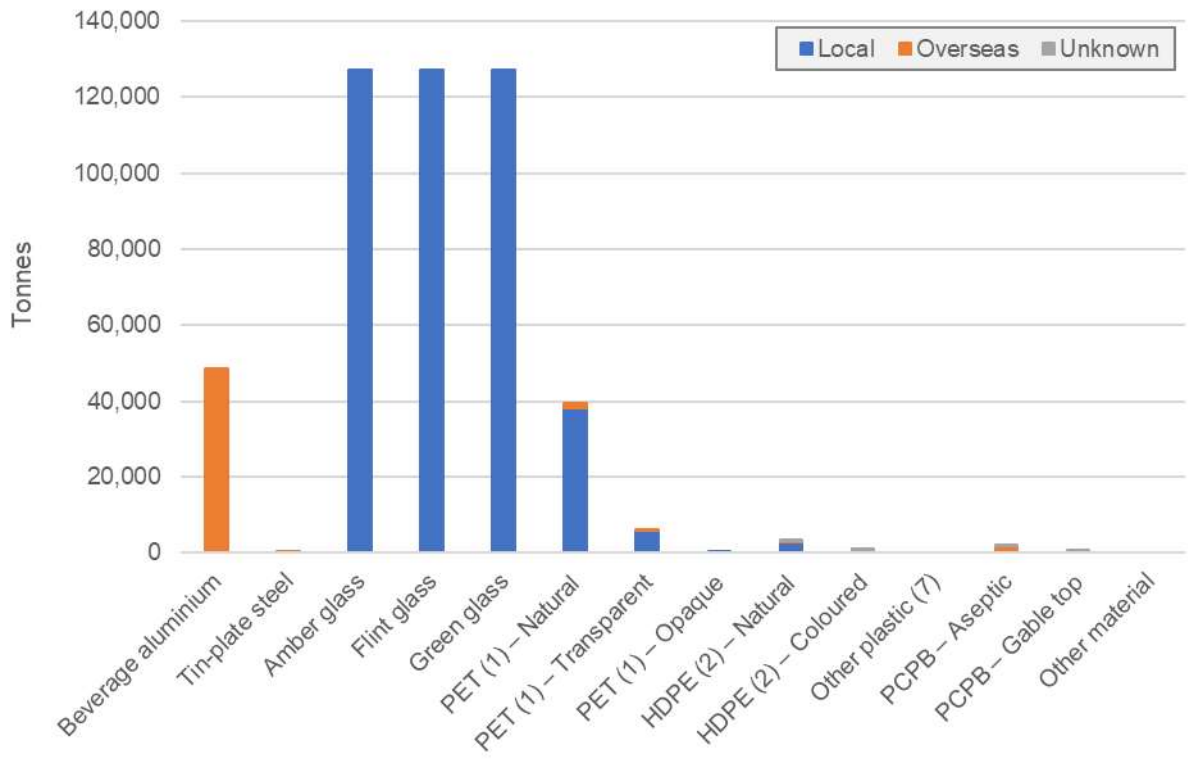


**Figure E-11 – CD eligible packaging reprocessing destination in 2022–23 by material type (tonnes).**

## E.3 CD eligible packaging to landfill

The following tables provide estimates of CD eligible packaging disposed to landfill. These quantities are almost entirely based on estimates of CD eligible packaging disposal to landfill at the household level, and public place disposal where recycling systems are not available.

**Table E-12 – CD eligible packaging to landfill in 2022–23 by material type and jurisdiction (tonnes).**

| Material type | ACT | NSW | NT | QLD | SA | WA | Total |
|---|---|---|---|---|---|---|---|
| | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) | (tonnes) |
| Beverage aluminium | 160 | 5,470 | 110 | 7,870 | 1,000 | 2,390 | 17,010 |
| Tin-plate steel | 10 | 200 | 0 | 100 | 0 | 30 | 350 |
| Amber glass | 740 | 11,610 | 0 | 7,490 | 1,570 | 3,530 | 24,940 |
| Flint glass | 740 | 11,610 | 0 | 7,490 | 1,570 | 3,530 | 24,940 |
| Green glass | 740 | 11,610 | 0 | 7,490 | 1,570 | 3,530 | 24,940 |
| PET (1) – Natural | 260 | 6,920 | 250 | 10,350 | 1,380 | 2,450 | 21,600 |
| PET (1) – Transparent | 60 | 1,540 | 50 | 900 | 310 | 200 | 3,060 |
| PET (1) – Opaque | 0 | 90 | 0 | 0 | 20 | 0 | 110 |
| HDPE (2) – Natural | 0 | 540 | 60 | 930 | 120 | 250 | 1,890 |
| HDPE (2) – Coloured | 0 | 120 | 10 | 200 | 30 | 50 | 420 |
| Other plastic (7) | 0 | 10 | 0 | 0 | 0 | 0 | 10 |
| PCPB – Aseptic | 90 | 1,760 | 40 | 1,880 | 480 | 920 | 5,180 |
| PCPB – Gable top | 20 | 440 | 40 | 470 | 70 | 230 | 1,270 |
| Other material | 0 | 30 | 0 | 0 | 0 | 0 | 40 |
| **Total** | **2,820** | **51,950** | **580** | **45,170** | **8,100** | **17,120** | **125,740** |

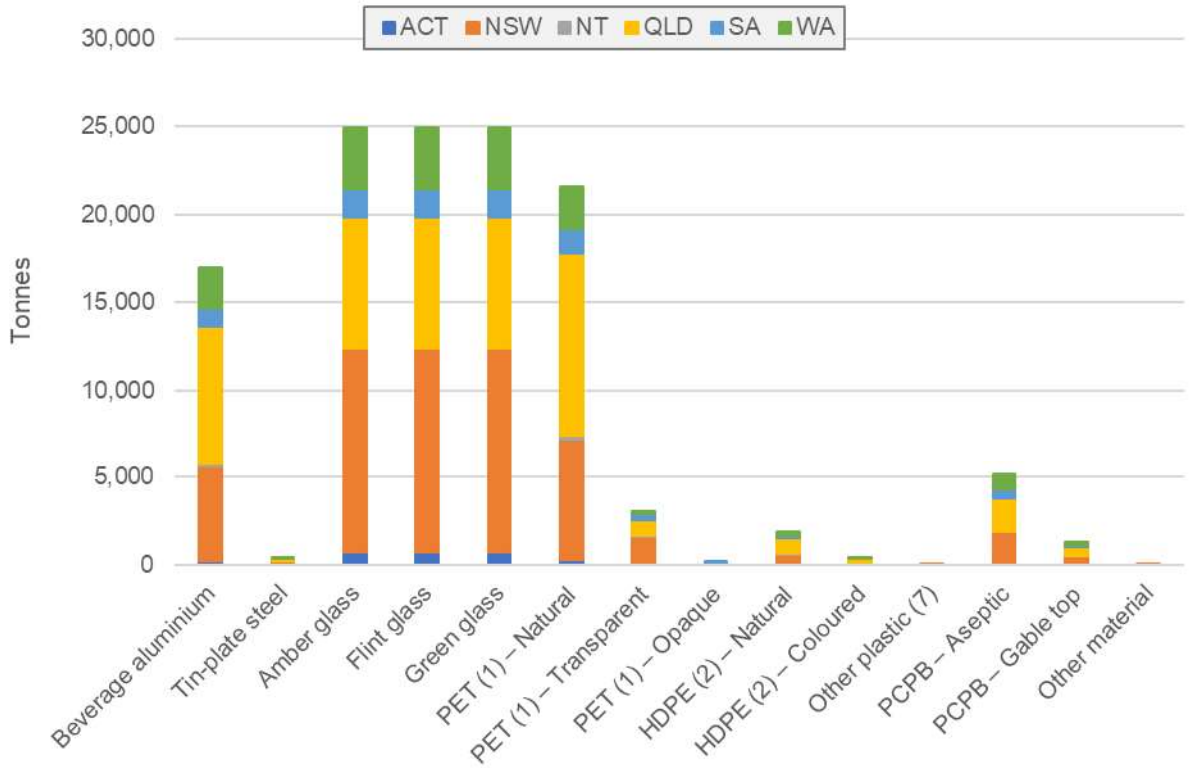


**Figure E-12 – CD eligible packaging to landfill in 2022–23 by material type and jurisdiction (tonnes).**

**Table E-13 – CD eligible packaging to landfill in 2022–23 by material type and jurisdiction (million packs).**

| Material type | ACT | NSW | NT | QLD | SA | WA | Total |
|---|---|---|---|---|---|---|---|
| | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) | (million packs) |
| Beverage aluminium | 11.519 | 396.377 | 8.129 | 382.024 | 73.576 | 175.360 | 1,046.986 |
| Tin-plate steel | 0.170 | 4.551 | 0.102 | 2.335 | 0.000 | 0.811 | 7.969 |
| Amber glass | 3.272 | 51.540 | 0.000 | 26.223 | 7.059 | 17.536 | 105.629 |
| Flint glass | 3.272 | 51.540 | 0.000 | 26.223 | 7.059 | 17.536 | 105.629 |
| Green glass | 3.272 | 51.540 | 0.000 | 26.223 | 7.059 | 17.536 | 105.629 |
| PET (1) – Natural | 10.792 | 291.894 | 10.434 | 297.424 | 52.006 | 144.170 | 806.720 |
| PET (1) – Transparent | 2.398 | 64.865 | 2.319 | 25.863 | 11.557 | 11.882 | 118.884 |
| PET (1) – Opaque | 0.133 | 3.604 | 0.129 | 0.000 | 0.642 | 0.000 | 4.508 |
| HDPE (2) – Natural | 0.152 | 17.609 | 2.061 | 26.289 | 5.995 | 8.890 | 60.996 |
| HDPE (2) – Coloured | 0.033 | 3.865 | 0.452 | 5.771 | 1.316 | 1.951 | 13.389 |
| Other plastic (7) | 0.062 | 1.113 | 0.000 | 0.000 | 0.000 | 0.000 | 1.175 |
| PCPB – Aseptic | 6.461 | 127.443 | 3.112 | 89.969 | 20.043 | 48.934 | 295.963 |
| PCPB – Gable top | 1.615 | 31.861 | 3.112 | 22.492 | 5.643 | 12.234 | 76.958 |
| Other material | 0.309 | 2.235 | 0.000 | 0.000 | 0.000 | 0.304 | 2.848 |
| **Total** | **43.459** | **1,100.037** | **29.850** | **930.837** | **191.955** | **457.145** | **2,753.282** |

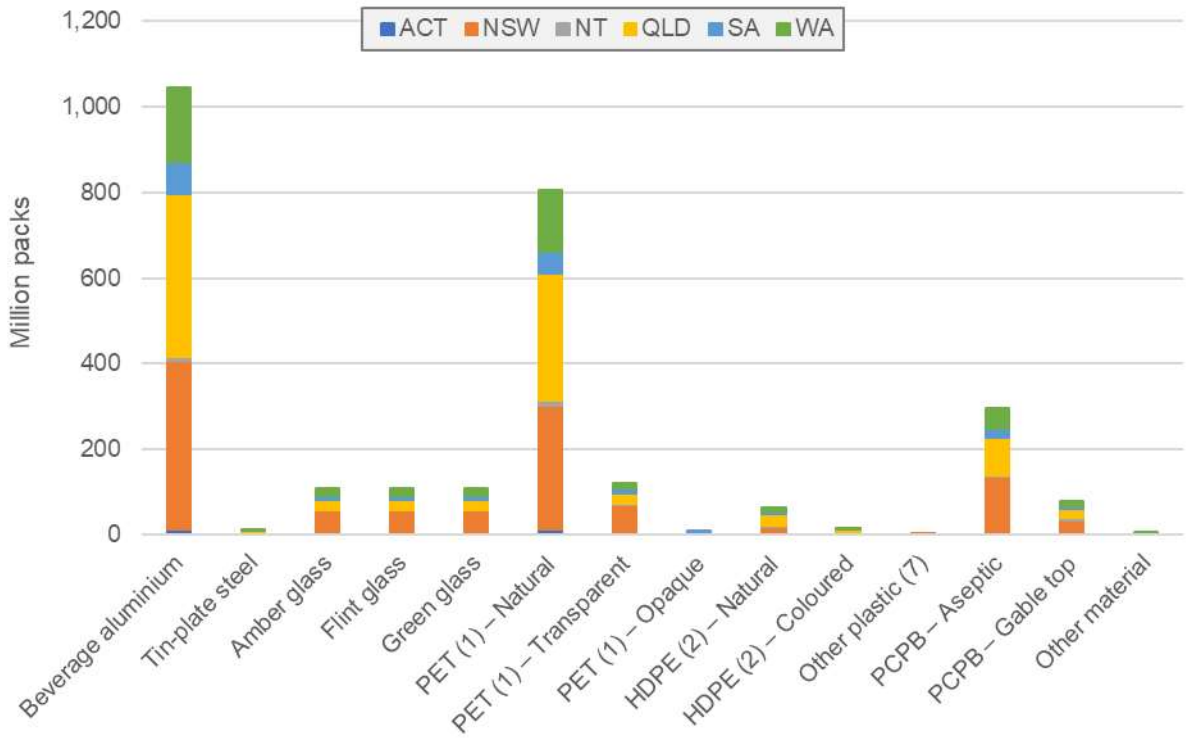


**Figure E-13 – CD eligible packaging to landfill in 2022–23 by material type and jurisdiction (million packs).**