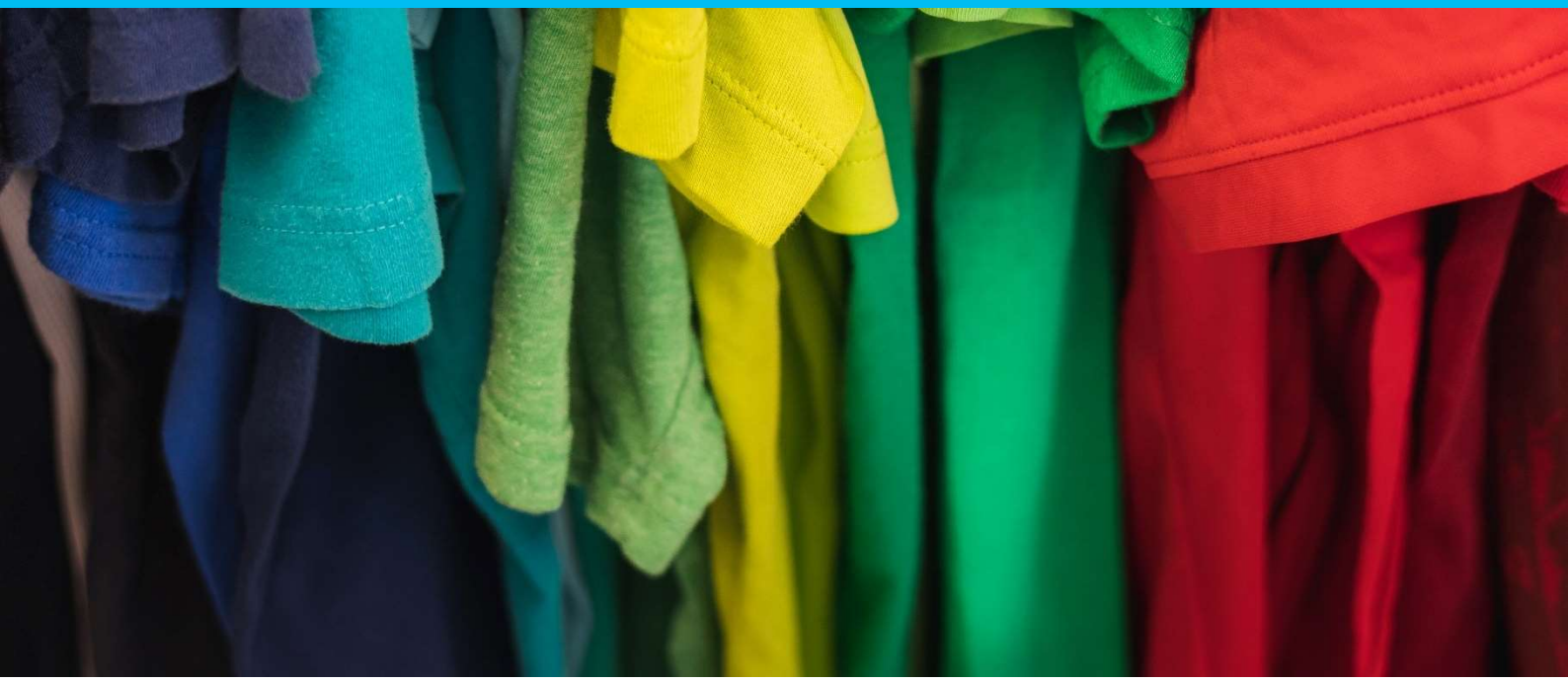
# Gap Analysis of Government Policies through a Waste Hierarchy & Circular Economy Lens

## A Submission to Charitable Recycling Australia

**16 November 2022**



MRA Consulting Group

## Gap Analysis of Government Policies through a Waste Hierarchy & Circular Economy Lens

A Submission to Charitable Recycling Australia
Job No. 1012906

### Prepared by

MRA Consulting Group (MRA)
Registered as Mike Ritchie & Associates Pty Ltd
ABN 13 143 273 812

Suite 408 Henry Lawson Building
19 Roseby Street
Drummoyne NSW 2047

+61 2 8541 6169
info@mraconsulting.com.au
mraconsulting.com.au

### Version History

| Ver | Date | Status | Author | Approver | Signature |
|---|---|---|---|---|---|
| 0.1 | 28/09/2022 | Draft | Masa Vahldieck | Katherine Dodd | - |
| 0.2 | 13/10/2022 | Draft | Masa Vahldieck | Katherine Dodd | - |
| 1.0 | 10/11/2022 | Final | Masa Vahldieck | Katherine Dodd |  |

### Disclaimer

This report has been prepared by MRA Consulting Group for Charitable Recycling Australia. MRA (ABN 13 143 273 812) does not accept responsibility for any use of, or reliance on, the contents of this document by any third party.

In the spirit of reconciliation MRA Consulting Group acknowledges the Traditional Custodians of country throughout Australia and their connection to land, sea and community. We pay our respects to Aboriginal and Torres Strait Islander peoples and to Elders past, present and emerging.

# Table of Contents

# List of Figures



# List of Tables

# Executive Summary

Internationally, waste and resource recovery landscapes are evolving to incorporate circular economy principles. Traditionally, the waste hierarchy has been widely accepted as the framework to, in theory, determine prioritisation of diversion of waste from landfill, highest value products, programs and allocate funding accordingly. However, policies and programs currently focus on targets and funding allocation for low value interventions i.e. recycling, waste and resource recovery and waste to energy (Refer to Figure 1).

Although policies across Australia commit to a circular economy transition, few demonstrate targets aligned with avoidance, reuse, repair, resell but rather provide investment into recycling technology innovations that address end-of-life management rather than prolonging the use of products in their intended form. This demonstrates a lack of commitment to upstream interventions, which if successful, would remove products from the end-of-life pathway.

Based on a review of Waste and Resource Recovery strategies across Australia, the use of the terminology 'reuse' was used only 8% of the time when compared to 'recover' and 'recycle', which were used 41% and 51% of the time, respectively. Although the trend is moving up the waste hierarchy with 'recycling' mentioned 41% of the time, the mentions of upstream interventions is still nominal. Unless stated in targets for reuse most reuse terminology is used to describe the circular economy or waste hierarchy.

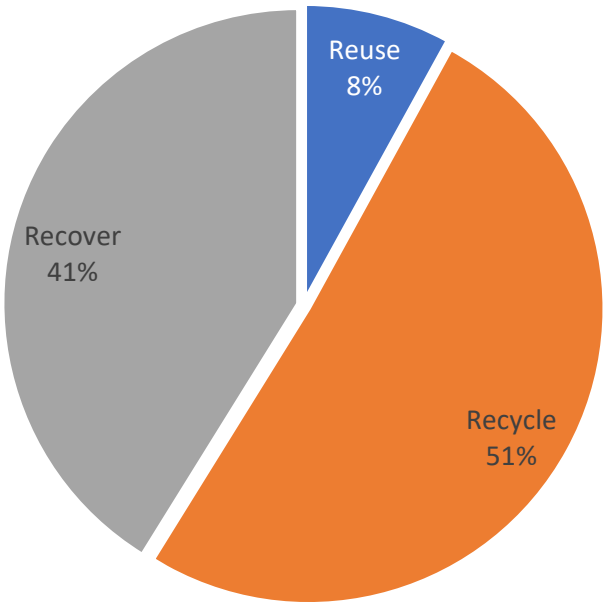



**Figure 1: Overall mentions of reuse, recover and recycle across Federal and State waste and resource recovery policies**

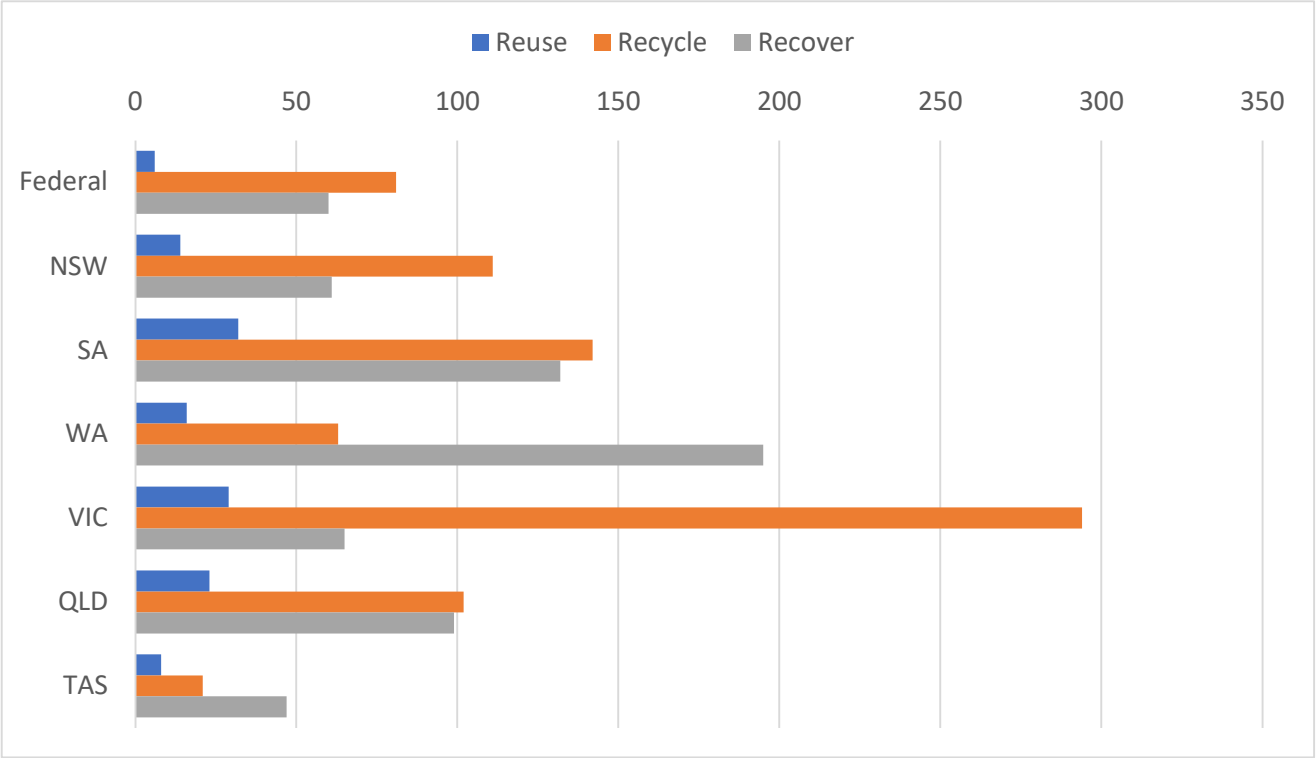



**Figure 2: Use of Reuse, Recycle and Recover terminology by Federal and State policies**

Embodied carbon refers to the emissions emitted through all stages of a products production. This includes mining the virgin materials, manufacturing, distributing, on selling to consumers and end-of-life. The embodied carbon of a consumer product is halted if its lifecycle is extended through reuse, resell, refurbishing, repairing. Once a product enters the recycling stage, additional emissions are created to decommission, recycle and remanufacture the feedstock into new products.

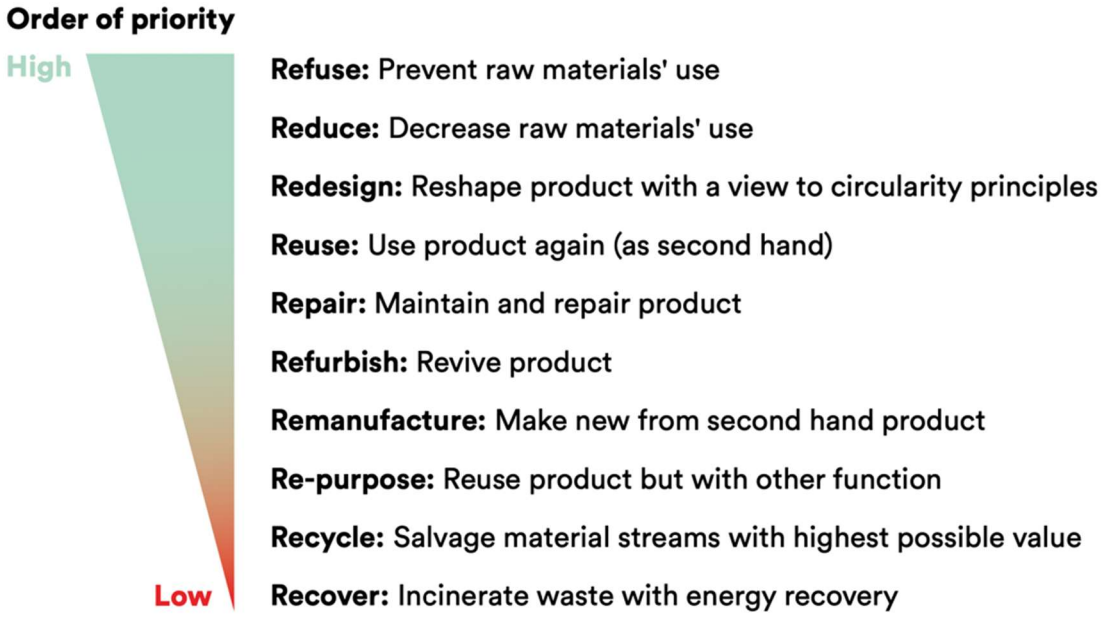



**Figure 3: The 10 R's (Building a Circular Economy, 2022)**

The Clean Energy Finance Corporation (CEFC) and Arup suggest that up to a 60% reduction in emissions from landfill by substantially reducing, reusing, resell and recycling materials before they enter the waste stream.[1]

The charitable recycling sector is widely established in Australia and driving the reuse sector. In 2020, charitable recyclers diverted over 1 million tonnes of waste from landfill, equating to 39kg per person per year.[2] The sector generated almost $1Billion a year for the economy, created over 5,000 jobs and 30,000 volunteer opportunities. Thereby playing a major role in the circular economy aligned with upstream interventions[3].

81% of Australians already use resell platforms and have the opportunity to make on average $6,900 per year from reselling their unwanted items[4]. In addition to the already burgeoning resell sector.

Australian policies supporting the already growing reuse and repair sector would reduce recycling feedstock material, divert material from landfill and encourage positive consumer behaviours.

Australian policy focuses on a traditional waste and resource recovery setting and the low value interventions, which traditionally focus on landfill diversion. To encourage a circular economy more emphasis needs to be put on higher value and upstream interventions.

[1] https://www.arup.com/news-and-events/arup-cefc-report-on-opportunities-for-australian-bioenergy-and-waste-investment

[2] https://mraconsulting.com.au/wp-content/uploads/2021/06/CharitableRecycling_2021_ImpactSnapshot_Digital_Final.pdf

[3] https://mraconsulting.com.au/wp-content/uploads/2021/06/Charitable-Recycling-Australia-Recycled-Clothing-Impact-Assessment-240521.pdf

[4] Gumtree, eBay, Facebook Marketplace, 'Gumtree 2022 Trading in the Circular Economy Report', 2022

# 1. Introduction

Reuse, despite being high on the Waste Hierarchy, has not attracted adequate funding and policy support. Although some policy targets could be interpreted to encompass reuse, few clearly identify and target reuse and repair. This report intends to provide the foundation for a long-term project to improve the Federal and State Government support toward prioritising reuse. This report will provide a horizon scan of state and federal policies that address reuse directly and indirectly and compare existing targets to the waste hierarchy and circular economy principles. The evidence will inform a future business case that both measures reuse, and highlight the economic, social, and environmental impact.

The business case and its accompanying advocacy strategy will aim to encourage all levels of government to integrate and fund reuse within their policies and reduce charitable costs to improve circular economy outcomes for the members of Charitable Recycling Australia.

## 1.1 Purpose of the Study

This report provides a summary of existing selected State and Federal Government waste policies that relate to reuse and identify the omission of reuse in waste, resource recovery and circular economy priorities that attempt to align with the Waste Hierarchy.

The objective of this summary is to identify gaps in best and highest use, which is often coupled with lack of funding or resources to address Reduce, Reuse and Repair in line with international consensus around the waste hierarchy and circular economy principles. The purpose of this summary is to identify the policy gaps and opportunities to address higher interventions before end-of-life recycling.

The desktop research identifies current policies that align, incorporate, or lend themselves to encompass reuse within Waste Hierarchy and the Circular Economy Principles by:

1. Reviewing the waste reduction, carbon reduction, Net-zero, resource recovery targets and rates for the Federal Government, and the State Governments of NSW, QLD, VIC, SA, TAS and WA (Refer to Section 5).
2. Reviewing the existing waste policies of the Federal Government, State Governments of NSW, QLD, VIC, SA, TAS and WA against the Waste Hierarchy and Circular Economy principles (Refer to Table 1).
3. Identifying non-adherence to the highest and best use interventions as articulated by the authoritative Waste Hierarchy.
4. Identifying misalignment with the principles and/or fundamental tenets of the Circular Economy.

## 1.2 Defining Principles

The reuse policy analysis will be guided by internationally respected and accepted circular economy principles and the waste hierarchy.

The Circular Economy is based on three principles, driven by design:

- Eliminate waste and pollution
- Circulate products and materials at their highest value – keep products and materials in use
    - Keep products in use through repair and reuse for as long as possible or when this is no longer possible as components or raw materials
- Regenerate natural systems

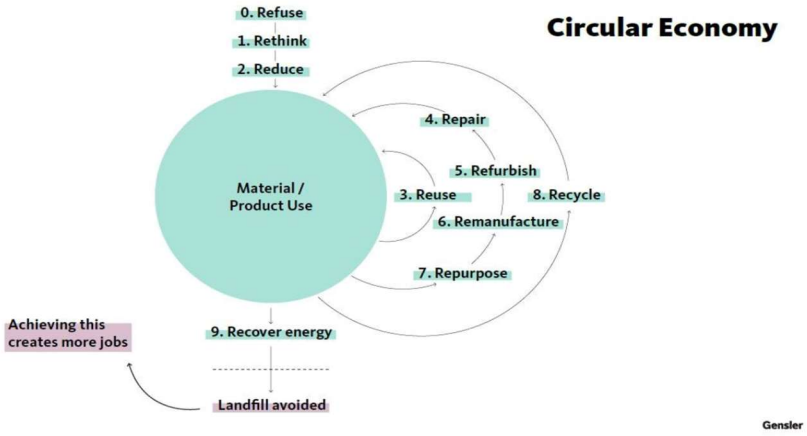



**Figure 4: Circular economy principles (Building a Circular Economy, 2022)**

The Waste Hierarchy defines highest use and identifies where efforts can be placed higher up the waste hierarchy before products become landfilled:

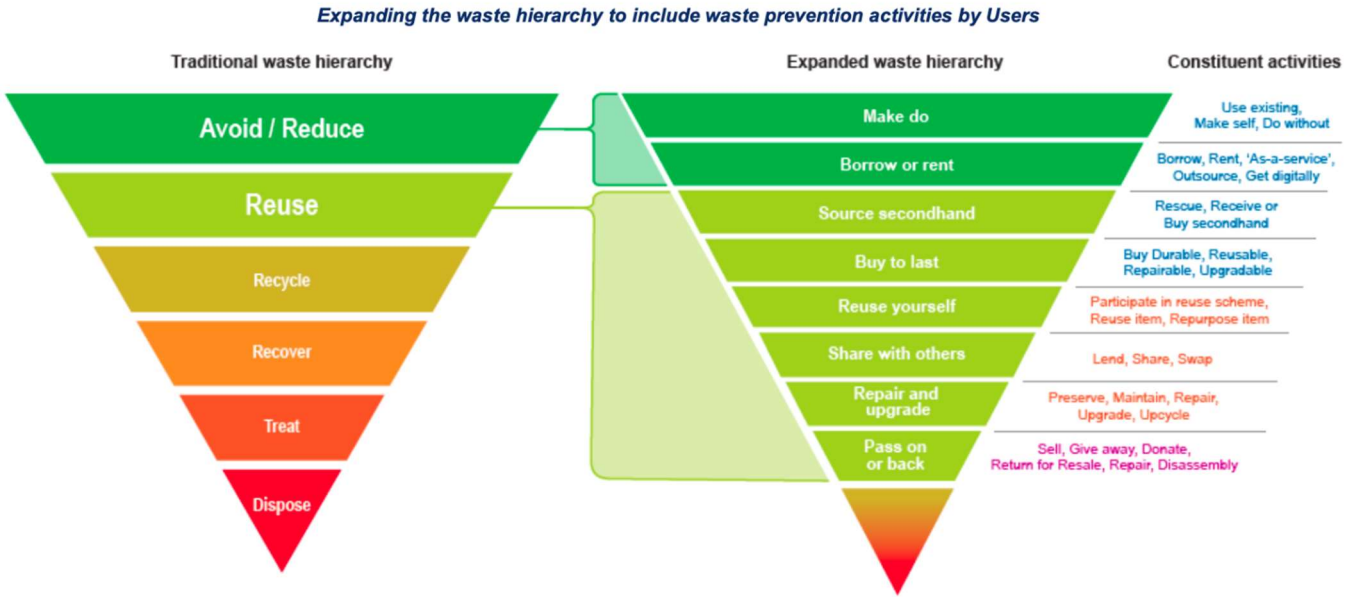



**Figure 5: Expanding the waste hierarchy to include waste prevention activities by users (source: Behaviour Works)**

For the purposes of this analysis 'reuse' covers the charity retail sector, informal product exchanges between acquaintances, to the semiformal structure of car-boot sales and internet exchanges such as eBay, Gumtree, Facebook Marketplace.

Reuse of organics is out of scope for this project.

For the purposes of this analysis, a broad definition is employed that covers most of the activities branded as reuse. It is a non-destructive process that finds a second or further use for end-of-first-life solid materials (products or components) without a change of state, excluding melting for metals, plastics and glasses, and pulping for paper. The further use of a product may be considered as product life extension[5].

[5] Julian M Allwood, 'Options for Achieving a 50% Cut in Industrial Carbon Emissions by 2050', 2010

# 2 Background

## 2.1 Global Context

Reuse is one of the Rs of "reduce, reuse, recycle, repurpose, repair"—promoted by the U.S. Environmental Protection Agency (US EPA 2014) and the UK Waste and Resources Action Programme (WRAP 2014) and expressed as part of China's Circular Economy (Yuan et al. 2006). They are also fundamentals of the circular economy principles and the waste hierarchy. As policy makers look to develop and fund recycling capacity, it is essential that the environmental impacts of reuse be better understood, prioritised and funded.

Through a circular economy and waste hierarchy lens, reuse and repair must be prioritised to keep products in use for longer. By reusing and repairing products the emissions, labour and inputs used to produce these are halted and minimised by keeping them from reaching the end-of-life stage. However, currently funding and policies for repair and reuse do not reflect these as priorities but rather emphasis is put on end-of-life solutions through recycling innovation, waste recovery and energy from waste. Many products' use-phase energy requirements are decreasing, therefore the importance of the embodied carbon impacts from initial production is growing and the prominence of reuse as an abatement strategy is likely to increase in the future.

Many countries recognise the importance of reuse to meet their waste and resource recovery goals. However, most governments policies that enable reuse are still in their infancy. Countries acknowledge the importance of implementing programs to encourage reuse but have not made many targets on repair and reuse. Only a minority of countries have been able to adopt policies regarding reuse.

France passed the 'AntiWaste' law in 2020. The law is meant to assist France's transition to a more circular economy through phasing out single-use plastic packaging by 2040. The law is organised so that new goals for reduction, recycling, and reuse are set every five years with the next goal for 2025 to be reduce France's single-use packaging by 20% with 10% of the reduction coming from reuse. This innovative law is important for two reasons (1) its inclusion of a reuse goal and (2) it being a law which was created by a country who has the status of a G7 country.

The right to repair is another piece of proposed legislation that is gaining traction internationally. A survey conducted by Eurobarometer supports these claims with 77% of EU consumers who responded stating that they would rather repair their goods than buy new ones. Unfortunately, these consumers are eventually forced into throwing these goods away and replacing them due to lack of servicing capabilities. In some of the worst cases these goods are manufactured so that they are nearly impossible to take apart and repair.

Laws that support the right to repair are beginning to gain favour in countries like the US who has multiply states proposing legislation forcing companies into designing goods in a way that are easier to service. These proposed state laws have already been beneficial as they have intimidated companies like Apple into setting up their own initiatives like releasing repair kits which greatly lower the difficulty of repairing their devices.[6]

[6] Davos Agenda 2022, 'How national policies can accelerate the transition to a reuse economy', 2022

## 2.2 Australian Context

Although the federal and state government have aligned with circular economy principles and follow the waste hierarchy, investment still focuses on end-of-life solutions, i.e. waste and resource recovery as well as recycling. The focus on the end-of-life is appropriate when higher level circular economy activities have not been successful, i.e. refuse, reuse, repair.

It is also noted that some states have reduced behaviour change and education targets aimed at encouraging responsible consumption and waste minimisation upstream. For example, under Waste Less, Recycle More, NSW developed and implemented an education and behaviour change strategy from 2016 - 2021, in the new Waste and Sustainable Materials strategy there is no prioritisation of education (it is mentioned four times in the strategy) or behaviour change (mentioned once). If done well, behaviour change will reduce waste volumes which will alter feedstock for earmarked recycling innovation investment.

To ensure the embodied carbon from the production of goods is minimised, and additional emissions are avoided, reuse and repair must be prioritised. Reuse and repair are generally low emissions actions in comparison to recycling and remanufacturing processes. MRA recognises the need for diverting products from landfill across the lifecycle and therefore appreciates the importance of recycling as part of the waste hierarchy.

The Federal Government has committed to the following targets:

- Working to meet or beat 80% recovery rate of waste by 2030.
- Regulating the export of glass, plastic, tyres, paper and cardboard.
- Investing more than A$1 billion to turbocharge waste and recycling industries.
- Supporting industry-led recycling schemes through the A$26 million National Product Stewardship Investment Fund.
- Halving food waste by 2030.

Australia is committed to creating enough onshore capacity to reprocess waste plastic, paper, glass, and tyres, which were previously exported, keeping these value-added materials in the Australian economy. The Recycling and Clean Energy National Manufacturing Priority road map identifies growth opportunities in:

- Recyclable products and packaging.
- Cleaner feedstocks for remanufacturing (and enabling tech).
- Products from recycled feedstocks (such as plastic, organic waste or e-waste).
- Recycling clean energy components (including PV panels, wind turbines and batteries).
- The charity pathway is a widely used pathway for consumers to donate unwanted items, divert these from landfill and extend the products lifespan. The charitable recycling sector currently makes $961 million in revenue per year.

Note the lack of commitments for reuse and repair throughout these targets.

The charitable recycling sector is widely established in Australia and is actively targeting the reuse sector. In 2020, the sector diverted over 1 million tonnes of waste from landfill, equating to 39kg per person per year.[7] The sector generated almost $1Billion a year for the economy, created

[7] https://mraconsulting.com.au/wp-content/uploads/2021/06/CharitableRecycling_2021_ImpactSnapshot_Digital_Final.pdf

over 5,00 jobs and 30,000 volunteer opportunities. Thereby playing a major role in the circular economy aligned with upstream interventions.

Taking clothing as an example, the charitable recycling sector diverts 310,316 tonnes of clothing from landfill a year thereby reducing emissions, minimises embodied carbon, water and energy use by keeping products in use for longer.

In diverting 310,316 tonnes of clothing from landfill the sector:

- reduced carbon emissions across the supply chain by 66% - 466,000 tonnes $CO_2$-e/yr versus 1,354,000 tonnes $CO_2$-e/yr for total clothing sent to landfill
- reduced global water consumption by 57% - 65, 510 ML/yr versus 153,937 ML/yr
- reduced global energy use by 59% - 1,281,029 MWh/yr versus 3,167,918 MWh/yr
- generated more value to the Australian economy - $1,700 revenue per tonne of clothing recovered through a Charitable Reuse and Recycling Enterprise, versus $120 per tonne if disposed in a landfill
- provided 46% more jobs – 5,300 total in the sector. 1,200 of these are individuals who face barriers to employment [8]

In Australia, the sharing/resale platform Gumtree estimates that $6,964 could be made per person per year, from unwanted/preloved items – this is increasing 31% year-on-year.

With additional support through government programs, education and incentives, the reuse, repair and resell, industry could reshape the volumes of feedstock for downstream innovation, remanufacturing and recycling.[9]

[8] https://mraconsulting.com.au/wp-content/uploads/2021/06/Charitable-Recycling-Australia-Recycled-Clothing-Impact-Assessment-240521.pdf

[9] Gumtree, eBay, Facebook Marketplace, 'Gumtree 2022 Trading in the Circular Economy Report', 2022

# 3 Australia's Circular Transition

The following section outlines:

- Discrepancy in terminology/language as it relates to defining waste
- Review of Federal and State waste and resource recovery policies to identify:
    - Identification of Federal and State targets corresponding to Circular Economy principles and waste hierarchy actions
    - Identification of policies commitment to high value interventions by reviewing the reference to 'reuse' in comparison to 'recover' and 'recycle'
    - Count of waste hierarchy actions mentioned in state policies
- Identification of Australia's current transition stage.

## 3.1 Discrepancy in Terminology/Language

The definition of waste across jurisdictions varies slightly. However, the commonality across all is that items aimed for reuse, repair, resell, recycling that don't find that intended pathway can also be considered waste. Based on widespread commitment to circular economy principles and the waste hierarchy, products that are deemed to have higher value opportunities must be excluded from waste terminology and be protected and supported to find appropriate and higher value end, life extending opportunities. Waste must be used to describe products or substances for which there are no reuse, repurpose, resell, refurbish, upcycling, recycling or recovery option.

| Jurisdiction | Waste definition |
|---|---|
| FED | [1]A substance or objects that: (a) is proposed to be disposed of; or (b) is disposed of; or (c) is required by a law of the Commonwealth, a State or a Territory to be disposed of<br>[2] waste, in relation to a product, means waste associated with the product after it is disposed of |
| NSW | Any substance (whether solid, liquid or gaseous) that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment, or any discarded, rejected, unwanted, surplus or abandoned substance, or any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, processing, recovery or purification by a separate operation from that which produced the substance, or any processed, recycled, re-used or recovered substance produced wholly or partly from waste that is applied to land, or used as fuel, but only in the circumstances prescribed by the regulations, or any substance prescribed by the regulations to be waste.<br>A substance is not precluded from being waste for the purposes of this Act merely because it is or may be processed, recycled, re- used or recovered. |
| VIC | Any matter whether solid, liquid, gaseous or radio- active which is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment;<br>Any discarded, rejected, unwanted, surplus or abandoned matter;<br>Any otherwise discarded, rejected, abandoned, unwanted or surplus matter intended for—<br>• Recycling, reprocessing, recovery or purification by a separate operation from that which produced the matter; or sale; and any matter prescribed to be waste. |

| Jurisdiction | Waste definition |
|---|---|
| QLD | Waste is defined in section 13 of the *Environmental Protection Act 1994* (the EP Act) as any thing, other than an end of waste resource, that is: (a) left over, or an unwanted by-product, from an industrial, commercial, domestic or other activity; or (b) surplus to the industrial, commercial, domestic or other activity generating the waste.<br>Furthermore, waste can be a gas, liquid, solid or energy, or a combination of any of them. A thing can be a waste whether or not it is of value.<br>A waste can be approved as a resource if the Department of Environment and Science (DES) considers that it meets specified quality criteria for specified use prior to it going to the end user. If a waste is approved as an end of waste resource under the *Waste Reduction and Recycling Act 2011* (the WRR Act), it is no longer considered a waste for the purposes of the EP Act as described in section 13 unless the resource ceases to be used in accordance with the requirements of the end of waste (EOW) approval or a code. |
| TAS | (a) discarded, rejected,<br>unwanted, surplus or abandoned matter, whether of any value or not; or<br>(b) discarded, rejected, unwanted, surplus or abandoned matter, whether of any value or not, intended–<br>(i) for recycling, reprocessing, recovery, reuse or purification by a separate operation from that which produced the matter; or<br>(ii) for sale. |
| WA | Matter, whether useful or useless, which is discharged into the environment, or matter which is prescribed by the regulations to be waste. |
| SA | a) any discarded, rejected, abandoned, unwanted or surplus matter, whether or not intended for sale or for recycling, reprocessing, recovery or purification by a separate operation from that which produced the matter; or<br>b) anything declared by regulation (after consultation under section 5A) or by an environment protection policy to be waste, whether of value or not. |

[10]

## 3.2 Identification of Federal and State targets corresponding to Circular Economy principles and waste hierarchy actions

The below table outlines committed, funded and measurable waste and resource recovery targets across Australia. These have been mapped against the waste hierarchy and circular economy principles. Note the most ambitious targets related to the ‘disposal ‘ stage.

[10] https://www.dcceew.gov.au/environment/protection/waste/publications/australian-waste-definitions-defining-waste-related-terms

## Table 1: State targets corresponding to Circular Economy principles and waste hierarchy actions

| CE Principle | Waste Hierarchy Action | Commonwealth | NSW | VIC | QLD | WA | SA | TAS |
|---|---|---|---|---|---|---|---|---|
| Design out waste and pollution | **Reduce / avoid** | Phase out problematic and unnecessary plastics by 2025 | -10% waste generated per person by 2030 | -15% total waste generation between 2020-2030 | -25% in household waste by 2050 | -10% waste by 2025 and -20% by 2030 | -5% per capita waste generation from 2020 baseline. | -5% waste generated per person by 2025 and -10% by 2030<br>-25% organic waste 2025 and -50 % by 2030 |
| Keep products and materials in use | **Reuse** | - | - | - | - | - | - | 100% reusable packaging by 2025. |
| | **Repair** | | | | | | | |
| | **Recycle** | - | Triple plastics recycling rate by 2030 | - | 75% across all waste types by 2050 | - | - | 100% recyclable packaging by 2025 |
| | **Recover** | 80% by 2030 | 80% by 2030 | - | 90% by 2050 | 70% by 2025 and 75% by 2030 | - | 40% by 2025 and 80% by 2030 |
| | **Dispose** | -50% food waste landfilled by 2030 | 75% organic diversion from landfill | -72% waste landfilled by 2025 and -80% by 2030<br>-20% organic landfilled by 2025 and -50% between 2020 and 2030 | - | <15% waste landfilled by 2030 | Zero avoidable landfill waste by 2030<br>75% MSW diversion by 2025<br>90% C&D diversion by 2025<br>95% C&D diversion by 2025 | - |
| Regenerate natural systems | | | | | | | | |

## 3.3 Waste and Resource Recovery Strategy Terminology

Based on a review of Waste and Resource Recovery strategies across Australia, the use of the terminology ‘reuse’ was used only 8% of the time when compared to ‘recover’ and ‘recycle’, which were used 41% and 51% of the time, respectively. Although the trend is moving up the waste hierarchy with ‘recycling’ mentioned 41% of the time, the mentions of upstream interventions is still nominal.

Below is a breakdown of Waste and Resource Recovery targets for all states. Note only committed and measurable targets have been included. These are compared to the Waste Hierarchy and Circular Economy principles, note lack of targets related to reuse.

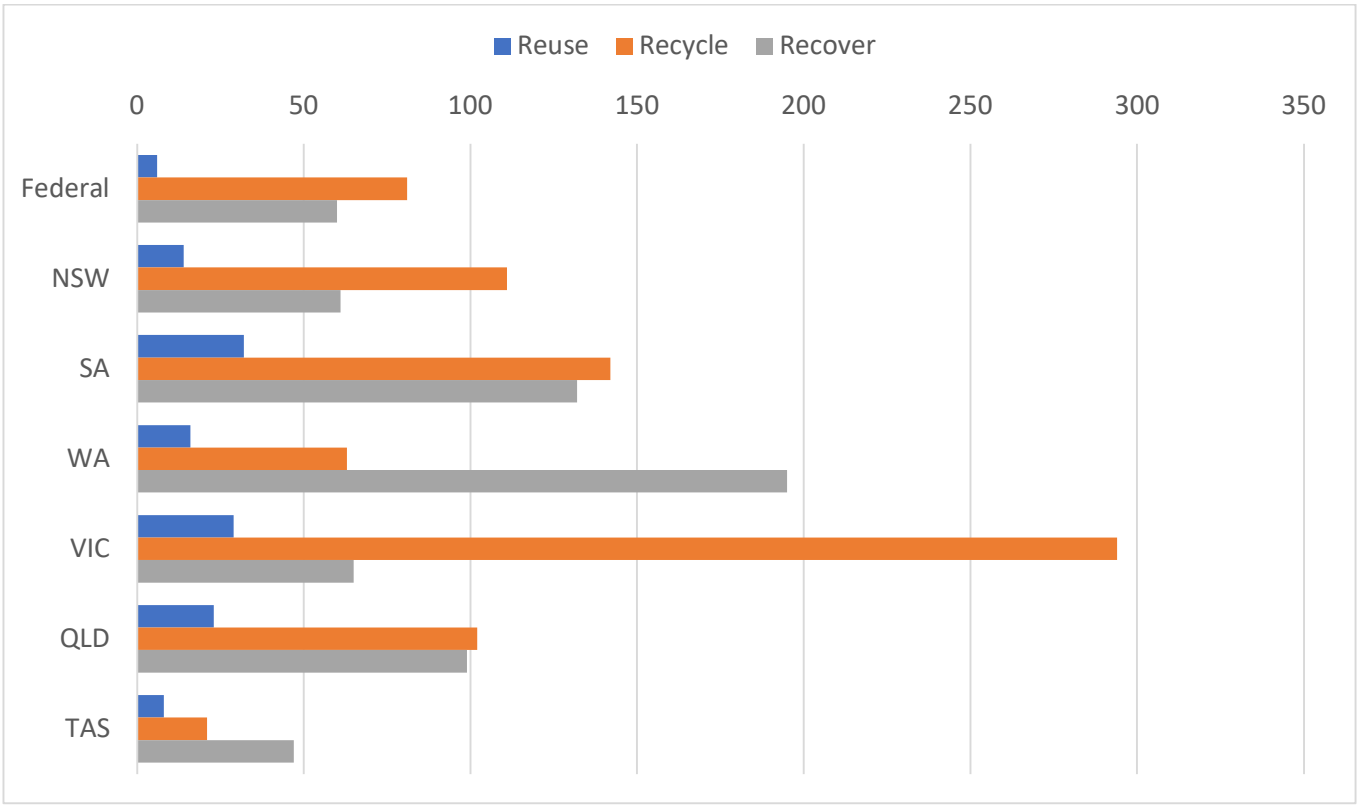



**Figure 6: State and Federal Waste and Resource Recovery mentions of Reuse, Recycle, and Recover**

State and Federal resource recovery strategies and policies acknowledge the waste hierarcy and circular economy principles. Based on the below tables, reuse and repair has been acknowledged yet not funded or prioritised in the same way recyclingy and recovery has.

Please note where ‘reuse’ has been mentioned with no targets, the terminology has been used to describe the circular economy.

Table 2: States and Federal Reuse Policies

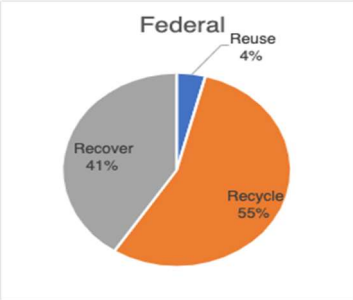
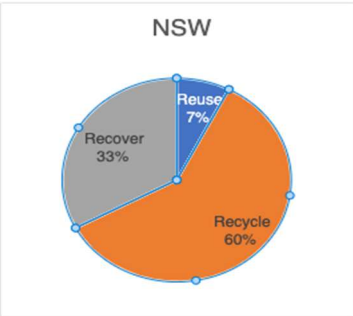
| | Federal | NSW | SA | WA | VIC | QLD | TAS |
|---|---|---|---|---|---|---|---|
| Reuse | 6 | 14 | 32 | 16 | 29 | 23 | 8 |
| Recycle | 81 | 111 | 142 | 63 | 294 | 102 | 21 |
| Recover | 60 | 61 | 132 | 195 | 65 | 99 | 47 |

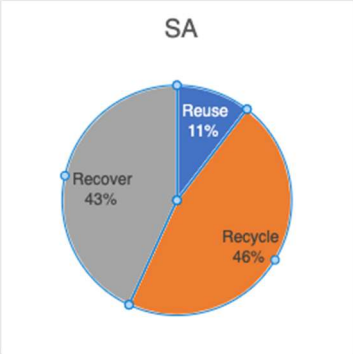
## 3.4 Count of waste hierarchy actions mentioned in state policies

Below is a breakdown of Waste and Resource Recovery targets for all states. Note only committed and measurable targets have been included. These are compared to the Waste Hierarchy and Circular Economy principles, note lack of targets related to reuse.

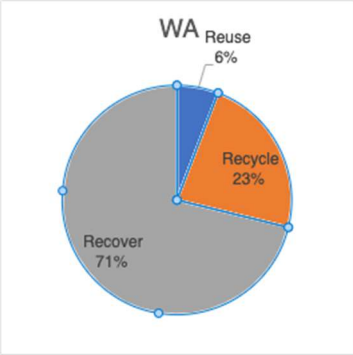
The Pie Charts identifies the aggregated mentions of ‘Reuse’, ‘Recycle’ and ‘Recover’ in key Waste and Resource Recovery Strategies. Targets directly relating to Reuse and Repair have been identified.

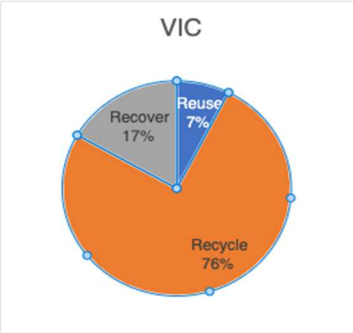
Table 3: Count of waste hierarchy actions mentioned in state policies

| State | Policy | Targets | Reuse and Repair Targets |
|---|---|---|---|
| FED |  <br>Figure 7: National Waste Action Plan | National Waste Action Plan<br>• Working to meet or beat 80% recovery rate by 2030<br>• Regulating the export of glass, plastic, tyres, paper and cardboard<br>• Investing more than A$1 billion to turbocharge Australia's waste and recycling industries<br>• Supporting industry-led recycling schemes through the A$26 million National Product Stewardship Investment Fund<br>• Halving food waste by 2030. | • (Section 2.7) Support community-based reuse and repair centres, enabling communities to avoid creating waste. |
| NSW |  <br>Figure 8: NSW Waste Action Plan | Waste and Sustainable Materials Strategy<br>• Phase out problematic and unnecessary plastics by 2025<br>• Plastic litter reduction target of 30% by 2025<br>• Reduce total waste generated by 10% per person by 2030<br>• 80% average recovery rate from all waste streams<br>• Introduce a new overall litter reduction target of 60% by 2030<br>• Eliminate problematic and single use plastics by 20205 | • New facilities for reuse and repair for E-waste by 2030.<br>• Circular Solar Grants<br>• Circular Plastics grants (focusing on the production of plastic materials using post-consumer plastic). |

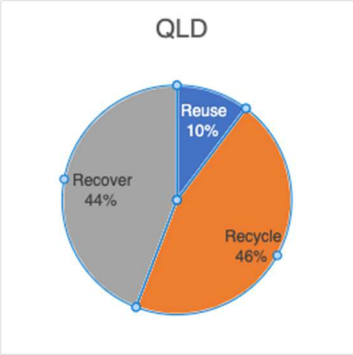
| State | Policy | Targets | Reuse and Repair Targets |
|---|---|---|---|
| | | • Triple the plastics recycling rate by 2030<br>• Halve the amount of organic waste sent to landfill by 2030<br>• Net-zero emissions from organics to landfill by 2030 | |
| SA |  <br>**Figure 9: South Australia's Waste Action Plan** | **South Australia's Waste Strategy 2020 – 2025**<br>• Zero avoidable waste to landfill by 2030<br>• Per capita waste generation 5% from a 2020 baseline<br>• Targets for metropolitan sector:<br>• 75% MSW diversion by 2025<br>• 90% C&D diversion by 2025<br>• 95% C&D diversion by 2025<br>• Target for non-metropolitan sector (all waste sectors):<br>• Regional Waste Management Plans are in place for all SA regional LGAs and/or regional city clusters and set regionally appropriate and progressive waste diversion targets by 2023 | • Support reuse and repair for further waste avoidance.<br>• Advocate for product labelling standards to enable better dismantling, reuse and recycling of products and information relating to recycled content.<br>• Materials (such as metals, paper and plastic) that are designed to circulate for as long as possible through repair, reuse and, as a last resort, recycling, without entering the environment for disposal.<br>• Develop government fit-out requirements to support increased resource recovery and material reuse and repurpose.<br>• Support establishing onsite salvage and save facilities, men's sheds, and maker spaces, to provide hubs for innovative reuse and redesign of materials.<br>• Encourage councils and charities to identify opportunities to direct suitable materials and goods donated or collected via transfer stations or hard rubbish collections, for reuse, redesign or recycling.<br>• Encourage improved processes during commercial 'strip-outs' and refurbishments to support increased resource recovery and material reuse. |

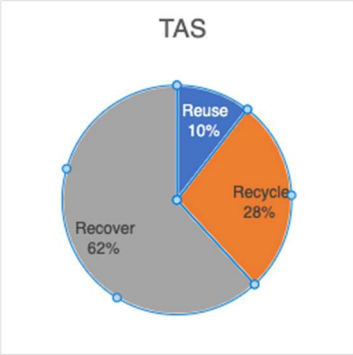
| State | Policy | Targets | Reuse and Repair Targets |
|---|---|---|---|
| | | | • Deconstruction as an alternative to demolition will also be an area of focus to enable materials to be kept intact and separated to maximise the amount that can be reused and recycled.<br>• Support adaptive reuse and retrofitting of existing building stock where possible.<br>• Develop operating standards to encourage better salvaging and reuse of building materials.<br>• Measure recycling activity, material flows and reuse activity.<br>• Product Stewardship: Increase beyond traditional approaches to managing disposal to those that encourage design for repair, reuse, disassembly, and eventually recycling.<br>• Problematic Wastes:<br>  ○ Encourage the recovery and treatment of oils, solvents and other valuable materials for reuse.<br>  ○ Encourage reuse of waste fill and intermediate level contaminated soils where appropriate as a priority and remediate low level and high-level contaminated soils for reuse.<br>  • Support research into durable products or components that encourage reuse and refurbishment.<br>This Waste Strategy advocates for continued work to ensure 'energy from waste' activity and targets align with the waste hierarchy and are framed within a long- term circular economy perspective that prioritises the prevention, reuse and recycling of waste materials. |

| State | Policy | Targets | Reuse and Repair Targets |
|---|---|---|---|
| WA |  <br>**Figure 10: Western Australia's Waste Action Plan** | Waste Avoidance and Resource Recovery Strategy 2030<br>• 10% reduction in waste generation per capita by 2025 and 20% by 2030<br>• Increase material recovery to 70% by 2025 and 75% by 2030<br>• Recovery energy only from residual waste from 2020<br>• No more than 15% of waste generated in Perth and Peel regions is landfilled by 2030<br>• All waste is managed and/or disposed to better practice facilities by 2030 | Avoid targets: Enabling Infrastructure:<br>Develop mechanisms and platforms that enable the community to adopt avoidance behaviours and explore reuse and low-waste alternatives<br><br>Focus Materials that will focus on reuse, reprocessing and recycling of:<br>• Concrete and demolition materials<br>• Organics<br>• Metals<br>• Paper and cardboard<br>• Plastics<br><br>Knowledge Target:<br>Investigate and improve reporting on material that is reused (as distinct from recycled) to better monitor the state's move towards becoming a circular economy. |

| State | Policy | Targets | Reuse and Repair Targets |
|---|---|---|---|
| VIC |  <br>**Figure 11: Victoria's Waste Action Plan** | Recycling Victoria, A New Economy<br>• Design to last, repair and recycle<br>• Use products to create more value<br>• Recycle more resources<br>• Reduce harm from waste and pollution<br>• Measure Australia's progress | Goal 1 – Design to last, repair and recycle<br>Generate less waste in businesses through innovation and design; use recycled materials in products and consider impacts across product life cycles; and support business to explore new circular economy business models.<br>Targets:<br>• 15% reduction in total waste generation per capita between 2020 and 2030.<br>• Divert 80% of waste from landfill by 2030, with an interim target of 72% by 2025.<br>• Cut the volume of organic material going to landfill by 50% between 2020 and 2030, with an interim target of 20% reduction by 2025.<br><br>On Goal 2 – Use products to create more value<br>Help people make smart purchasing decisions and extend the life of products and support the reuse economy; repair goods where possible.<br>Target:<br>• 15% reduction in total waste generation per capital between 2020 and 2030.<br>Key commitments:<br>2. Support Victorian communities and councils to reduce waste<br><br>2.3 Statewide education and behaviour change programs<br>deliver education and behaviour change programs to support a range of initiatives.<br>The Victorian Government will also consider what information, education and tools could help people to avoid and minimise waste, and reuse, repair and share products.<br><br>4. Support the reuse economy<br>4.1 Support for charities |

| State | Policy | Targets | Reuse and Repair Targets |
|---|---|---|---|
| | | | • Support the reuse, repair and share sectors through the Circular Economy Business Innovation Centre, business support grants and the Support Victorian Communities and Councils programs.<br>• Undertake research, in partnership with Monash University and the National Association of Charitable Recycling Organisations, to understand the contribution of the charitable sector to the reuse economy and expand product donation and reuse.<br>The Victorian Government is also committed to making it easier for Victorians to get their products safely repaired. It will work with the Australian Government to support national action on right-to-repair legislation and identify any Victorian legislative barrier to product repair.<br><br>On Goal 3 – Recycle more resources<br>Key commitment:<br>8. Increasing the use of recycled materials<br>8.1 Recycling markets acceleration package<br>This package could lead to the recovery and reuse of up to 2 million tonnes of materials every year that do not have strong domestic markets now.<br><br>Data<br>Investment in a circular economy must be underpinned by reliable and useful data. To support this, The Victorian Government will develop new Victorian Circular Economy metrics and expand the waste data system to cover the entire Victorian economy – from product and progress design to material use, reuse and recycling, and ultimate safe and effective disposal. |

| State | Policy | Targets | Reuse and Repair Targets |
|---|---|---|---|
| QLD |  <br>**Figure 12: Queensland's Waste Action Plan** | Waste Management and Resource Recovery Strategy<br>By 2050:<br>• 25% reduction in household waste<br>• 90% of waste is recovered and does not go to landfill<br>• 75% recycling rates across all waste types | **Vision**<br>Queensland will become a zero-waste society, where waste is avoided, reused and recycled to the greatest possible extent.<br>**On Strategic priority 2 – Transitioning to a circular economy for waste**<br>**Outcome:**<br>• Clear standards and guidelines for reuse, recycling and recovery<br>**Government Actions:**<br>• Assess the opportunities of the circular economy model for Queensland.<br>• Deliver community campaigns and education programs that support waste avoidance, re-purposing, reuse and recycling.<br>**Strategic priority 3 – Building economic opportunity:**<br>The Queensland Government will work with local government, business, industry and the recycling and resource recovery sector to expand reuse, recycling and recovery capability so that Queensland becomes a highly competitive centre for the remanufacture of waste materials into new products. Fostering sustained growth of the sector and establishing a progressive, stable policy and regulatory framework will provide business and industry with confidence to invest.<br>Outcome:<br>• Increased number of jobs in reuse, recycling and recovery |
| TAS | | Waste initiatives Progress Report<br>Draft Waste Action Plan<br>• Introduce a waste levy by 2021 to fund waste management and resource recovery activities; | On waste and resource recovery data<br>Use the National Partnership Agreement with the Australian Government, Tasmania has agreed to improve data and reporting systems around waste and resource recovery. This will help measure real baseline recycling and reuse rates and to track improvements over time.<br><br>On awareness and education |

| State | Policy | Targets | Reuse and Repair Targets |
|---|---|---|---|
| |  <br>**Figure 13: Tasmania's Waste Action Plan** | • Introduce a Container Refund Scheme in Tasmania by the end of 2022;<br>• Ensure 100% of packaging is reusable, recyclable or compostable by 2025;<br>• Reduce waste generated in Tasmania by 5% per person by 2025 and 10% by 2030;<br>• Achieve a 40% average recovery rate from all waste streams by 2025 and 80% by 2030;<br>• Have the lowest incidence of littering in the country by 2023;<br>• Work at the national level and with local government and businesses in Tasmania to phase out problematic and unnecessary plastics[1] by 2030; and<br>• Reduce the volume of organic waste sent to landfill by 25% by 2025 and 50% by 2030. | The Tasmanian Government acknowledges that reusing and recycling materials is a key part of the circular economy. There are various initiatives in place to enhance the clarity around what can be recycled and how items can be recovered. For example, Keep Australia Beautiful (Tasmania) for education and awareness campaigns, including the popular Tidy Towns awards, EPA Tasmania has also developed a collection of Teaching Manuals for Primary School ages children to support teachers with resources that focus on the Tasmanian context, as well as information workshops and engagement, and lastly a partnership between the State and Local Governments to help deliver campaigns, including a new agreement with Rethink Waste for delivering accurate and reliable information to the Tasmanian community. |

## 3.5 Transition Stages

According to Prof, Dr. Jacqueline Cramer, the author of 'Building a Circular Future', the transition to a circular economy is comprised of various stages:

| Predevelopment | Startup | Acceleration | Stabilisation |
|---|---|---|---|
| No national policies on circular economy | National policies on circular economy in development | National policies on circular economy in place | National policies on circular conomy as 'the new normal' |
| Percentage of recy-cling of household waste below 40% and no attention for redesign/reuse of products | Percentage of recy-cling of household waste between 40% and 56% and low levels of attention for redesign or re-use of products | Percentage of recy-cling of household waste above 56% and medium levels of attention for redesign/reuse of products | |

**Figure 14: Building a Circular Economy, 2022**

Based on the analysis of the policy landscape, States and the Commonwealth Government are currently in the 'Start up' Phase in their circular economy transition. Although they are aware of the importance of upstream interventions, through the waste hierarchy and Circular Economy, few States have shown commitment in their policy and funding commitments. Although there are grants rounds emerging named "Circular Solar" and "Circular Plastics", the focus of these is still on the use of recycled material, again focusing on downstream solutions rather than focus placed on reuse, repair, resell, reuse, refurbish.

MRA welcomes new grant programs emerging such as circular solar grants and circular plastics grants (NSW), Circular Economy Business Support grants (VIC) and encourages more jurisdictions to follow suit. Indentifying circular grants is out of scope for this project.

# 4 Conclusion and Next Steps

The desktop research focused on identifying current policies that align, incorporate, and encompass reuse within Waste Hierarchy and the Circular Economy principles.

Based on the methodology of identifying policy targets aligned to reuse and repair, Australia is in line with many other OECD countries in the sense that circularity is widely accepted, yet policy commitments and upstream commitments are still nascent.

The policy review has shown the emphasis on the end-of-life phase of products throughout all Australian state and federal policies. Although they demonstrate understanding and alignment with Circular Economy principles and the Waste hierarchy, the trend is focused on lower value interventions and investment through recycling innovation and investment. Although these are valid and integral parts of a products lifecycle, it is recommended that more funding and attention be given to higher value tasks to ensure that circularity.

The following next steps are recommended:

- Advocate for Governments to commit to upstream waste hierarchy and circular economy interventions and integrate these into policies, targets and funding pools.
- Identify embodied carbon benefits of upstream interventions (reuse, repair, resell, share, rent, refurbish).
- Identify and analyse grant programs that address reuse and repair.
- Advocate to governments investment in upstream interventions and provide business case and strategy paper.
- Identify consumer attitude towards upstream interventions.
- Develop consumer awareness campaigns to encourage more refuse, reuse, resell, repair.

# 5 Appendix: States WARR and Circular Economy Policies

## 5.1 New South Wales

**Overview:**

NSW has committed to inclusion of circular economy principles, but the investment and targets are focused on end-of-life rather than upstream interventions to avoid products reaching end-of-life. Although recycling poses an important service in diversion from landfill, investment in reuse, repair, resell can provide an opportunity to keep products in circulation for longer before they reach their end-of-life. Recycling materials is labour and emissions intensive. In accordance with the waste hierarchy recycling should only be considered when all upstream options have been exhausted.

### 5.1.1 Reuse

- The Waste Less, Recycle More initiative provides $60 million over five years to co-fund large-scale infrastructure and bring forward viable resource recovery projects, including funding for potential energy-from-waste projects.
- Through the new $13 million Circular Innovation Fund, NSW will support research into new technologies and uses for recycled material and provide opportunities to pilot them in government projects.
- To demonstrate NSW Government's commitment to supporting recycling markets, it will report annually on the use of recycled content in government procurement and its associated impact on emissions and waste reduction.

Additionally, NSW will demonstrate its leadership in adopting circular economy practices by:

- Identifying opportunities to embed circular design principles in new NSW Government buildings, infrastructure, and precincts.
- Requiring that all NSW Government-owned and leased buildings over 1,000 square metres obtain and publish a NABERS 28 Waste Rating by 2026, to drive waste avoidance and recycling in government operations.

### 5.1.2 Waste Reduction

- To demonstrate NSW Government's commitment to supporting recycling markets, the state government will report annually on the use of recycled content in government procurement and its associated impact on emissions and waste reduction.
- NSW Plastics Action Plan, which sets out how the state will phase out problematic plastics, tackle litter from plastic items like cigarette butts, and support innovation and research.
- NSW Waste and Sustainable Materials Strategy: A guide to future infrastructure needs, which sets out the investment pathway required for NSW to meet future demand for residual waste management and recycling.
- In 2020, the NSW Government released the Net-zero Plan Stage 1: 2020–2030, which sets out how NSW will reduce their emissions by 35% by 2030, reaching net-zero emissions by 2050. As part of the plan, the NSW Government committed to setting a target of net-zero emissions from organic waste to landfill by 2030.

The targets are to:

- Reduce total waste generated by 10% per person by 2030
- Have an 80% average recovery rate from all waste streams by 2030
- Significantly increase the use of recycled content by governments and industry
- Phase out problematic and unnecessary plastics by 2025
- Halve the amount of organic waste sent to landfill by 2030.

In addition to these targets:

- Introduce a new overall litter reduction target of 60% by 2030 and a plastic litter reduction target of 30% by 2025, as set out in the NSW plastics action plan
- Set a goal to triple the plastics recycling rate by 2030, as set out in the NSW plastics action plan
- Reaffirm the state government's commitment to the goal of net-zero emissions from organic waste by 2030, as laid out in the NSW net-zero plan stage 1: 2020–2030.
- Establish new indicators to help them track their progress on infrastructure investment and the cost of waste services
- Develop a new measure of the emissions performance of NSW's waste and materials management sector. This will help them to track their performance across the lifecycle of materials.

To help achieve NSW's targets of halving food waste to landfill and achieving net-zero emissions from organics in landfill by 2030, NSW will require the separate collection of:

- Food and garden organics from all NSW households by 2030
- Food waste from targeted businesses and other entities that generate the highest volumes of food waste, including large supermarkets and hospitality businesses, by 2025.

**Managing hazardous waste:** The NSW Government's Asbestos Strategy, released in 2019, sets out priority areas where they will continue to work to reduce mismanagement of asbestos waste. These include:

- Closing loopholes and increasing transparency in the transport of asbestos waste.
- Reducing cost of disposal.
- Minimising profitability and increasing penalties for unlawful and improper asbestos waste disposal (such as illegal dumping).

### 5.1.3 Carbon Reduction

- In 2020, NSW released their Net-zero Plan Stage 1: 2020–2030, which set out their strategy for reducing and offsetting carbon emissions, including from waste, to achieve net-zero emissions by 2050.
- Recent modelling suggests that Australia could reduce carbon emissions by 165 million tonnes per year by 2040. NSW will establish a new $10 million Circular Materials Fund that will provide a financial incentive for producers to design out or replace carbon emissions-intensive virgin plastic with lower carbon-intensity recycled materials. This will help improve materials efficiency, increase use of recycled content and deliver a measurable carbon dividend for NSW.
- Building on their net-zero commitments to reduce government carbon emissions, NSW will require state government departments to preference products that contain recycled content, including building materials and office fit outs and supplies, on an 'if not, why

not?' basis. This will not only drive better waste and recycling outcomes, but it will potentially reduce NSW's carbon footprint by using fewer virgin materials.

To help catalyse a shift to circular design that reduces carbon emissions, the NSW Government will establish a new $37 million Carbon Recycling and Abatement Fund. The fund will support innovative circular economy approaches that manage waste and materials more efficiently and reduce emissions.

Through this new fund NSW will support projects to:

- Trial the innovative use of low-carbon recycled materials, such as cement made with coal ash.
- Trial new approaches to reducing waste and improving recycling of waste generated through construction and demolition activities – such as modular design, digital materials passports, and novel uses of 'products as a service'.
- Help businesses co-locate in areas like the clean manufacturing precincts and special activation precincts where they can beneficially re-use each other's by-products, reducing their waste and carbon footprints.
- Support the recovery of biogas from waste materials (see below for more details).

Legacy methane emissions from organics in landfill can continue for 25 years or more. To stop these harmful emissions, many landfills in NSW have already put in place infrastructure to capture landfill gas for flaring or for power generation. To minimise the impact of landfill gas emissions, the NSW Government will:

- Require landfill gas capture for landfills over a certain size and all expanded or new landfills, with exemptions for certain circumstances
- Require net-zero emissions for landfills that are subject to an environment protection licence by a prescribed timeframe.

In addition, NSW will explore the introduction of a waste levy rebate for landfills that have landfill gas capture infrastructure installed. The levy rebate could be based on the amount of landfill gas captured and set at differential rates to encourage landfill operators to capture as much of the gas as possible.

### 5.1.4 Net Zero

In 2020, the NSW Government released the Net Zero Plan Stage 1: 2020–2030, which sets out how they will reduce their emissions by 35% by 2030, reaching net-zero emissions by 2050. As part of the plan, the NSW Government committed to setting a target of net-zero emissions from organic waste to landfill by 2030.

### 5.1.5 Resource Recovery Targets and Rates

- Have an 80% average recovery rate from all waste streams by 2030
- Set a goal to triple the plastics recycling rate by 2030, as set out in the NSW plastics action plan
- In addition, the carbon recycling and abatement fund will include funding to support biogas recovery from waste.
- Mandating the source-separated collection of food and garden organics will increase the available feedstock for anaerobic digestion facilities. Part of NSW funding for organics will support investment in anaerobic digestion facilities to help reduce the financial barriers for this technology.

- In addition, the carbon recycling and abatement fund will include funding to support biogas recovery from waste.

NSW will also look at establishing a new regulatory framework to further incentivise the uptake of anaerobic digestion facilities and biogas production. This could include:

- Creating a market-based instrument requiring landfills and thermal energy from waste facilities to surrender a minimum amount of biogas from waste certificates a year
- Streamlining planning approval processes for anaerobic digestion infrastructure, particularly where they are co-located with high energy or heat users or energy producers
- Supporting emerging uses for biogas – for example, the conversion of biomethane into renewable hydrogen and graphite

## 5.2 Queensland

**Overview:**

Targets for 2050:

- 25% reduction in household waste
- 90% of waste is recovered and does not go to landfill
- 75% recycling rates across all waste types

By reducing the amount of waste that goes to landfill, and subsequent greenhouse gas emissions, the Strategy will also directly contribute to the goals of the Queensland Climate Transition Strategy including to:

- Achieve zero net emissions by 2050
- Reduce emissions by at least 30 per cent below 2005 levels by 2030 (interim target).

### 5.2.1 Reuse

The Queensland Government will work with small and medium business, local government and community organisations to deliver information and education programs that support avoidance, reuse, recycling and proper handling (including disposal) of waste. These programs will aim to:

- Build understanding of material flows across the economy and demonstrate the value of waste resources and the part that can be played by all Queenslanders to manage resources more efficiently
- Connect material supply with demand markets through market planning and intelligence sharing
- Develop measures to encourage positive waste behaviour so that all Queenslanders can make informed and active choices about managing waste as a potential resource.

### 5.2.2 Waste Reduction

- The Queensland Government will support Queensland businesses and households to reduce the amount of waste generated through the delivery of targeted education and information-sharing programs.
- The Strategy will guide the development of educational programs to inform consumers about how they can reduce the amount of waste they produce, and to inform businesses about options to improve waste management.

- The Queensland Government will support this through the implementation of clear and transparent regulatory policy and enhanced compliance frameworks to provide consistency across the waste management and resource recovery sector and reduce waste crime.

**a. Government Actions:**

- Assess the opportunities of the circular economy model for Queensland.
- Collect and amalgamate data to understand material flows across the economy and address knowledge gaps.
- Explore options to expand reporting of waste to build baseline datasets and inform decision making.
- Develop material-specific action plans for problem wastes.
- Deliver community campaigns and education programs that support waste avoidance, re-purposing, reuse and recycling.
- Explore scope for industry leadership in developing a voluntary specification code for minimum recycled content in packaging and products.
- Develop programs to increase business recycling.
- Support and develop extended producer responsibility and product stewardship initiatives.
- Develop an energy from waste policy.
- Work with other governments to develop quality standards for product packaging.

**b. Actions for Local Government:**

- Optimise waste collection services.
- Improve community understanding about recycling and waste avoidance.
- Develop consistent messaging in delivery of services between councils.

**c. Waste Sector Actions:**

- Inform and educate business clients about options to reduce waste and increase recycling.
- Offer service options that provide clients with choice about the level of recycling they want to adopt.

### 5.2.3 Carbon Reduction

**a. Government Actions:**

- Implement the Plastic Pollution Reduction Plan.
- Audit landfills to test the quality of Queensland landfill infrastructure and identify non-compliance.
- Aid with alternative arrangements where landfill facilities are to be progressively closed.
- Develop the Litter and Illegal Dumping: A plan for Queensland.
- Develop an education strategy to integrate waste and recycling behaviours into the education system.

**b. Local Government Actions**

- Deliver litter and illegal dumping interventions within local communities and at targeted hotspots.
- Support delivery of waste education through existing networks.
- Improve or close redundant landfill facilities.

### c. Waste Sector Actions

- Strategically locate facilities in accordance with land use planning guidelines.
- Avoid and minimise the long-distance transport of waste where practicable.
- Continue to educate industry members about the appropriate management actions to take for wastes.

#### 5.2.4 Net Zero

Queensland aims to be net zero emissions by 2030.

#### 5.2.5 Resource Recovery Targets and Rates

- The deployment of certain types of energy recovery technology may also contribute to achieving the goal of powering Queensland with 50 per cent renewable energy by 2030.
- The Queensland Government will play a pivotal role in facilitating the growth of these markets by identifying pathways for industry development, as outlined in the Resource Recovery Industries 10 Year Roadmap and Action Plan.
- State-wide waste infrastructure planning will be undertaken and the Queensland Government will work with local governments to develop region-specific plans to deliver recycling and resource recovery facilities appropriate to these areas
- To provide a sustained feedstock for the recycling and resource recovery sector, the Queensland Government will pursue landfill disposal bans on selected waste streams.
- The Queensland Government will develop a policy for energy from waste that will seek to position it as an alternative to landfill, and not as an alternative to recycling as part of a longer-term solution.
- The recovery of energy from waste may be suitable for waste that cannot be recycled and otherwise would be destined for landfill.

### 5.3 South Australia

**Overview:**

- A clearly articulated policy and legislative framework that gives a solid platform for investment decisions and a stable and efficient market
- Supporting innovation and commercialisation
- Education, advocacy and awareness to support behaviour change in the way waste and resources are managed
- Applying the waste management hierarchy consistently with the principles of ecologically sustainable development.

#### 5.3.1 Reuse

- Promote manufacturing of products and components that replace virgin materials with sustainably produced materials.
- Measure recycling activity, material flows and reuse activity

### a. Municipal Solid Waste (MSW):

- Network-based community recycling hubs
- Support the development or expansion of network-based community recycling hubs to provide convenient drop-off for a wide range of materials.

- Support establishing onsite salvage and save facilities, men's sheds, and maker spaces, to provide hubs for innovative reuse and redesign of materials.
- Encourage councils and charities to identify opportunities to direct suitable materials and goods donated or collected via transfer stations or hard rubbish collections, for reuse, redesign or recycling.

**b. <u>Construction and Demolition:</u>**

- Support adaptive reuse and retrofitting of existing building stock where possible.
- Develop operating standards to encourage better salvaging and reuse of building materials.

### 5.3.2 Waste Reduction

- Encourage businesses and start-ups to adopt business models that support waste avoidance and a transition to the circular economy, for example in sharing, hire and leasing, products service systems, and incentivised return asset management.
- Promote design of products and components to increase reparability, durability, upgradability and recyclability to design out waste.
- Support reuse and repair for further waste avoidance.
- Advocate for product labelling standards to enable better dismantling, reuse and recycling of products and information relating to recycled content
- Embed waste reduction and management practices in tertiary, vocational education and training courses (C&I waste sector).

**a. <u>Actions relevant to all waste sectors (MSW, C&I and C&D):</u>**

**Plastics and packaging:**

- 100% of packaging in South Australia is recyclable, compostable or reusable by 2025, in support of the Australian Government commitment to Australian Packaging Covenant Organisation target.

**Food waste:**

- Implement South Australia's Food Waste Strategy.
- Support the National Food Waste Strategy 50% reduction target by 2030 by promoting food-waste prevention measures.
- Encourage the uptake of segregated organics collection systems, including potential for legislative reform to increase the recovery of this material for processing into soil improvement products.

**Product stewardship:**

- South Australia to support effective product stewardship schemes.

**Procurement:**

- Increase procurement of secondary materials and recycled content products.
- Increase local remanufacturing.
- Implement standards for recycled content products.

**Waste levy:**

- Continued application of the levy

b. **Additional actions relevant to MSW targets**

**Household bin systems:**

- By 2025, South Australia to adopt kerbside bin systems that optimise diversion of organics and recyclables and enable delivery of the MSW 75% waste diversion target.
- Ensure a standard three-bin system is adopted across all metropolitan councils, including a minimum service to all households: a. fortnightly collection of co-mingled recyclables b. fortnightly collection of organics, including food waste.
- Increase the recovery of recyclables in the yellow bin.
- Increase the recovery of organics and food waste in the green bin and processed in accordance with Australian Standard Composts, Soil Conditioners and Mulches – 4454.
- All kerbside bins to be compliant with Australian Standard AS 4123.5-2008 Mobile waste containers as soon as practicable (through replacement and in-field bin maintenance) before 2030, with a review to be undertaken by 2025.

c. **Additional actions relevant to MSW targets**

**Hard waste collection:**

- Implement best-practice hard waste collection and treatment to maximise material recovery.

**Community engagement:**

- Reduce contamination in kerbside collected bins.
- Support greater participation by households in food waste systems.
- Evaluate the effectiveness of the Which Bin? and other householder education campaigns undertaken by councils and others.
- Ensure common and consistent messaging

**Food waste:**

- A number of initiatives in South Australia currently contribute to food waste reduction and diversion from landfill, including:
- The application of the solid waste levy for all waste (including food waste) disposed to landfill
- Dedicated facilities and infrastructure to process food waste into compost and other soil improvement products
- Provision of kerbside food waste diversion incentives to councils
- Segregated commercial food waste collection services available across metropolitan Adelaide
- Anaerobic digestion for energy recovery and subsequent composting
- Support for food recovery organisations such as Foodbank and OzHarvest to divert fresh and non-perishable surplus food to charities.

Nationally, the Australian Government's National Food Waste Strategy requires each Australian state and territory to achieve a 50% reduction in food waste by 2030. This aligns with the United Nations Sustainable Development Goal 12.3:

*'By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses'.*

In addition to diverting food waste from households, action will be required in the agricultural and commercial and industrial sectors to reduce food waste.

### 5.3.3 Carbon Reduction

The Waste Strategy reflects the need to conserve resources and reduce pollution and carbon emissions while reducing poverty and maintaining human wellbeing within a supportive economy.

### 5.3.4 Net Zero

- The South Australian Government aims to reduce emissions by more than 50 per cent from 2005 levels by 2030 and for net-zero emissions by 2050 (Department for Environment and Water (SA), 2020a and 2020b).
- This Waste Strategy outlines how to reduce waste and greenhouse gas emissions, and so contribute to the transition to a circular economy.

### 5.3.5 Resource Recovery Targets and Rates

While South Australia's resource recovery industry is well established, with around 86% of all recovered material reprocessed locally and about 7% exported overseas (Rawtec, 2020), global restrictive measures that affect the trading of recycled commodities can impact the viability of South Australian recycling businesses that depend on those markets.

During the term of the 2020-2025 waste strategy, South Australia's work towards a circular economy will build upon current policy initiatives and activities designed to reduce waste, improve material and energy efficiency, and reduce greenhouse gas emissions.

This work will support the National Waste Policy and Action Plan (Australian Department of Agriculture Water and the Environment, 2019) circular economy principles:

**a. <u>Improve Resource Recovery</u>**

- Invest in infrastructure that supports circular economy material flows,
- Organic material, designed to re-enter and regenerate the environment safely (such as compost) materials (such as metals, paper and plastic) that are designed to circulate for as long as possible through repair, reuse and, as a last resort, recycling, without entering the environment for disposal.

**b. <u>Transitioning to a Circular Economy – Material Recovery</u>**

- Introduce measures to capture and process more materials for recycling, such as soft film plastics, packaging, batteries and electronic waste.
- Advocate for national solutions to problematic wastes such as packaging and hazardous wastes and consider state-based solutions if required.

In February 2018, following stakeholder consultation, Green Industries SA released its 'Waste and Resource Recovery Infrastructure Plan' (Green Industries SA, 2018c). The plan projects investment needs for waste management and resource recovery infrastructure over the next 10-30 years.

It models scenarios for waste flow projections, corresponding infrastructure needs and economic impact assessments:

- Moderate additional diversion – slightly more than business as usual) over a 10-year period.
- High additional diversion – aspirational goal of zero waste across metropolitan Adelaide and high diversion rates in regional areas) over a 30-year period.

This supports the 20-Year State Infrastructure Strategy which identifies the significant role that planning and investment in South Australia's waste and resource recovery infrastructure plays in building industry capacity to manage new and emerging waste streams and contributing to economic growth (Infrastructure SA, 2020).

Green Industries SA's Infrastructure Grants Program helps private sector, local government and not-for-profit organisations to invest in infrastructure and find innovative approaches to increasing the resource recovery and reducing the amount of waste sent to landfill.

**Infrastructure Capability and Capacity**

- Encourage innovation by tackling new and or problematic waste streams, assisting improvements to efficiency and targeting new market segments.
- Continue investment in high performing resource recovery infrastructure.
- Improve knowledge and awareness of resource recovery infrastructure as being essential infrastructure for the functioning of society and the economy.
- Improve knowledge and opportunities in relation to the potential return on investment in the resource recovery sector.
- Support soft infrastructure investment in workforce planning, training and talent retention in the resource recovery industry.
- Set best practice standards for recovered resources and ensure regulatory compliance in the sector.
- Ensure planning and investment in waste and resource recovery infrastructure to provide adequate waste management resilience and continuity in response to disaster and other significant disruptive events.
- Food waste: Provide financial incentives such as grants and loans to encourage the establishment and enhancement of resource recovery infrastructure, processes and technologies that divert food waste into productive use

In South Australia, significant work has been undertaken through reforming the regulatory settings for the waste management and resource recovery industry to achieve industry certainty and improved environmental outcomes (Environment Protection Authority, 2015).

The Environment Protection (Waste Reform) Amendment Act 2017 (Waste Reform Act), for example, took effect in November 2017; it provides strengthened powers under the Environment Protection Act 1993 (EP Act) through:

- Explicit powers to regulate material flow and stockpiling through amendments to the Objects of the EP Act and new powers regarding stockpiling conditions
- Expanding the circumstances in which financial assurances (including insurance) can be used to protect against environmental, abandonment and distortion risks while supporting innovation
- Improving the processes and evidentiary requirements to assess materials as approved recovered resources, to support innovative and safe resource recovery

- Improving powers for tackling breaches of licence conditions
- Strengthened powers for the Environment Protection Authority to prosecute illegal dumping cases.

**Competitiveness and Innovation**

- Investigate the potential for web-based platforms and/or mobile applications and processing technology to foster progress in generating a circular economy through improved waste management and resource recovery.
- Reduce South Australia's dependence on overseas exports of recyclable materials through enhanced reprocessing and re-manufacturing into new products for domestic consumption.
- Support the commercialisation of technologies and innovations in the waste management and resource recovery sector.
- Encourage collaborative platforms that bring together researchers, sector case studies and pilot industry projects that support progress towards a circular economy through improved waste management and resource recovery.
- Support the development of soft infrastructure, skills and capabilities to attract infrastructure investment and growth in waste management and resource recovery.

## 5.4 Tasmania

**Overview:**

Because solutions to Tasmania's waste and recycling challenges are strongly market based, capacity should be developed to support the establishment of recycling and reuse businesses, which would include support for domestic businesses entering national and international markets. While governments can set the policy frameworks and provide supportive structures, it is also up to industry to promote its recycled products and for consumers to buy these products.

### 5.4.1 Reuse

Several Tasmanian councils already have a locally administered levy of $ 5 per tonne, which some councils have proposed to increase to $ 7.50 per tonne by 2019/20, for the disposal of solid waste. This small levy and broader local government contributions have funded a range of waste initiatives such as Rethink Waste Tasmania, which promotes efforts to reduce, reuse and recycle.

### 5.4.2 Waste Reduction

- The laws and policies of the Australian Government are critical for addressing waste management issues in Tasmania. Policy tools available under national legislation like the Product Stewardship Act 2011 could potentially be used more effectively, and existing stewardship schemes reviewed and improved.
- Introduce a waste levy by 2021 to fund waste management and resource recovery activities.
- Introduce a Container Refund Scheme in Tasmania by the end of 2022.
- The Tasmanian Government will also develop legislation that indicates how the revenue collected from the levy will be directed to waste management and resource recovery initiatives, while ensuring regional authorities continue to derive a revenue stream from the new levy.
- Develop a Tasmanian Waste and Resource Recovery Infrastructure Plan by 2021.

- Work with Local Government to address potential planning issues around waste management and resource recovery infrastructure.

Adopt the following targets for waste and resource recovery:

- Reduce waste generated in Tasmania by 5% per person by 2025 and 10% by 2030;
- Ensure 100% of packaging is reusable, recyclable or compostable by 2025.
- Achieve a 50% average recovery rate from all waste streams by 2025 and 80% by 2030.
- Have the lowest incidence of littering in the country by 2023.
- Reduce the volume of organic waste sent to landfill by 25% by 2025 and 50% by 2030.
- Work at the national level and with local government and businesses in Tasmania to help phase out problematic and unnecessary plastics by 2030.

The Container Refund Scheme will also help boost the market for clean streams of recyclable material and achieve a reduction in the volume of litter in Tasmania. Several associated regulations will be revised within the life of this Plan, including the Environmental Management and Pollution Control (Waste Management) Regulations 2010 and the Environmental Management and Pollution Control (Controlled Waste Tracking) Regulations 2010. The revision of these regulations, along with proposed minor amendments to the Environmental Management and Pollution Control Act 1994 (EMPCA) will also provide an opportunity to consider the waste streams that may be more responsive to the proposed pricing signals, such as C&D waste, which generally has more alternatives available to landfilling.

### 5.4.3 Carbon Reduction

The “ReSOLVE” model for moving to a CE has six elements: Regenerate, Share, Optimise, Loop, Virtualise and Exchange. Regenerate is partly about the shift to renewables. This is clearly an area where Tasmania is well - advanced, with some 90% of Tasmania power coming from renewables. Tasmania became the first Australian jurisdiction to achieve zero net emissions in 2015 – 16.

### 5.4.4 Net Zero

Tasmania reached Net-zero in 2015.

### 5.4.5 Resource Recovery Targets and Rates

The Tasmanian recycling rate in 2016 - 17 was 49% compared to the national average of 58%. It is also around half the diversion rate of NSW, Victoria, South Australia and the ACT. The levels of recovery of materials from some waste streams, such as construction and demolition (C&D) waste, are significantly lower than the overall average recovery rate for Tasmania. However, Tasmania focusing its attention on key waste streams (e.g. organics, C&D) and having an appropriate investment framework in place, it will be possible to make substantial gains in a relatively short period of time.

Ambitious recovery targets for the state are listed below. These targets are in line with broader commitments on waste and resource recovery agreed to by Environment Ministers in 2018, strategies from the National Waste Policy, priority actions identified through consultation with local government and industry, and Tasmanian Government commitments on littering and illegal dumping.

These targets will be regularly reviewed as Tasmania's data on waste improves and new market opportunities arise:

- Reduce waste generated in Tasmania by 5% per person by 2025 and 10% by 2030;
- Ensure 100% of packaging is reusable, recyclable or compostable by 2025;
- Achieve a 40% average recovery rate from all waste streams by 2025 and 80% by 2030.
- Have the lowest incidence of littering in the country by 2023;
- Work at the national level and with local government and businesses in Tasmania to help phase out problematic and unnecessary plastics 16 by 2030; and
- Reduce the volume of organic waste sent to landfill by 25% by 2025 and 50% by 2030.

In Tasmania, the organic waste stream offers some promising opportunities. For example, diversion of domestic garden and food organics would reduce household waste by 20 - 30%, and put Tasmania in a strong position to achieve its organic waste target. The establishment of a Container Refund Scheme and introduction of a waste levy are also key parts of this Focus Area. The Australian Government's four - year, $100 million Environment Restoration Fund includes the clean - up, recovery and recycling of waste as a priority.

**Actions:**

Develop capacity across Government to support business development in the waste and recycling industry.

- Work with local government to introduce a statewide waste levy by 2021 to fund waste management and resource recovery activities.
- Introduce a Container Refund Scheme into Tasmania by the end of 2022.
- Work with the Australian Government to ensure that reviews of relevant legislation, such as the Product Stewardship Act 2011, result in effective programs that enhance resource recovery.
- Establish a loan scheme for businesses and local government that helps grow locally based and innovative recycling and processing facilities which increase recycling rates while also delivering new jobs across Tasmania
- Support industry to use materials effectively, reuse materials and to understand the business case to improve resource recovery.
- Develop an Organic Waste and Resource Recovery Strategy by the end of 2020.
- Develop a Tasmanian Market Development Study by the end of 2021.
- Continue to investigate and provide appropriate support for Energy from Waste and Bioenergy options, which includes the management and utilisation of forest residues.
- Support the investment in industrial waste sorting – in particular construction and demolition waste.
- Boost demand for recycled products through adoption of sustainable procurement practices across State and local government

**Waste Initiatives Progress Report**

**State Budget 2021 – 2022**

The Tasmanian Government is committed to building their circular economy and progressing important waste and resource recovery reforms. In the 2021 - 22 State Budget the following key commitments were made:

- $3 million to invest with industry in the construction of a rubber crumbing plant to turn end-of-life tyres into products that can be used in the Government's Road Resurfacing Program.
- $1 million to address the impacts of problematic single use plastics on the Tasmanian environment by phasing out single use plastics by 2025. This will include collaboration with local government and support to business.
- $10 million for the COVID-19 Response – Circular Economy Fund. This will support strategic investments in waste management and resource recovery and support other waste initiatives and create jobs.
- $4.5 million has been earmarked from the Circular Economy Fund to improve organic waste (including Food Organics and Garden Organics – FOGO) reprocessing capacity in Tasmania.
- $1 million towards improving waste and resource recovery data and waste data infrastructure in Tasmania, which will help with the implementation of the waste levy and monitoring of resource recovery targets.

**Current key initiatives:**

Over the past year or so the Government has also been working on the following important initiatives:

- Investing in the resource recovery sector through providing $5.5 million towards the Tasmanian Recycling Modernisation Fund (Plastics) Grants. This funding was matched by the Australian Government with matched funding (or better) being provided by project applicants. The three successful projects will result in $20 million being invested into plastics recycling and remanufacturing in Tasmania and generate over 50 ongoing jobs.
- Introducing a statewide waste levy. The levy will help to divert waste from landfill to more productive, innovative and valuable uses. The Waste and Resource Recovery Bill 2021 is expected to be tabled in Parliament later this year, with collection of the levy to commence on 1 July 2022.
- Introducing a Container Refund Scheme (CRS), which will reduce litter and increase recycling of containers. The Container Refund Scheme Bill 2021 is also expected to be tabled in Parliament later this year, with the CRS to commence in 2022.
- Strategic planning work on organic waste and waste infrastructure to inform the proposed Waste and Resource Recovery Board when it develops its first Waste Strategy.
- Ongoing work to help manage litter and illegal dumping, such as through Report Rubbish.
- Improving public awareness and education in waste management. This includes providing $95,000 to Rethink Waste to offer a centralised source of information for communities and businesses on how to reduce waste, and what materials can be recovered/recycled, where and when.

## 5.5 Victoria

**Victoria's Circular Economy Goals:**

Victoria's transition to a circular economy will be guided by four goals spanning the life cycle of materials (make, use, recycle and manage). Each goal is designed to maximise value and minimise waste.

- **Goal 1 - Design to last, repair and recycle.** Generate less waste in businesses through innovation and design; use recycled materials in products and consider impacts across product life cycles; and support business to explore new circular economy business models
- **Goal 2 - Use products to create more value.** Help people make smart purchasing decisions and extend the life of products and support the reuse economy; repair goods where possible
- **Goal 3 - Recycle more resources**. Reform kerbside collections to generate more value from waste; improve the separation of recyclable materials; develop markets for recovered materials; plan for and boost investment in recycling infrastructure; embed the waste hierarchy in the management of materials; support the development of appropriate waste to energy facilities.
- **Goal 4 - Reduce harm from waste and pollution.** Protect communities and the environment from high-risk and hazardous wastes.

These goals align with the United Nations Sustainable Development Goals, including Goal 8 ('promote sustained, inclusive and sustainable economic growth') and Goal 12 ('ensure sustainable consumption and production patterns').

**What the Victorian Government has already delivered:**

The Victorian Government has provided record funding of more than $135 million since 2015 for waste and resource recovery initiatives.

Recent initiatives include:

- $37 million to develop and implement the *Recycling Industry Strategic Plan* to stabilise and improve the productivity of the recycling sector, increase the quality of recycled materials, and develop new markets for materials
- $35 million for more reliable household recycling services, co-investment with industry in infrastructure to better process plastics and other recycling, and development of stronger end markets for recycled resources
- $6.6 million to councils directly affected by the closure of SKM Recycling
- $12.8 million to combat illegal stockpiling and mismanagement of hazardous waste, and to address illegal dumping of industrial waste in Victoria.

**Building on current work:**

Recycling Victoria: builds on many years of work by the Victorian Government to improve waste management and increase recycling in Victoria. The state now recovers 69 per cent of its waste. Victoria led the nation in 2015 by launching Australia's first 30-year plan for waste and recycling infrastructure and leads collaborative waste and recycling services procurement across local councils. The Victorian Government has also banned single-use plastic bags and the disposal of e-waste in landfill.

**Measuring progress**:

Four ambitious new targets will help Victoria measure its progress.

- Divert 80 per cent of waste from landfill by 2030, and an interim target of 72 per cent by 2025.
- Cut total waste generation by 15 per cent per capita by 2030.
- Halve the volume of organic material going to landfill between 2020 and 2030, with an interim target of 20 per cent reduction by 2025.
- Ensure every Victorian household has access to food and garden organic waste recycling services or local composting by 2030.

These complement the following seven national targets agreed through the *National Waste Policy Action Plan.*

- Ban the export of waste plastic, paper, cardboard, glass, and tyres commencing in the second half of 2020.
- Reduce total waste generation in Australia by 10 per cent per person by 2030.
- 80 per cent average resource recovery rate from all waste streams following the waste hierarchy by 2030.
- Significantly increase the use of recycled content by government and industry.
- Phase out problematic and unnecessary plastics by 2025.
- Halve the amount of organic waste sent to landfill for disposal by 2030.
- Make comprehensive, economy-wide and timely data publicly available to support better consumer, investment and policy decisions.

Recycling Victoria will also help deliver on the national target to halve Australia's food waste by 2030.

### 5.5.1 Reuse

The Victorian Government is committed to supporting a thriving second-hand economy and helping charitable recyclers reduce the number of materials sent to landfill.

**Support for charities:**

To achieve these outcomes, the government will:

- Support the reuse, repair and share sectors through the Circular Economy Business Innovation Centre (see Action 1.1), business support grants (Action 1.2) and the Support Victorian Communities and Councils programs (see Actions 2.1 and 2.2)
- Undertake research, in partnership with Monash University and the National Association of Charitable Recycling Organisations, to understand the contribution of the charitable sector to the reuse economy and expand product donation and reuse.

The Victorian Government will continue to support charities with funding that reduces their waste management costs. The government will also work with the sector on a strategy to reduce waste at charities so that over the long-term charities waste management costs are reduced.

The Victorian Government is also committed to making it easier for Victorians to get their products safely repaired. The Victorian Government will work with the Australian Government to support national action on right-to-repair legislation and identify any Victorian legislative barriers to product repair.

**Statewide education and behaviour change programs:**

The Victorian Government will deliver education and behaviour change programs to support a range of initiatives included in *Recycling Victoria*, including reforming kerbside recycling services (Action 5.1). The Victorian Government will also consider what information, education and tools could help people to avoid and minimise waste, and reuse, repair and share products.

These programs will build on existing successful campaigns on avoidance and reuse, such as ***Love Food Hate Waste*** (helping households and businesses to reduce food waste) and the ***Better Bag Habits*** campaign (helping Victorians remember to bring their reusable bags when shopping). They will complement the ***ResourceSmart Schools*** program, which helps schools embed sustainability in their facilities, curriculum and communities.

Support to change purchasing decisions and other behaviours can be effective in reducing waste. For example, 90 per cent of people surveyed as part of Sustainability Victoria's ***Love a List*** challenge reduced their food waste and saved an average of $30 a week for four weeks.

In addition to these programs, the Victorian Government will support more informed consumer decisions by advocating for the Australian Government to consider better product labelling to inform purchasers about durability, repair and end-of-life management of the products they buy. This could be similar to energy and water efficiency labelling on whitegoods.

**Recycling Markets Acceleration package:**

To drive demand for recycled materials across the economy, the Victorian Government will help identify new uses for recycled materials and make it easier for these products to be used. An early focus will be products made from recovered organic materials, such as compost and biofuels, and materials subject to Australia's new waste export ban—plastics, paper, cardboard, glass and tyres.

The Victorian Government will:

- **Expand existing innovation programs** to encourage researchers and businesses to collaborate to take new products using recycled materials from research through to commercialisation
- **Develop and promote standards, specifications and guidance materials** for using recycled materials in commercial, industrial and construction settings.

This package could lead to the recovery and reuse of up to two million tonnes of materials every year that do not have strong domestic markets now.

It will also support business growth and innovation for advanced manufacturing and construction sectors that make use of recycled materials.

### 5.5.2 Waste Reduction

Targets:

- Cut total waste generation by 15 per cent per capita by 2030.
- Ensure every Victorian household has access to food and garden organic waste recycling services or local composting by 2030.

The Australian Federal Government in 2018 released a National Waste Policy. In August 2019, the Australian Government and all state and territory governments committed to ban the export of waste glass, paper, cardboard, plastic and tyres. Recycling Victoria will ensure local infrastructure and markets are in place to support the ban and safely manage materials in Victoria.

Victoria already recovers 69 percent of its waste. By shifting to a circular economy, Victoria will recover at least 80 per cent of its waste by 2030. To ensure greater transparency and service standards across the state, the Victorian Government will establish a new dedicated waste and recycling Act that governs all aspects associated with waste and recycling services.

Going forward, Victoria needs the right settings in place to ensure waste and recycling services are reliable and transparent. This will include:

- Changing the way Victoria collect waste from households, including introducing a container deposit scheme, to reduce contamination and increase the value of the materials collected.
- Setting landfill levies at the right level to make recycling and energy recovery more cost-effective than landfill - and ensuring Victoria does not become a dumping ground for waste coming from other states.
- Improved regulation and planning to ensure Victoria maintains reliable and transparent recycling services into the future.

**Reform the way households recycle:**

The way Victorians recycle is going to change. Putting all recycling into a single ‘commingled’ bin produces low-quality materials that are no longer in demand. Two complementary reforms will encourage greater separation of waste, recover more materials and preserve their value.

The Victorian Government will establish a kerbside collection system that will be better aligned with its local recycling markets and introduce a container deposit scheme.

Changing how Victorians recycle will take time and will require the engagement of all Victorians—from households to local governments and recycling businesses.

**Household recycling reforms:**

To manage this transition, the Victorian Government will provide a kerbside reform package to support local government—key delivery partners in this reform—to roll out this new recycling system for Victoria.

This system will include access to four core waste and recycling services:

- Combined food and garden organics.
- Glass.
- Combined paper, plastic and metals.
- Residual waste.

Standardising bins (including bin lid colours), and kerbside services (including items accepted) across Victoria will simplify household recycling, backed by a statewide education program.

Standardised recycling services will look different in metropolitan, regional and rural areas. A standard four-bin service may not be suitable for some communities or dwelling types such as large apartment buildings or more remote areas, where alternative arrangements, such as transfer stations, local drop-off points, home composting support or worm farms might be more appropriate.

The Victorian Government will work closely with councils to find options that meet local needs while maintaining a consistent statewide service and associated education program. Councils will be supported to work together, aggregating waste volumes and pursuing collaborative procurement of waste and recycling contracts to achieve improved services and recycling outcomes.

The reforms will be implemented gradually, with the Victorian Government supporting the rollout of new glass bins and new bin lids from 2021. All Victorians will have a new glass bin or access to glass services by 2027.

Mandatory rollout of food and garden organics recovery services to households that don't already have access will commence in 2026-27, with all Victorians to have access to a bin or service by 2030. To support the reforms, the Victorian Government will review relevant existing guidelines, policies and regulation to make sure people living in diverse dwelling types, including multi-unit developments, have equitable access to best practice recycling.

**Support safe and effective high-risk and hazardous waste management**

The Victorian Government will ensure the safe management of high-risk and hazardous wastes through stronger regulation, policy and planning (Action 10.1). Industry investment in better hazardous waste management, including opportunities to maximise the safe and cost-effective recovery and recycling of these wastes, will be encouraged.

The Victorian Government will:

- **Consider the potential introduction of new levies for waste being stockpiled for long periods** encouraging the safe storage of these materials and managing associated public safety risks. Consultation will occur in 2020, with new mechanisms proposed to be introduced from 2021 (action 10.4)
- **Recover avoided waste levies and disposal fees for illegally stockpiled wastes** (action 10.4)
- **Ensure adequate disposal points for asbestos across the state,** through an asbestos disposal management plan (action 10.2)
- **Continue the successful *detox your home* program,** encouraging the safe management and disposal of hazardous waste from households (action 10.3).

The Coordinated Prevention and Response Framework establishes and documents a cross-government coordination approach for the management of high-risk and hazardous waste sites, including those that store combustible recyclable and waste materials and those associated with criminal activity.

To implement the Framework the Victorian Government will:

- **Establish a Waste Crime Prevention Inspectorate** within the Environment Protection Authority to work across government with Worksafe Victoria, emergency service agencies, local government and other regulators, to address illegal activities and combat waste crime in Victoria (Action 10.5).
- **Improve intelligence sharing arrangements** across regulatory and emergency management agencies (Action 10.4).
- **Build the regulatory capacity and capability** of these agencies (Action 10.4)
- **Introduce new measures to ensure that the cost of managing or cleaning up high-risk sites is borne by those responsible for the site,** to the greatest extent possible (Action 10.4).

### 5.5.3 Carbon Reduction

A global circular economy could reduce greenhouse gas emissions from four major industry sectors (plastics, steel, aluminium and cement) by 56 per cent in developed economies by 2050. Greater recycling and reuse of materials within a more circular economy could also lower the costs of reducing emissions in those sectors by between 40 and 45 per cent.

Recycling creates environmental benefits, by preserving precious resources. Increasing the recycling and recovery of organic waste will also help reduce greenhouse gas emissions from the waste sector.

Giving all Victorian households access to a combined food and garden waste services could divert up to 650,000 tonnes of organic waste from landfill each year and significantly reduce greenhouse gas emissions associated with disposing of organic waste in landfill.

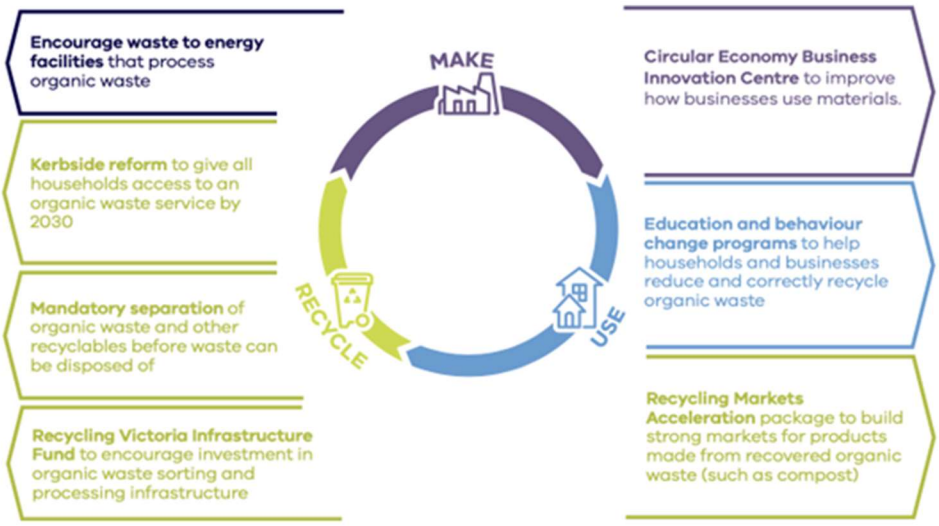



**Figure 15: Organic waste and the circular economy**

Waste-to-Energy: Victoria supports waste to energy projects where they reduce greenhouse gas emissions compared to the waste and energy services they displace.

### 5.5.4 Net Zero

Victoria aims to have net zero emissions by 2050.

### 5.5.5 Resource Recovery Targets and Rates

**Waste to energy infrastructure:**

As part of a comprehensive industry and infrastructure development package, the Victorian Government will support early entrants into Victoria's waste to energy market, including facilities that use organic waste to make bioenergy or provide precinct-scale energy. This will help expand Victoria's developing waste to energy market.

Investment support will include grant or loan funding and investment facilitation to help proponents navigate regulatory and financial processes.

The government will also fund research to develop safe end uses for the residual products (like ash and digestate) of waste to energy facilities. This work will create investment certainty for project proponents. In 2023, the Victorian Government will review the progress of the waste to energy sector to make sure it is helping to meet Victoria's waste reduction and resource recovery targets.

Victoria's broader waste to energy framework is outlined in the 'Encourage appropriate waste to energy' section.

**Encourage appropriate waste to energy:**

The Victorian Government recognises a role for waste to energy investment in Victoria, and supports waste to energy projects where they:

- Meet best-practice environment protection requirements including air pollution controls
- Reduce the amount of waste sent to landfill and do not displace reuse or recycling
- Do not inhibit innovation in reuse or recycling of materials
- Meet best-practice energy efficiency standards
- Reduce greenhouse gas emissions compared to the waste and energy services they displace
- Have sustainable business models that create jobs and economic development
- Work well with local communities in which they operate.

The need for biological waste to energy treatments, such as anaerobic digestion, will be critical as Victoria recovers more organic wastes. This will be a priority for the Victorian Government when leveraging investment in waste to energy infrastructure (see Action 8.3).

It is important that the volumes of residual (non-recyclable) waste made available for thermal waste to energy facilities are monitored carefully. Over-investment in waste to energy infrastructure in the short term has the potential to undermine efforts to decrease waste generation and increase recycling in the long term. Experience in other jurisdictions indicates that over-investment in waste to energy infrastructure could be a disincentive to innovation in reuse and recycling and transitioning to a circular economy. For this reason, the Victorian Government will monitor the development of waste to energy facilities closely.

The composition of Victoria's residual waste will also change over time. As Victoria moves to a circular economy, the amount of waste that can be used to generate energy (such as paper and organic waste) as a proportion of total residual waste, will fall.

**Illegal Waste Disposal program:**

Changes to the landfill levy will encourage greater resource recovery, however, it must be accompanied by strong anti-avoidance measures to prevent illegal waste stockpiling and disposal.

The Environment Protection Authority Victoria will be given additional resources to monitor, investigate and prosecute illegal behaviour through the existing Illegal Waste Disposal program (formerly known as the Illegal Dumping Strikeforce).

**Plan for recycling infrastructure over the long term:**

Victoria was the first Australian jurisdiction to develop a comprehensive framework that plans for waste and resource recovery infrastructure.

This framework, which includes the ***Victorian Recycling Infrastructure Plan**** and associated regional plans, guides planning and investment in waste and resource recovery infrastructure over the next 30 years.

The Victorian Government will build on this framework, planning for all waste streams, undertaking contingency planning to address major system disruptions and forecasting how much residual (non-recyclable) waste they will have in the future, so that they have in place the infrastructure that they need.

As part of the upcoming review of the ***Victorian Recycling Infrastructure Plan,**** the Victorian Government will:

- **Include hazardous waste infrastructure.**
- **Plan for waste to energy facilities** so that Victoria has the infrastructure that they need in place (see key commitment 9).
- **Improve state-wide risk and contingency planning** for waste and resource recovery infrastructure.
- **Make sure land use planning systems align with infrastructure planning** so that expanding recycling infrastructure can be accommodated.

*Formerly known as the Statewide Waste and Resource Recovery Infrastructure Plan

**Industry and infrastructure development package:**

Victoria's ambitious resource recovery targets and the national ban on waste exports mean that Victoria must process more recycled materials locally.

- Kerbside reforms enable increased recovery of recyclable materials. Giving Victorians access to more organic waste collection services could lead to the recovery of up to 650,000 tonnes of food and garden waste each year.
- The initial focus of this package is to accelerate and stimulate investment in infrastructure for the increased recovery of organic, plastic, paper, cardboard, glass, textile, chemical and tyre waste and to manage those materials in line with the waste hierarchy and export ban.
- Victoria is already a national leader in recycling. ***Recycling Victoria*** creates new opportunities for business to invest in Victoria, using new technologies to collect, sort, process and use these valuable resources.

**Recycling infrastructure:**

In the future, the Recycling Victoria Infrastructure Fund will focus on other priority materials for recovery.

To support new facilities under the Fund, the Victorian Government's Investment Facilitation Service will also be expanded to help resource recovery and other Victorian businesses:

- Access government grants
- Understand planning, policy and regulatory requirements
- Learn about new technologies
- Better understand viability of new investment in resource recovery and remanufacturing
- Identify and understand feedstock by providing high quality waste and recycling data
- Establish off-take agreements
- Prepare business cases for investment.

## 5.6 Western Australia

| Goals | Key commitment | Action |
|---|---|---|
| 1 MAKE Design to last, repair and recycle | 1. Improve business productivity and reduce waste | 1.1 Circular Economy Business Innovation Centre |
| | | 1.2 Business support grants |
| | | 1.3 Product stewardship |
| 2 USE Use products to create more value | 2. Support Victorian communities | 2.1 Support for communities |
| | | 2.2 Support for councils |
| | | 2.3 Statewide education and behaviour change programs |
| | 3. Address plastic pollution | 3.1 Ban plastic bags |
| | | 3.2 Further action on plastic pollution |
| | 4. Support the reuse economy | 4.1 Support for charities |
| 3 RECYCLE Recycle more resources | 5. Reform the way households recycle | 5.1 Household recycling reforms |
| | | 5.2 Introduce a container deposit scheme |
| | 6. Fit-for-purpose landfill levies | 6.1 Landfill levy reform |
| | | 6.2 Illegal Waste Disposal program |
| | | 6.3 Landfill levy auditing |
| | 7. Governance and regulation | 7.1 Regulate waste as an essential service |
| | | 7.2 Plan for recycling infrastructure over the long term |
| | 8. Increasing the use of recycled materials | 8.1 Recycling Markets Acceleration package |
| | | 8.2 Public leadership in recycling |
| | | 8.3 Industry and infrastructure development package |
| | 9. Encourage appropriate waste to energy investment | 9.1 Develop a waste to energy framework |
| 4 MANAGE Reduce harm from waste and pollution | 10. Support safe and effective high-risk and hazardous waste management | 10.1 Policy and planning for hazardous waste management |
| | | 10.2 Asbestos Disposal Management Plan |
| | | 10.3 Detox Your Home program |
| | | 10.4 High-risk sites management |
| | | 10.5 Addressing waste crime |
| MEASURE OUR PROGRESS | 11. Expand Victoria's waste data systems | 11.1 Expand Victoria's waste data systems |

**Figure 16: Strategic interventions to key commitments**

## Strategy Overview:

**Table 4: WA Waste Strategy**

| | | | |
|---|---|---|---|
| **VISION** | Western Australia will become a sustainable, low-waste, circular economy in which human health and the environment are protected from the impacts of waste. | | |
| **OBJECTIVES** | **AVOID**<br>Western Australians generate less waste. | **Recover**<br>Western Australians recover more value and resources from waste. | **Protect**<br>Western Australians protect the environment by managing waste responsibly. |
| **TARGETS** | **2025** - 10% reduction in waste generation per capita<br><br>**2030** - 20% reduction in waste generation per capita | **2025** - increase material recovery to 70%<br><br>**2030** - Increase material recovery to 75%<br><br>**From 2020** - Recover energy only from residual waste. | **2030** - No more than 15% of waste generated in Perth and Peel regions is landfilled<br><br>**2030** - All waste is managed and/or disposed to better practice facilities |
| **HEADLINE STRATEGIES** | 1. Develop state-wide communications to support consistent messaging on waste avoidance, resource recovery and appropriate waste disposal behaviours.<br>2. A consistent three bin kerbside collection system, which includes separation of food organics and garden organics from other waste categories, to be provided by all local governments in the Perth and Peel region by 2025 and supported by State Government through the application of financial mechanisms.<br>3. Implement sustainable government procurement practices that encourage greater use of recycled products and support local market development.<br>4. Implement local government waste plans, which align local government waste planning processes with the Waste Avoidance and Resource Recovery Strategy 2030.<br>5. Review and update data collection and reporting systems to allow waste generation, recovery and disposal performance to be assessed in a timely manner.<br>6. Undertake a strategic review of Western Australia's waste infrastructure (including landfills) by 2020 to guide future infrastructure development.<br>7. Review the scope and application of the waste levy to ensure it meets the objectives of Waste Avoidance and Resource Recovery Strategy 2030 and establish a schedule of future waste levy rates with the initial schedule providing a minimum five-year horizon.<br>8. Provide funding to promote the recovery of more value and resources from waste with an emphasis on focus materials. | | |

### 5.6.1 Reuse

National context Western Australia contributes to national strategies aimed at increasing the recovery of materials from waste, including:

- The National Waste Policy: Less waste, more resources, 2018 and the Product Stewardship Act 2011 support national approaches to problem wastes such as televisions, computers, paint, tyres and packaging.
- The Australian Packaging Covenant and the Environment Protection (Used Packaging Material) Measure are national programs aimed at reducing generation and encouraging the reuse and recycling of used packaging materials.

### 5.6.2 Resource Recovery Targets and Rates

**Energy recovery:**

Resource recovery includes the recovery of energy from waste. However, energy recovery is considered to be the least preferred of all resource recovery options in the waste hierarchy as it merely releases embodied energy but does not preserve the material for reuse.

For this reason, the waste strategy identifies that only residual waste (waste which remains following the application of better practice source separation and recycling systems) is to be used for energy recovery. Where better practice guidance is not available, an entity's material recovery performance will need to meet or exceed the relevant stream target (depending on its source - MSW, C&I or C&D) for the remaining non- recovered materials to be considered residual waste under this waste strategy.

**Headline Strategy 1:**

Develop state-wide communications to support consistent messaging on waste avoidance, resource recovery and appropriate waste disposal behaviours.

This comprehensive strategy brings together the *WasteSorted toolkit* with the community-facing *'Be a GREAT Sort'* behaviour change communications campaign and aligns with other high-profile waste programs.

The 'Be a GREAT Sort' campaign will contribute to improving MSW recovery rates to 70 per cent by 2030. Behavioural changes in the community are intended to reduce waste generation, improve the amount of materials separated at the source, reduce contamination rates and enable higher-quality waste materials for reuse.

Definition of Success:

Improving household waste sorting behaviour will lead to improvements in the amount of materials recovered through:

- MSW materials being separated correctly at the source. MSW recovery rates increasing from 32 per cent (variable across different local governments) to 70 per cent by 2030 because of a reduction in contamination.
- Contamination rates being reduced. Increased availability of high- quality uncontaminated waste materials demonstrate community uptake of communications.

Indicators of Success:

The WasteSorted evaluation will identify the:

- proportion of local governments using the WasteSorted toolkit or Be a GREAT Sort campaign materials.
- percentage increase of householders who sort high-impact waste items correctly.
- reduction in kerbside bin contamination rates.
- reduction in MSW waste sent to landfill by local governments

Interdependencies:

The campaign is supported by the WasteSorted toolkit and aligned messaging from other communications platforms, such as those managed by the local governments, including the WA Local Government Association's (WALGA) work on bin-tagging, household hazardous waste collection points and waste-related conferences. Other opportunities to promote the key messages are through the Containers for Change container deposit scheme, the WasteSorted Schools program (formerly the Waste Wise Schools program), the WasteSorted Awards, the implementation of the State Government's Plan for Plastics, the Keep Australia Beautiful Council ***Litter Prevention Strategy for Western Australians 2020–25***, Plastic Free July and events such as National Recycling Week.

**Headline Strategy 2:**

A consistent three bin kerbside collection system, which includes separation of food organics and garden organics from other waste categories, to be provided by all local governments in the Perth and Peel region by 2025 and supported by State Government through the application of financial mechanisms.

Implementing this headline strategy requires Perth and Peel local governments to provide a better practice three-bin kerbside service which includes a separate FOGO service. A separate FOGO service enables household organics to be processed into value products such as compost.

A three-bin service that includes FOGO can achieve recovery rates of 65 per cent (or higher if residual waste undergoes further treatment for recovery) and can make the single biggest contribution to achieving the waste strategy material recovery targets for MSW.

Definition of Success:

- All local governments in the Perth and Peel regions provide a consistent better practice three-bin FOGO kerbside collection system by 2025.
- Services achieve a recovery rate of 65 per cent by 2030.
- FOGO rollout plan delivered each year.

Indicators of Success:

- Annual data collection through local government waste plan progress reports.
- Number of Perth and Peel local governments that provide FOGO collection.
- Proportion of organics recovered.
- Sufficient FOGO processing capacity.

Interdependencies

A successful FOGO rollout is dependent on:

- Effective engagement and education supported by the WasteSorted toolkit and the Be a GREAT Sort campaign (headline strategy 1).
- Suitable processing infrastructure supported by the waste infrastructure plan (headline strategy 6).
- Strong markets for FOGO-derived products supported by government commitments to procure recycled products (headline strategy 3).
- Support for local governments to provide services through, for example, the Better Bins Plus: Go FOGO program.

**Headline Strategy 3:**

Implement sustainable government procurement practices that encourage greater use of recycled products and support local market development.

Government procurement can directly and immediately drive demand for recycled products and can also provide confidence within other sectors. For example, the use of recycled C&D materials by Main Roads WA (MRWA) saved significant costs, inspiring local governments and contractors to use recycled materials.

Focus must remain on the high waste generation streams of organics and C&D materials.

State and local governments have significant buying power and government purchasing decisions can directly support market development for recycled materials. They can also stimulate demand by providing confidence in the use of recycled products. This can be driven through implementation of the State Sustainable Procurement Policy, review of common use arrangements and promotion of opportunities to purchase low-waste and recycled products, including a longer-term review of government construction projects.

MRWA has shown leadership in using recycled products. It has used over 100,000 tonnes of Roads to Reuse products and has committed to increasing the use of recycled products (including C&D materials and rubber) in future projects. The Waste Authority is finalising a C&D Rollout Plan with actions - including procurement actions - which build on Roads to Reuse.

Definition of Success:

Success will be achieved by 2030 if:

- A strong and sustainable market exists for locally produced recycled products.
- Governments preference the use of recycled products (where available, and fit-for-purpose) over virgin raw materials.

Indicators of Success:

- Number of government agencies that preference the use of recycled products.
- Change in the proportion of recycled products purchased by government agencies.
- The number (tonnes) and type of recycled products purchased.

Interdependencies:

Procurement will stimulate market development; however, it is recognised that the local market for locally produced recycled materials and products is currently limited, and there will be a short- to medium-term period where the demand for recycled products and the supply of suitable products will not always be balanced. Over the next four years, there will be significant investment by industry, together with grant funding from the State and Commonwealth governments, in new reprocessing capacity, particularly for paper and cardboard, plastics, tyres and e-waste.

Interdependencies also exist with the FOGO market development work underway, the Roads to Reuse program and wider public sector procurement reforms led by the Department of Finance.

**Headline Strategy 4:**

Implement local government waste plans, which align local government waste planning processes with the *Waste Avoidance and Resource Recovery Strategy 2030.*

Local governments are the primary managers of MSW waste generated in WA. Improving local government waste management practices will have a significant impact on material recovery rates.

Local governments located in the Perth and Peel regions and major regional centres are required to include a waste plan within their plans for the future. These plans will allow the mapping of current performance and align local government waste management activities with the waste strategy. The first annual reports on the implementation and progress of waste plans are required by 1 October 2022.

Definition of Success:

Success will be achieved when all relevant local government waste plans are aligned with the objectives and targets of the waste strategy, and plans are implemented to achieve effective outcomes, including increasing material recovery rates and reducing MSW landfill volumes.

Interdependencies:

Development and implementation of local government waste plans is part of the local government integrated planning framework. There are also interdependencies between the Planning and Development Act 2005, the Local Government Act 1995, the WARR Act and the Environmental Protection Act 1986 (EP Act). Any reviews of these Acts and their associated Regulations will require respective legislative teams and the Parliamentary Counsel's Office to work collaboratively to ensure consistent, positive impacts on local government waste management responsibilities.

**Headline Strategy 5:**

Review and update data collection and reporting systems to allow waste generation, recovery and disposal performance to be assessed in a timely manner.

The Waste Avoidance and Resource Recovery Levy Act 2007 (WARR Levy Act) and Waste Avoidance and Resource Recovery Levy Regulations 2008 (WARR Levy Regulations) provide for a landfill levy for waste received at landfill premises in the metropolitan region, and for waste collected in the metropolitan region and received at landfill premises outside the metropolitan region. The waste levy is an economic instrument that aims to reduce waste to landfill by increasing the price of landfill disposal and generating funds for a range of waste and environmental purposes.

In January 2015, the waste levy increased from $28 per tonne to $55 per tonne for putrescible waste and from $8 per tonne to $40 per tonne for inert waste. There were incremental increases in the intervening years. The levy in 2021-22 was $70 per tonne for both putrescible and inert waste sent to landfill.

Definition of Success:

A waste levy that acts effectively to reduce the volume of material lost to landfill and encourages increased material recovery of all waste generated in WA to at least 75 per cent by 2030.

Indicators of Success:

The scope and application of the waste levy ensures it meets the objectives of the waste strategy and a new five-year schedule of waste levy rates is established.

Interdependencies:

- Those who dispose of waste at metropolitan landfill sites are subject to the waste levy.
- The waste levy aims to reduce waste to landfill by increasing the price it costs to dispose of waste via landfill.
- At least 25 per cent of the annual waste levy revenue must be allocated to the WARR Account, administered by the Waste Authority.
- The WARR Account funds a variety of waste reduction, recycling and environmental protection programs and initiatives, specified in the annual business plan approved by the Minister for Environment.
- The success of WARR Account funded actions should eventually lead to a reduction in the revenues from the waste levy and therefore a reduction in funding available for further programs.

**Headline Strategy 6:**

Undertake a strategic review of Western Australia's waste infrastructure (including landfills) by 2020 to guide future infrastructure development.

Planning for future waste infrastructure development is crucial to achieving the waste strategy target that at least 75 per cent of waste generated in WA is reused or recycled by 2030. The commissioning of two significant waste-to-energy facilities in Kwinana and East Rockingham in 2022 is a major development in waste infrastructure in WA.

A waste infrastructure audit and needs analysis undertaken in 2021-22 will form the basis of the State Waste Infrastructure Plan. The plan will provide a long-term framework to guide decision-making for the planning and development of waste infrastructure in WA. Public and industry consultation will be undertaken in 2022-23, and the plan finalised in late 2022/early 2023.

Definition of Success:

Sufficient waste infrastructure is available to cater for WA's needs, meet waste strategy targets and move WA towards a circular economy.

Indicators of Success:

- The state waste infrastructure plan effectively guides planning and decision-making for waste infrastructure.
- Planning activities include existing infrastructure which meets better practice standards, and the additional measures and infrastructure required to achieve waste strategy targets.
- A land-use planning instrument for waste infrastructure that informs planning decisions is established for use by the State Government, local government and industry.
- Stakeholders – including the Department of Planning, Lands and Heritage (DPLH), the waste and recycling industry and local governments – are consulted to ensure their views are considered in the planning process.
- Well-sited landfills and other waste facilities, which meet better practice standards (where applicable) and have reduced environmental and social impacts, are developed.

Interdependencies:

- The EP Act contains provisions for the approval, licensing and ongoing regulation of prescribed premises (including landfills and other waste facilities) and seeks to ensure that these premises do not present an unacceptable risk to the environment or public health.
- The state waste infrastructure plan should align with DPLH's State Planning Strategy 2050 and Infrastructure WA's State Infrastructure Strategy to ensure a consistent whole-of-government approach to achieving shared desired outcomes.
- Headline strategy 6 aligns with initiatives that may be undertaken as part of the emergency waste management project being delivered by the Department of Water and Environmental Regulation (DWER) and the State Emergency Management Committee.
- Mechanisms, including funding agreements, should be established to support investments in local resource recovery infrastructure.

**Headline Strategy 7:**

Review the scope and application of the waste levy to ensure it meets the objectives of Waste Avoidance and Resource Recovery Strategy 2030 and establish a schedule of future waste levy rates with the initial schedule providing a minimum five-year horizon.

Under regulation 18C of the Waste Avoidance and Resource Recovery Regulations 2008 (WARR Regulations), liable persons are defined as those who provide waste services (including local governments); waste recyclers who treat, process or sort at least 1,000 tonnes of reprocessed, recycled or recovered material in a financial year; and landfills located outside of the metropolitan region which receive at least 20,000 tonnes of solid waste in a financial year. Liable persons are required to report the required data on an annual basis. The data collected is used to track progress against waste strategy targets.

Definition of Success:

Performance against the waste strategy targets can be assessed accurately and in a timely manner. The management of data ensures that the delivery of the waste strategy is better informed and more likely to succeed.

Indicators of Success:

- Relevant, quality and timely waste and recycling data is collected.
- The management of waste data meets legislative requirements, supports the delivery of the waste strategy and meets the needs of waste data stakeholders.
- Liable persons required to report waste and recycling data can do so in an efficient manner.

Interdependencies:

Timely and reliable data underpins the development and maintenance of effective waste management legislation, licensing, policy, programs and the waste levy. Improved data will enhance the measurement and evaluation of waste management programs and initiatives and ensure funding and other resources are directed where they can be most effective.

**Headline Strategy 8:**

Provide funding to promote the recovery of more value and resources from waste with an emphasis on focus materials.

The state's capacity to reprocess, repurpose or reuse recyclable materials into new products will be significantly enhanced through the substantial investment by industry, and State and

Commonwealth government grants for new infrastructure, which will be developed over the next four years.

Containers for Change:

Containers for Change gives Western Australians an opportunity to return eligible drink containers for a 10-cent refund. The program is supported by the Waste Authority and has increased the recycling rate in WA.

Waste Infrastructure:

The Recycling and Waste Reduction Act 2020 regulates the export of certain types of processed waste while building Australia's capacity to generate high-value recycled commodities and associated demand. Waste glass, tyres, and mixed paper, cardboard and plastics which have not been processed into value-adding material are subject to the export ban:

- All waste glass by January 2021
- Mixed waste plastics by July 2021/22 (phases 1 and 2)
- All whole tyres including baled tyres by December 2021
- Remaining waste products, including mixed paper and cardboard, by no later than 1 July 2024.

E-waste Ban to Landfill:

A State Government plan to ban e-waste from landfill by 2024 will require policy development, regulations, compliance resources and grant administration support for improved e-waste recycling facilities. Work commenced 2021-22.

Definition of Success:

- Funding agreements are successfully established with identified reprocessing projects.
- WA moves towards a more circular economy, with local markets buying locally produced recycled products made from locally generated waste.

Indicators of Success:

- Projects funded and started within the financial year that funding is made available.
- Funding programs are well defined, with clear scope, objectives, targets and outcomes in line with the waste strategy's objectives and targets.
- Volume of material diverted from landfill and value of products derived from that material.

Interdependencies:

- Funding to promote the recovery of more value and resources from waste includes supporting existing product stewardship schemes, such as the Containers for Change container deposit scheme introduced in 2020.
- Recovered material must be processed to a standard that gives it value as a product with a viable market.

1) There are further interdependencies with the national waste ban and subsequent implementation plan, the National Waste Policy and Action Plan and the Australian Packaging Covenant Organisation

**MRA Consulting Group**

Suite 408 Henry Lawson Building
19 Roseby Street
Drummoyne NSW 2047

+61 2 8541 6169
info@mraconsulting.com.au
mraconsulting.com.au


MRA Consulting Group