



The Hon Jim Chalmers MP
Treasurer
c/o Productivity Commission
Locked Bag 2, Collins St
East Melbourne Vic 8003
Email: Circular.economy@pc.gov.au
Submission via online [portal](#)

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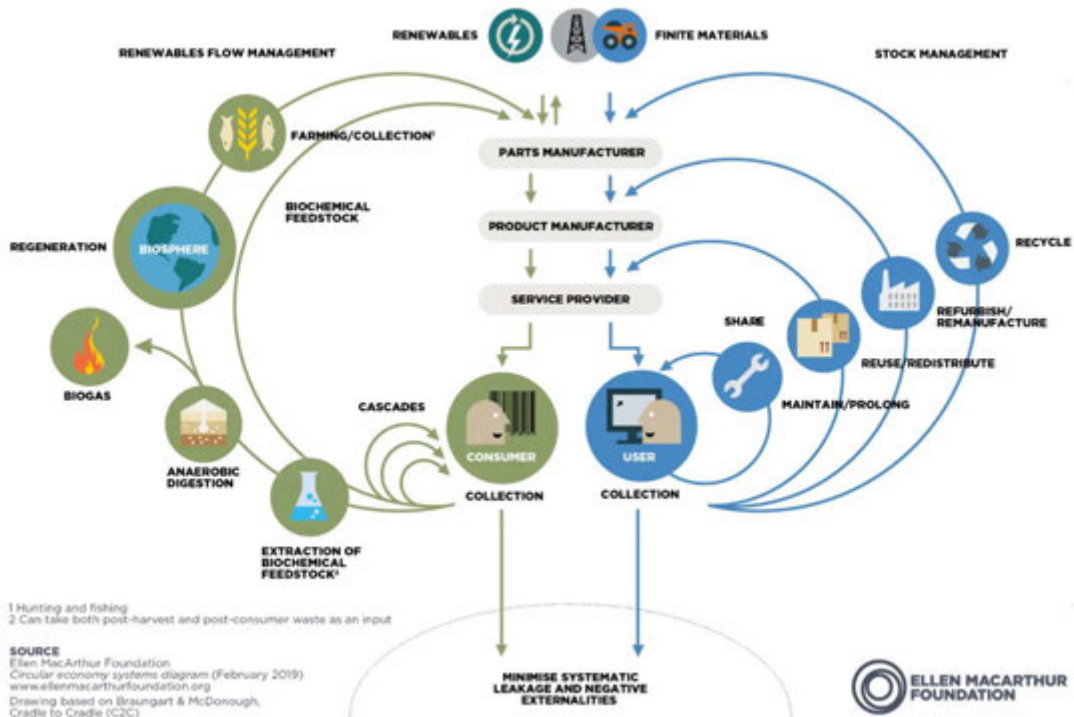
Dear Mr Chalmers MP

Re: Opportunities in the circular economy

Thank you for the ability to provide a submission to the Productivity Commission (PC) on opportunities in the circular economy. The Waste Management and Resource Recovery Association of Australia (WMRR) is the national peak body representing Australia's \$17 billion waste and resource recovery (WARR) industry. With more than 2,300 members from over 410 entities nationwide, we represent the breadth and depth of the sector, including representation from business organisations, the three (3) tiers of government, universities, and Non-Government Organisations (NGOs), including research bodies. Our members are involved in activities fundamental to the success of the Australian economy including infrastructure investment, collections, remanufacturing of valuable products from resource recovered materials, energy recovery, community engagement and education, and responsible management of residual waste.

WMRR understands that the Australian Government has asked the PC to undertake an inquiry into Australia's opportunities in the circular economy to improve materials productivity and efficiency in ways that benefit the economy and the environment. The PC's inquiry coincides with several other processes currently occurring in Australia in relation to circular economy policy development, including the agreement of the Environment Ministers to design out waste and pollution, keep materials in use, and foster markets to achieve a circular economy by 2030, and the Australian Government's commitment to publish a National Circular Economy Framework by the end of 2024, led by the Department of Climate Change, Energy, the Environment and Water (DCCEEW).

It is WMRR's view that at present the vast majority of 'circulating' in the Australian economy is done as a direct result of work being undertaken by our essential industry, that is driving investment in the outer loop (recycling) as shown in the following Ellen Macarthur 'butterfly diagram'. However, this alone will not achieve circularity. Given Australia is one of the highest consumers globally (hitting our own Earth Overshoot Day on 5 April 2024) we need a significant rethink of our business and environment systems for both people and planet.



As fierce proponents of the resource and waste management hierarchy, advocating for beyond end-of-life material management and the reinvestment of valuable resources back into the productive economy, in order that less can be used for longer and adverse carbon impacts mitigated, WMRR is strongly supportive of these government commitments – which must honour a systematic approach to designing out waste and keeping materials in use for as long as possible, which we believe are integral steps that need to be taken if Australia is to successfully transition to a genuine circular economy. However, key to the success of this important work is that they all join together working across all of government, whilst taking a systems view of the opportunities that are being presented across the entire Australian economy shifting the paradigm to assist with increasing productivity as well as addressing sovereign risk. We hope that this work will ultimately be rapidly implemented by all of the government, which will be necessary to realise both the 2030 targets and the opportunities that circularity can present.

General comments

Of all the waste generated in Australia, the vast majority of which is valuable natural resources that have only been used once, only 63% of it is recovered. Increasing the economic value and real demand of 'secondary raw materials' recovered from waste streams (such as metals, plastic, paper, cardboard, rubber, organics and glass) must underpin national regulatory and policy settings for Australia to achieve the targets set across a myriad of government policies, including the National Waste Policy Action Plan's goal to reach 80% recovery by 2030, create a circular economy by 2030, meet our climate mitigation target of 43% as well as achieve the reduction in natural vegetation committed to. Utilising secondary raw materials is crucial to reducing carbon impacts given over 60% of carbon is mitigated at material extraction stage, as well as driving the growth of the domestic remanufacturing sector.

The transition to a circular economy must be led by strong regulation which values natural material, creates generator obligations at the start of the value chain and across all lifecycle aspects from design to disposal, as



well as safeguarding both the economy and the environment. The Federal Government must use the levers at its disposal to establish a framework that addresses imports, creates strong carbon policy and utilises levers such as taxation to drive improved investment in green jobs and material productivity, a clear example being the need to mandate requirements for the use of secondary materials over virgin materials within existing supply chains, including government procurement at all levels of government. The productivity of Australian businesses and the economy, is adversely impacted (as well as the environment) by the current lack of a comprehensive regulation that create positive obligations as well as a level playing field, requiring all in the supply chain to create safe circular products.

This lack of systems thinking, and regard for strong carbon policy in Australia has also driven in many ways an emphasis on linear consumption and over production, with ongoing emphasis on retail sales and trade, given our natural resource base, and to date we have not grasped the opportunity to create regulation, systems and skills that keep these ultimately finite resources (possibly just not in our generation) circulating. The lack of regulation not only deprives Australia of new skills and models of business, but also to risk given we are increasingly becoming a dumping ground for products and materials that cannot be placed on other international markets due to safety concerns or failing to address sustainable design requirements. No where is this more evident than our slow (and incomplete) response to addressing PFAS- this has been banned in a number of countries for many years under the Stockholm Convention, however Australia continues to allow this chemical of concern to be placed on market.

It is WMRR's firm view that strong regulation, creating a stepping stone for circularity can be achieved with the implementation of an overarching framework, akin to the *European Union Waste Directives Framework*, to establish a clear and consistent systems approach to resource and material management. The European framework makes clear the order of preference for managing materials in accordance with the waste management hierarchy and places obligations squarely on those that produce and place products on market, i.e. creating by default a real paradigm of extended producer responsibility (EPR) This is integral to transitioning to a circular economy as it places direct pressure on producers to stimulate the investment and innovation in avoiding the creation of waste so that it does not end up in the environment. The framework includes numerous international best practice instruments such as such as the *EU Packaging and Packaging Waste Regulation (PPWR)*, Right to Repair (R2R), and the EU Circular Economy Action Plan (CEAP) and takes a phased approach to rolling out mandatory and harmonised Extended Producer Responsibility (EPR) schemes supported by overarching policy and action plans to measure success against specified targets.

The CEAP aims to double the EU's 2020 circular material use rate by 2030 to reach 23.2%. The 'circular material use rate' or 'circularity rate', measures the contribution of recycled materials in the overall use of materials. According to Eurostat, in 2023 11.8% of materials used in the EU came from recycled materials¹. In 2023, the circularity rate was highest in the Netherlands (30.6%), followed by Italy (20.8%) and Malta (19.8%). Interestingly, the Netherlands aims to halve the use of primary abiotic raw materials by 2030 and run the economy entirely on recycled materials by 2050, thus demonstrating that the significant motivation to displace (limited) natural resources within economic supply chains and attribute their counterpart recycled materials with equal and greater economic value. In contrast Australia's material circularity rate is approximately 5%.

WMRR is hopeful that the promised Circular Economy Framework - which the Australian Government seeks to deliver by the end of this year – will mirror the European model (although this has certainly not been alluded to within the PC's call for submissions). WMRR appreciates it will take time and will require long term government commitment to an overarching framework to truly close loops in industrial manufacturing and design out waste.

¹ <https://www.recycling-magazine.com/2024/11/13/almost-12-of-materials-in-the-eu-came-from-recycling/>



“Achieving a climate neutral and circular economy requires the full mobilisation of industry. It takes 25 years – a generation – to transform an industrial sector and all the value chain”².

In the absence of establishing a clear directives framework, it is WMRR’s view that Australia will continually struggle to meet both its circular and resource recovery targets as there will be no positive obligation on those that make products, to start taking responsibility for their products and their impacts (environmentally or economically). It is a theme throughout our submission that legally binding requirements on product manufacturers will be crucial to stimulate the investment and innovation essential to driving change, and for this reason, government leadership and oversight is essential.

We have seen firsthand that business as usual is not driving the paradigm shift necessary to mobilise industry, due to concerns about free riders and adverse impact of being the first movers. As such it is vital that government take the lead and establish an operating environment (that includes regulation) where these obligations apply to all - noting that producers are most likely to adjust their procurement and supply chain strategies when it becomes financially appropriate to do so. Appealing to profit driven decision making through financial adjustments to support circularity should be recognised as an efficient method of affecting change. The profitability of environmentally and socially harmful linear practices can be addressed through developing pricing mechanisms to deter environmental and social externalities associated with linear supply chains.

Targeted comments

WMRR understands that the PC’s findings will inform policymaking regarding strengthening the Australian circular economy and that the PC has identified the following four (4) key areas for stakeholder comments to inform their inquiry, which will now be addressed in turn:

1. Circular economy success stories and measures of success
2. Priority opportunities to progress the circular economy
3. Hurdles and barriers to a circular economy
4. Government’s role in a circular economy

1. Circular economy success stories and measures of success

WMRR has identified the European Union’s experience with its Waste Directives Framework as a key part of the success story. It is WMRR’s view that a paradigm shift in national policymaking guided by a similar national Waste Directives Framework is urgently needed to shift the focus away from regulating existing materials’ ‘waste products’ end-of-pipe and instead, move towards an overriding national framework that starts at ‘front of pipe’ resource and materials management that is focused on the reinvestment potential of materials at the product design stage. This model places responsibility squarely on industrial product producers to avoid waste and pollution (this includes creating unsafe products, using hazardous and unsafe chemicals, etc) entering the economy in the first instance, and can only be achieved through mandating requirements for all product producers to design for circularity (sustainable design principles).

Current Australian circular economy metrics - ‘waste generated per person’ and ‘resource recovery rate’ - do not capture the fundamental elements of avoiding creating waste (e.g. through designing for re-use or using less in production), establishing systems to prolong life (e.g. repair and share), market demand for the secondary material (recovered resources and designing as such) and in no way demonstrate whether their ‘recovery’ use held significant environmental benefits such as displacing the use of virgin resources or fossil fuels. It simply measures the volume of material that was not landfilled. WMRR believes we must shift the focus away from

² [COMMUNICATION FROM THE EUROPEAN COMMISSION](#) . The European Green Deal, COM(2019) 640 final, Brussels, 11.12.2019 at 2.13



diverting 'waste' and start talking about increasing the 'reinvestment' of recovered resources and materials into secondary uses across supply chains and creating the systems across the value chain to do so.

It follows that one of the best measures for success for a circular economy is measuring consumption of natural materials coupled with increasing levels of reinvestment of secondary materials within product supply chains – displacing the use of virgin resources (thereby mitigating the associated negative environmental and carbon impacts) and growing our local economy through increased demand for local remanufacturing/reprocessing and recycling products, infrastructure and jobs.

Data capture from mandatory EPR schemes and design standards under the Commonwealth should enable these metrics to be captured and for targets to be set under a national policy, similar to the CEAP. Supply chain transparency and traceability is possible via smart technologies to track movement of materials, and this data can be used to determine the actual lifecycle of materials and products and help identify opportunities to improve.

2. Priority opportunities to progress the circular economy

An essential requirement of the transition to a circular economy is to maximise opportunities in the top half of the waste management hierarchy to focus on prevention and avoidance through design for durability and reuse as well as increased levels of repair activity. These interventions highlight the relevance and importance of ensuring a strong and consistent product focus, and we would argue a national framework that establishes this is vital. Broader regulatory and legislative solutions should be considered by the Commission to structurally enable circularity throughout Australia. The current approach by government in looking at individual product streams (e.g. mattresses, batteries, packaging) or states by state (single use plastics, beverage containers) is expensive to business and confusing to community.

WMRR agrees with the Product Stewardship Centre of Excellence that State and federal agencies should prioritise:

- Mandating nation-wide strict, ambitious and achievable environmental and social targets that align with planetary boundaries, incorporating reporting guidelines to track progress.
- Incorporating circular design into domestic product manufacturing and importation quality control standards.
- Implementing Government procurement strategies that preference eco designed products in line with the European Eco-design Sustainable Product Regulation.

A regulatory framework that places clear obligations, would assist greatly in addressing the challenge of plastics in Australia. Australians consume one million tonnes of single-use plastic each year, 84% of plastic is sent to landfill and only 13% is recycled. Furthermore, in spite of over 20 years of policy intervention under the National Environment Protection Measure and the existence of the Australian Packaging Covenant co-regulatory scheme, 2.5 million tonnes of packaging is still being sent to landfill each year. It has failed to meet the 2025 targets of having 100% of packaging being reusable, recyclable or compostable, 70% of plastic packaging being recycled or composted, 50% of average recycled content included in packaging and the phase out of problematic and unnecessary single-use plastic packaging. It demonstrates that voluntary stewardship schemes can create a lack of clarity for brand owners regarding their liability and obligations, enable free riders, reduce industry confidence and participation and resulted in little or no data collection to measure and report on performance.

The proposed suite of reforms for state-based single use plastic phase outs and national packaging reforms are inextricably linked to also addressing increasing concerns with littering, the introduction of mandatory food organics collection services (to meet the 2030 target to halve the amount of organic waste sent to landfill) and public health concerns through emerging microplastic and PFAS contaminants. For example, the NSW EPA has



proposed in its plastics plan (*NSW Plastics: The Way Forward*) specific action items to ensure that public litter data is attributed to the specific brands responsible for creating that litter, and to publish 'green' and 'red' lists of permitted chemicals for use in food packaging by the end of 2027. This transparency and liability are exactly what is required to shift the dial and start placing responsibility for the safety and suitability of resources on the producers that make the products entering our circular economy in the first place.

Packaging and single use plastics would be ideal to prioritise rolling out mandatory design requirements and an extended harmonized EPR scheme under a Waste Directives framework, remembering that the goal must be to move to avoidance or reuse of the materials in these streams, rather than requiring infrastructure at scale to adapt to small-scale poorly designed items that should be designed out. Doing this and creating a genuine circular system for packaging- something that touches so many in the value chain - could be extremely useful in shifting the paradigm nationally towards circularity given its widespread use and acceptance.

3. Hurdles and barriers to a circular economy

By far the most significant barrier to creating a circular economy is the lack of systems thinking within Australia about natural resources and valuing them to keep circulating as long as possible at their highest and best use for as long as possible, this includes establishing systems for re-use and repair and designing to use recycled materials.

In WMRR's view, to successfully transition to a successful and safe circular economy there must be a systems approach inclusive of:

- a stronger focus on design, to eliminate the creation of hard-to recycle and/or single-use materials;
- a precautionary approach to harmful chemicals. It will not be possible to reach resource recovery targets (in any area) with the ongoing inclusion of chemicals such as PFAS in products sold in Australia. They must be designed out as a matter of priority;
- support and investment in re-use systems; and
- an engagement strategy delivered to empower community and business to avoid purchasing products that are not designed for circularity.

These elements are something that an overarching Directives framework should address. The lack of a current cohesive framework is exemplified by the current following hurdles.

a. Lack of harmonised regulation and policy across borders and within the WARR sector

Perhaps the greatest challenge to the WARR industry specifically is the lack of commonality in regulation and policy development across borders - even though we are one (1) large common market in Australia. There must be common, minimum standards that all jurisdictions agree to follow to enable certainty for all industries in the supply chain. Regulations and initiatives need to be clear and certain, with any changes undertaken being based on transparency and industry consultation. This is especially the case for the government's approach to addressing emerging contaminants and legacy materials, which must be considered in the context of a circular economy and their impact on the recovery of materials for reuse and recycling. There is also a high degree of uncertainty across all levels of government and industry stakeholders as to the definition of 'waste', and pathways that may create a resource from 'waste'. Without this clarity and consistency across the Australian economy, policy and regulation will be inconsistent and piecemeal, and lack the transparency needed for the industry to have security of investment and certainty of operating conditions.

b. Not measuring or designing for circularity – thereby undermining investment in CE

Australia has to date, taken a piece-meal approach to addressing different waste products within existing supply chains by using 'diverting from landfill' as the key metric for success. Stockpiling of materials due to lack of market demand for secondary materials, the contamination of resource streams through misleading labelling on products (enabled by voluntary schemes), poor product design, the use of emerging contaminants in products,

and the lack of suitable infrastructure to remanufacture materials into suitable products are key initial barriers to transitioning existing linear supply chains into circular ones. Couple the above elements with the lack of certainty of policy and regulatory settings for the WARR sector (i.e.: conservative testing thresholds for end-products from 'waste' streams in some jurisdictions but no others, a lack of 'end of waste' codes for recoverable safe materials to be effectively re-used, lack of funding and regulatory support available for emerging technologies, and lack of alignment of waste levies between jurisdictions - to name a few) and it is easy to appreciate that both the WARR and manufacturing sectors struggle to secure private sector investment in circular solutions.

c. Misalignment with commercial objectives with circular economy goals

WMRR notes the numerous obvious existing barriers to achieving circularity from a commercial perspective which can broadly be identified as:

- Financial – noting that circularity measures can be more expensive to implement than simply depositing in landfill given the capital and operational costs involved. For commercial outcomes, there is often no imperative to apply circular principles to product choices. To combat this, costs such as eco-modulated fees under mandatory EPR schemes must be implemented, and demand must be built for secondary materials so that there are cost benefits to circularity for businesses.
- Legal – where there is no requirement for circularity, the additional resource and cost burden is enough to deter participation. If Australia is serious about establishing a circular economy, steps must be taken to exclude those producers that cannot contribute. Arguably, financial penalties for non-compliance alone are not enough – particularly for larger companies.
- Market demand – it does not follow to design for circularity where there is no market demand (or incentive) to purchase secondary products.
- Quality and safety concerns – there can be a perceived risk to utilising secondary materials, particularly for products derived from products considered 'waste' which have traditionally been designed to 'use and throw'. Ensuring that harmful contaminants are designed out of product supply chains is key.
- Consumer behaviours – social norms often dictate that 'new' products are better quality, more desirable and perform better. To combat this, government should lead the way in through introducing product design standards for circularity and stipulate recycled content minimum thresholds for products, developing programs for education/awareness of valuable secondary materials and implementing mandatory procurement of locally sourced secondary materials to role model the suitability and quality of circular products.

WMRR reiterates that an overarching framework can provide commercial pressure on product producers through the use of mandated design requirements, an extended EPR scheme to address these issues and economic incentives to 'do better'.

d. Lack of remanufacturing capacity within local markets'

There is a need for demand to be created for Australian materials and products made from recycled Australian materials to address shortfalls in infrastructure. At present, it can often be cheaper to import recycled materials or use a virgin /'new' product. This must change. The strongest way that this could occur is genuine Government procurement of Australian recycled materials given both the national footprint of government and the purchasing power it has.

e. Lack of robust data about the existing materials in our supply chains

As noted in Section 1, Australia does not adequately track or monitor our valuable resources and measure them for their intrinsic economic value. There are no quality, safety or design requirements set by the Commonwealth restricting, controlling and monitoring what enters and re-enters our economy, making it difficult for those



opportunities for increased recovery of materials to be measured and identified. Under a Directives framework, mandatory initiatives would necessitate the capture of this valuable economic data.

4. Government's role in a circular economy

Government has the most important role of driving the circular economy by ensuring that national policy and regulatory settings are aligned to circular thinking and behaviour about Australia's consumption and resources. Australian is one common market – and most products within our supply chains are manufactured at scale. To this end, it is not enough that products are theoretically recoverable as a secondary material, there must be demand for that material. Any less than an end-to-end system approach to materials and resources, overseen and mandated by government, will fail to create the desired circular economy. This should include:

- Implementing mandatory harmonised Extended Producer Responsibility (EPR) legislation for materials from products in Australian supply chains
- Implementing design standards for circularity for both domestic product manufacturing and imported materials
- Committing to developing secondary material markets

Incentives and initiatives must be put in place by state and federal governments to even out the playing field between the use of secondary and virgin materials within supply chains. This should encompass behavioral change efforts to promote consumer awareness of necessary changes to existing waste management practices, and to encourage preference for products with increased 'circularity value' that cannot be 'thrown away'.

This should also include regulated economic drivers. This may include local recyclable content thresholds to be mandated within government procurement, incentives to be implemented for the use of increased levels of recycled content and the exclusion of additional requirements (such as testing) for secondary materials that are not required for their 'new' counterparts. Furthermore, when assessing materials for government procurement, there should be formal policy requirements to increase the value weighting given to protecting and restoring natural ecosystems, to the sustainable use of resources and to improving human health (ie: as per the EU Green Deal).

There is a huge opportunity for Australia to implement the systems thinking we need to transition to a circular economy, and to do so in the near term with the implementation of an overarching Circular Economy framework. At its core it will necessitate Commonwealth action to ensure that producers of products are made legally and financially responsible for continuing circularity of the products they put on the Australian market to enable *less to be used for longer*. Australia needs to be bold and place adequate controls on what enters our economy in the first place if we want to keep those materials safely circulating within our supply chains (and enabling the preservation of virgin resources and mitigating carbon impacts), whilst increasing our capacity for the remanufacturing of quality Australian products.

WMRR welcomes opportunities for further engagement. Please contact the undersigned if you wish to further discuss WMRR's submission.

Yours sincerely

Gayle Sloan

Chief Executive Officer

Waste Management and Resource Recovery Association of Australia