

MARCH 2020

2025

RECYCLED
CONTENT TARGETS



1. New recycled content targets for Australia

In mid-2018 at the Meeting of Environment Ministers (MEM) forum, the state and federal governments agreed to Australia's four 2025 National Packaging Targets (2025 Targets). Together the 2025 Targets provide all Australians with a clear mandate to deliver a new, sustainable pathway for packaging. The 2025 Targets will be achieved through collaboration of stakeholders involved in designing, managing and governing the packaging supply chain in Australia.

Using the Collective Impact Framework set out in the APCO *Our Packaging Future* report, all stakeholders will plan and make the necessary adjustments to meet the 2025 timeline. The Collective Impact Framework will underpin strategic planning, projects and stakeholder engagement to 2025 and beyond.

Benchmarking analysis confirmed in 2019 that Australia has successfully achieved one of these four targets – for 30% average recycled content included in all packaging. This is an incredibly positive indicator that, as a nation, we are heading in the right direction. We must continue to build on this momentum to develop a more efficient, productive and circular approach to packaging.

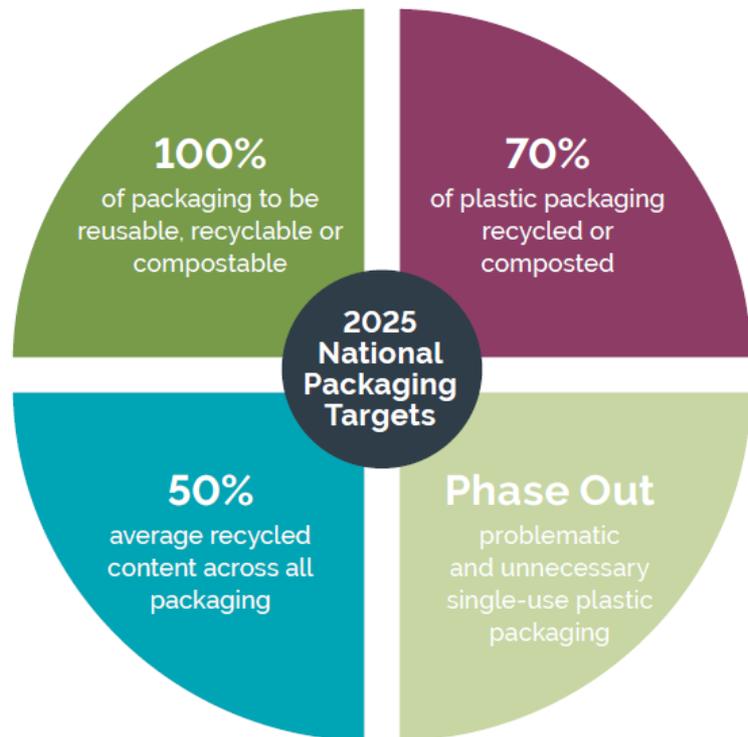


Figure 1: Australia's 2025 National Packaging Targets

Recycled content is a powerful lever for change throughout the packaging supply chain and is a key indicator of the circularity and efficiency of Australia's packaging system. As such, after significant consultation and industry-wide engagement, the overall recycled content target will be lifted to 50%, with further targets for each material stream, including four unique targets for plastics.

This report has been developed for APCO Members, to communicate the new individual material stream targets and the consultation process and data insights that informed their development. This highly focused approach will ensure the strategic development of the right types of innovation, investment and solutions for each material stream.

These targets also recognise the work of governments - state, local and federal - with advanced policies, action plans, regulations and incentives to shift towards a circular economy. Collectively, the Commonwealth Government's ban on the export of waste agreed at the MEM

forum in 2019 and financial incentives announced at the National Plastics Summit in March 2020, coupled with national container deposit schemes, new kerbside collections, plastic pollution plans, new procurement and landfill levies and incentives for increased reprocessing, particularly of plastics, will greatly assist Australia to meet these targets.

2. Towards the new recycled content targets

On 8 November 2019, the MEM delegated the review of Australia's recycled content target to APCO. The Hon Sussan Ley MP, Federal Minister for the Environment, wrote to APCO on behalf of the MEM forum to provide a clear mandate for ambitious action. The letter addressed four key issues:

- 'APCO is to play a significantly stronger role in managing the impact of packaging on the environment, and needs to be more ambitious with targets.
- There are large differences in recycling rates for different material types and success with some materials masks the low recycling content in others, particularly plastics.
- Targets are to be set for specific packaging materials, especially plastics, fibre and glass, with a significantly improved target for the plastics stream, and examination of content target above 50% for fibre and glass
- Market pull from industry will bring about increased recycling performance, and 'Ministers are prepared to consider mandatory targets in this regard at the next MEM'.

As noted by the MEM, Australia has achieved its target for recycled content – 30% average across all packaging. Within this achievement, there is significant variation in performance between the different materials streams, and the success of some materials masks the low recycled content of others, particularly plastics. There is also capacity for more ambitious targets for fibre and glass.

To address this issue, APCO has delivered a significant consultation and industry engagement process to establish an ambitious new set of recycled content targets. APCO has commissioned several studies to assess current, feasible targets being delivered internationally. Through detailed analysis of the packaging system and recovery rate data, alongside significant engagement with Members, industry stakeholders and government, APCO has determined the new targets outlined in Figure 2. APCO will review and report on progress toward these targets each year.

MATERIAL TYPE	CURRENT RECYCLED CONTENT RATE	2025 TARGETS
ALL PACKAGING	35%	50%
PLASTICS	2%	20%
PET	12%	30%
HDPE	2%	20%
PP	3%	20%
FLEXIBLE PLASTICS	UNKNOWN	10%
PAPER	49%	60%
METALS	30%	35%
GLASS	32%	50%

Figure 2: Australia's 2025 National Recycled Content Packaging Targets

2.1 Glass recycled content target

- Current recycled content rate: 32%
- New 2025 average recycled content target for glass: 50%

The glass recycled content rate is strong and the second highest at 32%. In 2017-18 an estimated 1.273 million tonnes of glass packaging was put on the Australian market and 407,000 tonnes (32%) was recovered for recycling from consumers. The main limiting factor to increased recycled content to date has been the lack of supply of recovered clean and colour-sorted packaging glass cullet.

It is anticipated that Australia will reach the 50% glass recycled content target by 2025. There are several factors that will contribute to this success, including some initiatives already underway in early 2020. These include:

- Increased quantities of quality source-separated glass are becoming available through separate kerbside collections in Victoria and container deposit schemes (CDS), which will be operating in every state and territory from 2023. These will provide quality glass (cullet) that can be colour sorted for application back into colour specific glass applications, such as wine and beer bottles and food jars. The quantity of glass collected through commingled collections and reprocessed back into packaging applications in Australia is currently unknown, estimated to be less than 20% in 2017-18.
- There is existing underutilised reprocessing and manufacturing capacity for recycled glass packaging, particularly in South Australian, Victoria, NSW and Queensland. This

means that existing manufacturers have plant, equipment and staff to handle increased quantities of glass cullet.

- Australia has a strong industry structure and supply chains for recovering and reprocessing glass. This means that there are well established, robust businesses in an existing supply chain capable of ramping up investment, collection, processing and training given the right conditions.

Australian manufacturing of glass packaging is stable with relatively constant domestic demand. Over 85% of glass packaging used in Australia is made in Australia, meaning there is a sizeable local market for cullet, and Australian glass packaging manufacturers have used cullet for over a hundred years. From a technical perspective packaging glass could have recycled content greater than 50%, however supply, quality control for colour and clarity and reprocessing costs are the challenges.

Looking ahead, a number of initiatives will continue to reinforce and further support manufacturer and supply chain investment, innovation and expanded capacity. These include:

- Procurement targets for glass products that contain recycled content.
- Improvements to ensure sustainable design practices that incorporate the maximum level of recycled glass materials.
- Addressing the issues related to label adhesives to ensure labels adhere during product use and are able to be removed easily at the end of life.

2.2 Metal recycled content target

- **Current recycled content rate: 30%**
- **New 2025 average recycled content target for metal: 35%**

The metal recycled content rate is steady, and the metals sector had already met the 30% target in 2017-18. In 2017-18 an estimated 213,000 tonnes of metal packaging was put on the Australian market. All of this was imported as finished or semi-finished packaging or in sheet format for fabrication in Australia into packaging such as cans and trays.

There is no production of either aluminium can sheet or tin-plated steel sheet to make packaging in Australia and currently virtually all recovered metal packaging is exported for reprocessing offshore. While recovered metals have a consistent value, in 2017-18 less than half our metal packaging (48%) was recovered for recycling by consumers.

Currently Australia's large metal smelting manufacturers almost exclusively use virgin material and not recovered metals, and they make steel and aluminium for industrial products (such as rail tracks and window frames) rather than packaging. This situation could change within the next five years if proposed new facilities are opened up in Australia.

There are some suggestions from industry that it is feasible to increase recycled content to 35% in imported metal packaging through procurement specifications. The value of recovered metal packaging will continue to oscillate relative to supply and commodity prices of virgin aluminium and steel. It is anticipated that Australia can reach the increased 35% metal recycled content target by 2025 and in the process, stimulate greater innovation, recovery and circularity in these finite resources.

2.3 Paper fibre recycled content target

- **Current recycled content rate: 49%**
- **New 2025 average recycled content target for paper fibre: 60%**

The paper recycled content rate is strong and the highest at 49%, with significant variations between different formats. Paper and cardboard (fibre) are the dominant materials (53%) in Australia's packaging market. In 2017-18 an estimated 2.9 million tonnes of paper packaging was put on the Australian market and 62.6% was recovered for recycling from consumers.

There are also technical and food safety limitations to address to allow recycled content in some packaging, such as milk cartons, coffee cups and other polymer coated paperboard.

It is anticipated that Australia will reach the 60% fibre recycled content target by 2025 as a result of several factors and some initiatives already underway in early 2020:

- Retail, wholesale and office sectors already provide the bulk of the necessary quality source-separated recovered material to Australian reprocessors and there is potential to grow both the quantity and reach of source-separated material collections.
- Increased quantities of quality source-separated paper and cardboard are becoming available through the removal of glass from commingled kerbside collections in Victoria. The quantity of fibre collected through commingled collections and reprocessed back into packaging applications in Australia is currently unknown, whereas it is known that the quality of much of the material through commingled collections does not meet Australian packaging and international export standards.
- There is existing underutilised reprocessing and manufacturing capacity, particularly in mills in Victoria, NSW and Queensland, and small facilities near each capital city, excluding Darwin. This means that existing manufacturers have plant, equipment and staff to handle increased quantities of recovered material and lift production.
- Australia has an extensive and large industry structure and supply chains in recovering and reprocessing paper and cardboard into corrugated cardboard and moulded fibre formats like egg cartons. This means that there are well established businesses in an existing supply chain capable of ramping up investment, collection, processing and training, given the right conditions and support.

There is a long history of using recycled fibre in fibre packaging in Australia. Approximately half of the fibre packaging used in Australia is imported as packaging with product, or sheet form for

local fabrication into boxes and bags, and half is fully manufactured in Australia. Therefore, there is capacity to:

- Increase local production and recycled content in paper and cardboard and moulded product.
- Increase recycled content overall, particularly with a stronger focus by brand owners and customers on recycled content and review of strength requirements in selected feasible applications to allow for a higher percentage of recycled material.

One of the challenges for local fibre packaging manufacturers is absorbing both the locally produced and imported packaging back into new product. There are technical limits on recycled content, based on fibre strength and deterioration over repeated cycles. The fibre quality of much of the imported packaging is poor and utilising this can compromise local packaging quality. The export of baled paper/cardboard from sorting facilities and of Australian-made fibre packaging are important outlets to balance the quantity of imported volumes of packaging. The recent closure of newsprint and magazine grade plant production in Australia means that there is no longer an avenue for circularity on these products, and this fibre is increasingly being blended into packaging production.

2.4 Plastic recycled content targets

- **Current average recycled content rate for all plastic: 2%**
- **New 2025 average recycled content target for all plastics: 20%**

The plastics recycled content rate is the lowest of all material types at 2% on average. This brings down the overall packaging recycling rate to 35%, despite high rates for paper/cardboard and glass. There is no denying the large challenges we face in Australia to increase recycled content in plastics. For this reason, there is one overall target for plastics at 20% and one for each major polymer relevant to their proportion of the market, current recycled content rates and reprocessing capacity in Australia.

Plastics are a growing proportion in total packaging given their low cost, light weight and versatility in meeting diverse requirements. In 2017-18 an estimated 1.067 million tonnes of plastic packaging was put on the Australian market and only 16% was recovered for recycling. Addressing the following factors will be critical to improve the recovery and increase recycled content:

- An increase in the quantity and quality of plastics collected through separate channels, such as commercial services and drop-off facilities (similar to cardboard and glass). An increase in the number of premises recycling (especially businesses) and better separation via CDS and at Material Recovery Facilities (MRF) to retain value and minimise costs.
- Increased capacity for reprocessing plastic packaging in Australia, particularly for PET, HDPE and PP.

- Better coordination and integration of planning and policy development between the sector, policy makers, brand owners, collectors and industry groups. This requires a different approach to the other material streams given the very large number of small to medium enterprise (SME) manufacturers, who make both product and packaging (rigid and flexible), are not vertically integrated and are widely dispersed across Australia.
- The comparative cost of recycled plastics compared to virgin materials.
- Simplifying the diversity of colour, packaging formats and polymer types combined with phasing out single use, problematic and unnecessary plastic packaging
- Increased market pull for recycled content is confirmed by manufacturers, brand owners and customers, including in specifications in procurement tenders.

Action on these factors will shift reprocessing from being a marginal activity, and increase the number and capacity of plastics reprocessors who will produce material in the volumes and quantity suited for packaging.

Australia's diverse plastics manufacturing sector and strong technical expertise provides us with a base for expanding recycled content using recovered material. Specifying recycled content in imported packaging will also support this.

2.4.1 Polyethylene terephthalate (PET) (1)

- **Current recycled content rate: 12%**
- **New 2025 average recycled content target for PET: 30%**

The new recycled content target for PET is 30%. In 2017-18 PET achieved a recycled content rate of 12%, the highest rate amongst the polymers. PET is the fourth most widely used packaging plastic with 132,000 tonnes placed on the Australian market.

A number of brands are committed to increasing PET recycled content in a range of packaging formats, and this will continue to drive the recycled content rate. In recent years demand has exceeded the ability of the local MRFs and reprocessors to supply material. This has resulted in food grade recycled PET being imported from overseas. This strong market pull is now driving collaborative investment by government and business in the sector, improved sorting at MRFs and even changes at the top of the supply chain in composition, design and labels/adhesives.

In packaging, PET's largest volume application is in beverage bottles. The value and recyclability of these is widely recognised by MRFs and the plastics industry, and recovery will grow through CDS schemes across Australia. PET is also used in coloured bottles and other formats such as punnets that are lower value and difficult to recover through conventional MRFs. Further changes, both in design and across the supply chain, will assist to reach the target. Several companies have commenced or announced plans for reprocessing plants to lift recycled PET capacity, and further investments and initiatives will be required to meet the recycled content target and the recovery rate.

2.4.2 High-density polyethylene (HDPE) (2)

- Current recycled content rate: 2%
- New 2025 average recycled content target for HDPE: 20%

The new recycled content target for HDPE is 20%. This is compared to 2% achieved in 2017-18. HDPE is proportionally the largest plastic packaging polymer; HDPE accounted for 364,000 tonnes in 2017/18 and is frequently used in business sectors where it is not widely collected.

HDPE is mainly used in rigid formats, with the majority going into beverage bottles, such as milk, and other rigid containers such as large crates and tubs that are not collected via kerbside collections. Compared to PET, more HDPE packing is used in non-food applications like tubs and crates, so there is potential for more suppliers to produce recycled resin suitable for rigid packaging. This will require increased capacity in Australia to reprocess food grade HDPE, particularly for the dairy bottle range. One limitation on the use of HDPE recycle in consumer packaging has been the wide use of coloured resins, as unpigmented HDPE has a much stronger end market.

Approximately 20% of HDPE is used for flexible packaging. A high proportion of this is likely to be commercial packaging and there are good prospects for increasing reprocessing of this material into products like railway sleepers and fence posts via procurement programs. Currently most HDPE packaging is recycled into durable (non-packaging) product applications, replacing virgin materials, and this is expected to continue.

2.4.3 Polypropylene (PP) (5)

- Current recycled content rate: 3%
- New 2025 average recycled content target for PP: 20%

The new recycled content target for PP is 20%. This is compared to 3% achieved in 2017-18. PP is Australia's third most widely used packaging plastic with 164,000 tonnes placed on the Australian market in 2017-18.

PP often appears in business/industrial packaging like crates and tubs, for which collection and recycling programs are not widely available or only available at a cost to the business. It is frequently coloured, resulting in lower value (e.g. ice-cream containers), and is prohibited by many council kerbside commingled collection schemes and baled as mixed plastics for export by MRFs.

This recycled content target will assist to stimulate the market pull in Australia. The PP that is currently recovered and reprocessed is sorted by only select MRFs, or collected at end of life from business-to-business reuse schemes, such as retail bread and vegetable crates.

PP is predominantly used in rigid formats for both consumer and industrial packaging like cleaning and health and beauty products. It is generally not used in food packaging, meaning

that a market for recovered PP exists in Australia. It is possible to sort PP from HDPE, low density polyethylene (LDPE) and other polymers without difficulty in MRFs and therefore systems built to recover PE-based polymers can also recover PP.

2.4.4 Flexible plastic packaging (LDPE, HDPE, PP) (4, 2, 5)

- Current recycled content rate: Unknown
- New 2025 average recycled content target for Flexible Plastics (LDPE, HDPE, PP): 10%

The average recycled content in flexible plastic packaging is unknown, expected to be extremely low. Flexible plastics include LDPE, HDPE and PP, and are used in business and consumer applications including shrink wrap, pallet wrap, bubble wrap, bread bags and confectionery and chip packets. Flexible plastics are not reprocessed back into packaging in Australia. Challenges include the material specifications to enable processing into films and limitations on recycled materials in food contact packaging.

The recycling target of 10% is aspirational and intended to drive innovation and investment in design, collection and reprocessing technologies.

Separate collections (e.g. REDcycle for consumer packaging, and commercial collections for pallet wrap and other B2B packaging) and recycling solutions such as integration into road asphalt and timber replacement products are being used and can be developed further.

2.5 Overall recycled content target

- Current overall recycled content rate: 35%
- New 2025 average recycled content target for all material streams: 50%

Australia's packaging recycled content rate is currently 35% across all material streams (metal, glass, fibre and plastics). The original target of 30% was exceeded in 2017-18 largely due to glass and paper/cardboard packaging. The new average recycled content target for 2025 is 50%. This new rate takes into account the proportions of the various material streams and the capacity for change in the Australian market.

Appendix A: Analysis and consultation

APCO has undertaken a rigorous process to review the recycled content targets. For several years APCO has obtained annual data on recycling rates for Australia's packaging, and has consistently worked to improve the methodology and align the scope and definitions with international standards.

These consultation activities have demonstrated valuable facts, concerns and insights from all parts of Australia's packaging ecosystem, including designers, manufacturers, collectors, sorters, reprocessors, brand owners, industry groups and governments (local, state and federal). Through a process of information sharing, consultation and stakeholder engagement, APCO has gathered the best available information to support the benchmarking of the progress towards the 2025 Targets.

In 2019, APCO developed the Australian Packaging Consumption & Resource Recovery Data report, to map in granular detail the complete Australian packaging ecosystem, highlighting the performance of key areas within the current system. The report details new benchmark data in areas of packaging recyclability, recycled content uptake and plastic packaging recycling.

Data was collated from a series of surveys of packaging manufacturers, packaging reprocessors and secondary processing facilities, as well as the analysis of imported and exported packaging or scrap packaging through Australian Harmonized Tariff Item Statistical Code (HTISC) and APCO Membership data. Packaging material feedstock sources were separated into post-consumer source, pre-consumer source and virgin source, as well as if this was locally sourced or imported.

Another APCO recycled content project in 2019 conducted research into recycled content labelling to summarise best practice examples of recycled content labels internationally. The research collated key stakeholder feedback and considerations, analysed the best practice characteristics of a labelling system; and provided a short list of labelling options within a Strengths – Weaknesses - Opportunities and Threats (SWOT) analysis.

The detailed analysis in the Australian Packaging Consumption & Resource Recovery Data report, together with the APCO consultation process and other priority projects related to recycled content, provided the robust evidence to support the new 2025 Targets for recycled content.



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