

1 November 2024

Orora's response to Productivity Commission's Call for submissions on Opportunities in the circular economy

Submission

As a global packaging company with significant operations in Australia, Orora appreciates the opportunity to contribute to the Circular Economy review initiated by the Productivity Commission. Orora is committed to sustainable packaging practices and understands the importance of materials circularity to enhance environmental outcomes while ensuring the viability of the packaging industry.

In this submission, we have provided responses to the information requested in the call for submissions document released 16 Sep 2024 and support this with fundamental principles and data which we believe are central to successful reform and maximising circular economy opportunities.

Orora background and context

Orora is an ASX listed company and one of Australia's leading manufacturers of sustainable and infinitely recyclable beverage packaging solutions.

Orora operates a global network of seven glass manufacturing facilities located across France, Belgium, UAE, Mexico, and Australia. Our state-of-the-art glass manufacturing facility in South Australia is one of the largest glass manufacturing plants in the southern hemisphere.

As the largest aluminium can manufacturer in the Oceania region, Orora operates six can manufacturing facilities in Australia (NSW, QLD, VIC, WA) and New Zealand. Working with global partners, we are a market leader in high quality, innovative beverage can solutions.

Across these Australian sites combined we employ approximately 1100 full time team members and many more indirectly in downstream areas including freight, warehousing, supplies, mining and hospitality, among numerous others.

Orora is also a large-scale recycler of glass, having invested in an on-site glass beneficiation plant at our South Australian facility.

Waste reduction and recyclability have long been key priorities for Orora. We remain focused on increasing the amount of recycled content we use. In FY24 we achieved 50% recycled content (pre and post-consumer) in our new manufactured glass bottles and 72% recycled content in new manufactured aluminium cans.

Orora uses significant power purchase agreements and on-site solar systems to provide renewable electricity to our sites and we continue to innovate to reduce the impact of glass and aluminium can manufacturing on the environment.

Orora has made significant public commitments towards reducing our greenhouse gas emissions (GHG) and increasing recycled content in our products. We have committed to achieving Net Zero Scope 1 (S1) and Scope (2) emissions by 2050 along with an interim target of achieving a 40% reduction in these emissions by 2035 from a 2019 baseline. Orora has also committed to achieving 60% total recycled content (post and pre-consumer) in glass products manufactured at our Gawler facility by 2025.

We are stretching the limits of what is technically and commercially possible in order to meet these targets and we are on track to achieve them.

We have summarised our views based on the information requests in the *Call for submissions* issued by the Productivity Commission. Orora respectfully requests that our submission be kept confidential. We would specifically request that the Productivity Commission keep the sections highlighted in yellow confidential at a minimum and seek express consent if they wish to publish these sections with specific reference to Orora.

Information Request 1: Circular Economy Success Stories and Measures of Success

The cans and glass manufacturing sector has made significant progress towards circularity, particularly through initiatives such as increasing the use of recycled content, improving product design for durability, and collaborating with other industries to repurpose byproducts and waste materials.

Case Study: Increased Use of Recycled Glass (Cullet) in Manufacturing

One of the most significant circular economy practices in the glass industry is the use of recycled glass (cullet). Currently, many glass manufacturers incorporate up to 40-50% cullet in their production processes, significantly reducing the need for raw materials such as silica sand, soda ash, and limestone. For every 1 tonne of cullet incorporated in the glass manufacturing process, 1.2 tonnes of virgin materials are conserved and not required to be mined. This practice also results in substantial energy savings—about 3% energy reduction for every 10% of cullet used—alongside a reduction in CO2 emissions. As a market leader, Orora demonstrates its dedication to environmental sustainability through tangible action. As mentioned above, the company has publicly committed to exceeding a total pre and post-consumer target of 60% recycled content for its glass containers by 2025. To help in achieving our circular economy targets, Orora commissioned a state-of-the-art glass beneficiation plant in October 2022. The A\$25-million-dollar facility has the capability of recycling up to 150,000 metric tonnes of waste glass each year. In terms of funding, Orora was supported by an \$8 million grant from the Commonwealth and South Australian governments through the Recycling Modernisation Fund.

Impact on Business and Economic Outcomes:

- **Cost Savings:** Lower energy consumption leads to reduced operational costs in the long term. Additionally, the reduction in raw material usage can reduce input costs, particularly as virgin materials become more expensive due to resource scarcity. Having said that, sourcing recycled glass requires establishing supply chains capable of handling glass. Due to the variability in supply chain costs and commodity costs for recycled glass from different sources in different parts of the country, the landed costs for cullet can have a wide range with some sources being significantly more expensive than virgin material alternatives.
- **Environmental Benefits:** Increased use of cullet reduces greenhouse gas emissions, assisting Orora to achieve the Government's desired outcomes for the Safeguard Mechanism. Additionally it leads to less waste sent to landfills. It also decreases the need for mining virgin materials, thus conserving natural resources. Orora has been able to improve its total pre and post consumer recycled content usage rates over the last two years from 38% to 50% (FY24) which has also helped in greater energy efficiency and reduced emissions intensity.
- **Social Outcomes:** Orora sources cullet from a range of suppliers from small family-owned depots to large scale resource collectors in every mainland state. This creates a significant number of direct and indirect jobs in the economy. Additionally, the reduced amount of mining required to meet demand requirements also helps reduce any unintended social impact. The Container Deposit Schemes are also a key enabler for driving community engagement and a number of charity organisations are supported through the proceeds from the container deposit schemes.

Levels of Uptake:

The whole glass manufacturing industry has adopted practices and processes to increase recycled content and we have observed positive momentum towards improving recycled content. Orora has

been able to temporarily run its furnaces at levels as high as 95% recycled glass, however sustaining such high levels of recycled content is limited by the availability of cullet of acceptable quality.

Drivers for adoption

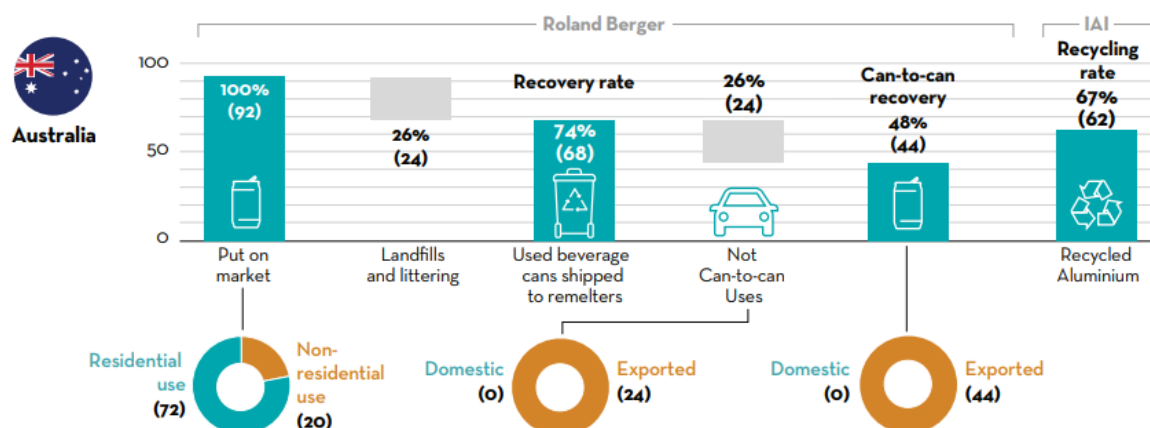
The key driver for the adoption of greater glass recycling is a product stewardship scheme in the form of a container deposit scheme. The scheme creates the right incentives for end consumers to return beverage packaging to assigned collection points which are designed to efficiently and effectively segregate the returned containers and make these available for recycling. The CDS schemes are now active across all states and territories in Australia and have collection rates of around 65-75%. The effectiveness of the schemes can be further improved by simplifying, harmonising and expanding the scheme and these are detailed in Information Request 2.

Case Study 2: Cans Manufacturing with increased recycled content

Like glass packaging, aluminium cans are infinitely recyclable, and the industry has focused on increasing recycling rates and recycled content. Recycling aluminium saves up to **95%** of the energy required to produce new aluminium from raw ore. Aluminium cans are the most recycled beverage containers worldwide, boasting a recycling rate of 71%. This high rate significantly outperforms other beverage packaging materials, such as polyethylene terephthalate (PET) plastic bottles.

Australia has a mature circular recycling loop established with well-developed aluminium packaging waste collection and recycling processes and systems. While Australia does not have any domestic rolled coil sheet manufacturing capability (required for can manufacturing), an international circular loop exists as most of domestically produced aluminium scrap is sent overseas to these sheet manufacturers to recycle that scrap into rolled coils which are then shipped to Australia for converting back into cans, completing the circularity loop.

Orora sources from global leading aluminium suppliers and continuously works with these key suppliers to encourage them to improve the level of recycled content in the sheet metal supplied to Orora. The company has established a closed loop that ensures that all process scrap is shipped back to the rolled coil suppliers for recycling. The table below shows the high levels of material recovery and circularity in aluminium can recycling based on a recent report from Roland Berger (International Aluminium Institute, 2024)



Impact on Business and Economic Outcomes:

Aluminium is an internationally traded commodity and given it can be recycled with no quality losses, recycled aluminium is sold at the same market prices as virgin aluminium. This precludes any cost savings for the can manufacturing industry from using more recycled aluminium.

However, given that aluminium recycling saves 95% of the energy needed for primary aluminium production, this material circularity has significant environmental benefits. In 2022, the carbon footprint of global primary aluminium production (from mine to cast house) was 15.1 tonnes of CO₂e per tonne. In contrast, the carbon emissions for producing recycled aluminium (gate-to-gate) were 0.52 tonnes of CO₂e per tonne according to the International Aluminium Institute.

Additionally, from a material circularity perspective, with the high degree of recycling of aluminium cans avoids mining of new ore. According to International Aluminium Institute's, "ALUMINIUM: The sustainable option for beverage cans, 2024" report, 75% of all aluminium ever produced is still in use today.

Similar to glass, the Container Deposit Schemes are a key enabler for driving material circularity for aluminium cans in Australia.

Information Request 2: Priority Opportunities to Progress the Circular Economy

There are several priority opportunities for the cans and glass manufacturing sectors to advance circularity, improve environmental outcomes, and boost economic growth.

Opportunities to Narrow and Close Loops

1. Harmonisation of CDS

Currently each state has a difference in the container types that are eligible for CDS rebates. This creates confusion in the minds of consumers leading to collection losses. A harmonised and unified CDS eliminates confusion caused by varying state regulations, making it easier for consumers and businesses to participate effectively. Additionally, if the schemes are harmonised, it would make it easier for beverage brand owners to be able to meet compliance requirements in an effective and efficient manner. Finally, with a harmonised CDS across states, various stakeholders including packaging manufacturers like Orora, can support national campaigns and education programs become more effective with consistent messaging, increasing participation rates.

2. Enhancing Recycling Infrastructure:

Even as CDS schemes are rolled out and potentially expanded across different states, there will still be a significant fraction of glass packaging that would be needed to be recovered and recycled from the mixed waste kerbside recycling process. Based on data shared through SA CDS consultation by SA EPA, even after excluding Wine and Spirits, almost a quarter of kerbside beverage containers will be glass.

Kerbside Beverage Container Weight by Material Type
(tonnes per annum)

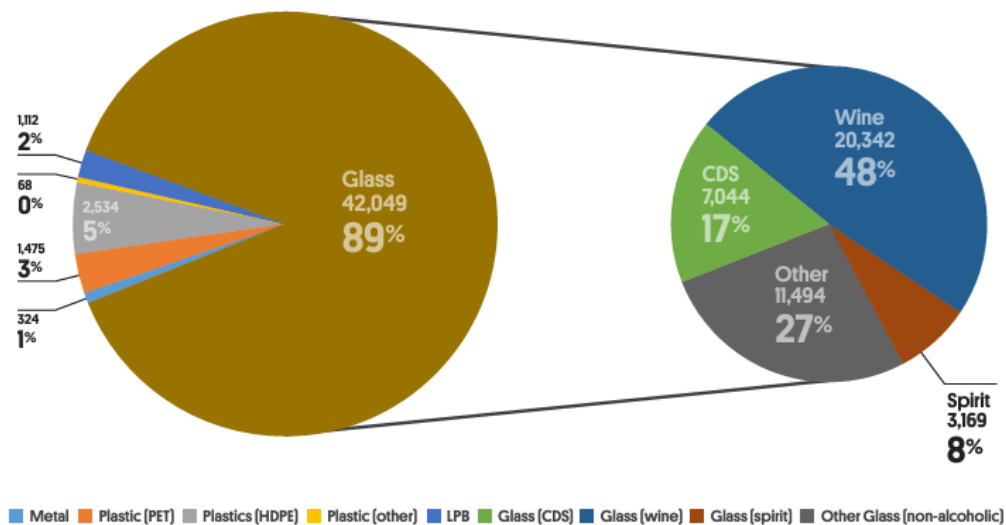


Figure 1 Source: IMPROVING SOUTH AUSTRALIA'S RECYCLING MAKES CENTS, SA EPA

Currently, most Material Recovery Facilities (MRFs) engaged by councils nationwide have not invested in the necessary infrastructure and processes to recover glass and recycle it into cullet suitable for glass manufacturing. Consequently, most of the glass collected through these MRFs is either sent to landfills or repurposed for end-of-life applications in civil construction. Given the energy embedded in glass containers, this represents a significant loss, highlighting an opportunity to enhance recycling infrastructure at MRFs to optimise glass-to-glass circular recycling. Achieving this would deliver substantial economic and environmental benefits for the nation. The technology to support such circular recycling is both available and proven, as demonstrated by some MRFs that have taken leadership in this area, enabling glass-to-glass recycling of MRF-sourced glass.

3. Collaboration with Other Industries:

The potential to repurpose waste from other industries into glass and aluminium packaging presents a valuable opportunity to reduce materials waste. For instance, by-products generated through steel and paper manufacturing can be used as a raw material for glass production. Similarly, aluminium scrap generated through various industries can be recovered and recycled into aluminium rolled coil sheet for can manufacturing. Often small incentives are required to prove the processes and enable the investments required to realise this cross-industry recycling loops and there is an opportunity to enable such circular use of materials through this consultation process. This will create new revenue streams for industry by selling waste materials to other sectors, reduced landfill costs, and lead to reduced demand for virgin materials.

- **Environmental Outcomes:** Reducing the environmental footprint of the entire production cycle by promoting cross-industry collaboration and reuse of materials.
- **Feasibility:** Collaboration requires better coordination across industries and government support for cross-sector partnerships.

Information Request 3: Hurdles and Barriers to a Circular Economy

While the cans and glass manufacturing sector has made strides toward circularity, there are several barriers preventing full adoption of circular economy practices.

1. High Initial Costs for Transition

Upgrading manufacturing facilities to accommodate higher levels of recycled content or adopt circular production processes often necessitates substantial capital investment. In recent years, inflationary pressures on financing costs and essential capital goods, such as iron and steel, freight, and labour, have further compounded the challenges of investing in circular production practices. Orora has made considerable investments toward achieving its circular economy goals in glass, as discussed earlier in this paper; however, additional investments remain essential. Facilities constructed 20 years ago were not designed to operate with high levels of circular inputs or to manage the added complexity introduced by using more recycled materials in production processes. We propose that the government consider supporting this transition through grants, subsidies, low-interest loans, and tax incentives to alleviate the financial burden of adopting circular practices. It is worth noting that since Australia has no domestic aluminium recycling and rolling capability, our suppliers of rolled coil aluminium are making these investments overseas. While there are no local manufacturing cost imposts for using Aluminium with higher recycled content in the can conversion process, the suppliers rightfully recover these investments from Australian manufacturers looking to source rolled coil aluminium with higher recycled content.

2. Insufficient Recycling Infrastructure

Australia's existing kerbside recycling infrastructure falls short of supporting the widespread adoption of circular practices, thereby limiting the supply of high-quality recycled materials for manufacturing. As illustrated in Figure 1, from a glass perspective, only around 11% of municipal waste collected in comingled recyclables bin in SA are able to reach circular recycling outcomes. Material Recovery Facility (MRF) operators have access to proven technologies that enable the circular use of raw materials; however, investment in these advanced systems remains limited across the majority of facilities.

To secure a consistent supply of recycled materials for manufacturing and promote circularity, increased government investment in recycling infrastructure is essential. Key areas requiring enhancement include the expansion of collection systems, upgrades to sorting facilities, and modernisation of processing plants to improve material recovery rates and quality. Such investments would not only bolster Australia's capacity for circular practices but also support environmental goals by reducing landfill dependency and conserving natural resources.

3. Regulatory Complexity and Lack of Alignment

Differing regulations across states and territories, and between Australia and international markets, create compliance challenges for manufacturers. In some cases, inconsistent standards hinder the adoption of circular practices by increasing the cost of doing business. Harmonisation of circular economy regulations across jurisdictions and alignment with international best practices would reduce compliance costs and create a more predictable environment for businesses.

Information Request 4: Governments' Role in the Circular Economy

Governments play a crucial role in enabling the transition to a circular economy. We recommend the following actions:

1. Financial Incentives for Circular Investments

Governments should provide financial support, such as grants, tax rebates, or low-interest loans, to help Australian manufacturers invest in circular technologies, recycling infrastructure, and product design innovations. This will enable more businesses, particularly SMEs, to participate in the circular economy. The Australian Government's Recycling Modernisation Fund is a great example of how financial support from the government can enable significant transformation in recycling infrastructure. We believe there is more investment required to achieve our circular economy goals for the benefit of the industry and community, and greater financial support is required from state and federal agencies.

2. Regulatory Reforms and Alignment

To enhance the collection of recycled materials, regulatory frameworks across Australia need to be streamlined. Expanding and standardising Container Deposit Schemes (CDS) is essential for promoting circularity. According to Australia's 2019 National Waste Policy Action Plan, achieving the target of an 80% average recovery rate across all waste streams by 2030 will require such measures. Glass, which constitutes a significant portion of waste by weight, particularly as seen in Figure 2, "Kerbside Beverage Container Weight by Material Type" from South Australia, underscores this need.

Orora recommends that CDS expansion be based on packaging type rather than content, ensuring coverage for all glass containers. Extrapolating South Australian data to a national level suggests that this policy adjustment could drive circular outcomes for up to 90% of waste collected via kerbside programs.

3. Education and Awareness Campaigns

Governments can help drive consumer and business demand for circular products by raising awareness about the environmental and economic benefits of circularity. Educational programs that highlight best practices in product design, recycling, and materials reuse will further accelerate circular economy adoption.