



WHITE PAPER
NTCRS SCOPE EXPANSION





EXECUTIVE SUMMARY

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Australia and New Zealand Recycling Platform Limited ('ANZRP') is an approved co-regulatory arrangement under the Product Stewardship Act 2011 ('the Act'). It is a not-for-profit ('NFP'), for-industry organisation established to manage members' liability under the National Television and Computer Recycling Scheme ('NCRS'). ANZRP is funded by over 40 members including leading ITC manufacturers and retailers with strong commitments to sustainability and corporate responsibility. ANZRP focuses on regulatory compliance and meeting its members' high standards for sustainability.

The Act has recently been reviewed by the Department of Agriculture, Water and the Environment ('the Department'). The Department made 26 recommendations, and the Australian Government has responded stating it will immediately commence action on all of the recommendations, with implementation already commenced for a number of the recommendations. One of the recommendations is to assess the feasibility of expanding the NCRS to include electronic and electrical equipment ('EEE').

ANZRP supports the expansion of the NCRS to include all EEE due to the following benefits:

- Allows waste EEE to be managed in a nationally consistent manner which will reduce public confusion and encourage greater community participation.
- Avoids landfill disposal of EEE which can contain hazardous materials.
- Increases the recycling and recovery of valuable materials contained in EEE including precious metals and critical materials.
- Improves environmental outcomes associated with recycling EEE including avoidance of greenhouse gas emissions, energy and water usage and particulate matter emissions.
- Creates domestic jobs in the recycling sector.
- Achieves economies of scale thereby reducing the costs of current EEE product stewardship schemes and programs.
- Prevents free-riders and creates an even playing field.
- Prevents multiple product stewardship schemes thereby reducing overheads and making compliance and enforcement activities more efficient.

This White Paper provides ANZRP's recommendations on the best options to broaden the NCRS to include all EEE.



SUMMARY OF KEY RECOMMENDATIONS

ANZRP's key recommendations are summarised below:

01. Expand the scope of the of the NTCRS to cover all EEE, i.e. any device that requires an electric current or electromagnetic field to operate, including batteries.
02. Establish harmonised waste EEE category definitions using the six categories used by the European Union WEEE Directive.
03. Trial a full EEE pilot program in sample metropolitan, inner regional, outer regional and remote areas in each Australian state and territory to identify capacity constraints and inform NTCRS expanded scope recycling targets and material recovery targets across all new EEE streams and categories.
04. Conduct lifecycle benefit analysis across an expanded EEE scope for inclusion in the NTCRS to accurately quantify the expected lifecycle benefits across all EEE categories.
05. Implement stronger monitoring and enforcement of the requirements of the NTCRS to ensure an even playing field and increase the requirements for reasonable access collection services so that all cities and towns across Australia are adequately serviced.
06. Implement an allocation model for outer regional/remote locations so that all co-regulatory arrangements do not have to provide a separate collection service in these locations.
07. The Department to provide earlier notification to co-regulatory arrangements of their annual recycling target to allow for better planning and budgeting.
08. Conduct periodic Australia-wide waste EEE material flow analysis to track waste EEE movements (including international exports), confirm waste arising assumptions and ensure recycling targets remain achievable.
09. Undertake regular social research to understand how the attitudes, beliefs and behaviours of waste EEE generators are changing and how product stewardship education campaigns can do more to address undesired behaviours such as EEE hoarding.
10. Investigate how re-use can be integrated with the NTCRS.
11. Assess all EEE product categories to identify any material properties that are hazardous to manage, to understand recycling and repair capacity and to determine material recovery rates that can be achieved.
12. Require retailer participation in the NTCRS to either provide collection services for used EEE that they sell or educate consumers on where they can drop off used EEE.
13. Consider the type of organisation that can be approved as a co-regulatory arrangement to ensure that their objectives are in alignment with the objects of the Act.
14. Ensure ongoing support for waste EEE management across all tiers of government in Australia.
15. Do not preclude co-regulatory or mandatory product stewardship model funding support in the Product Stewardship Investment Fund.
16. Establish one NTCRS education and awareness campaign to reduce user confusion, increase waste EEE recovery and responsible management.

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WHITE PAPER

1.0

PURPOSE OF THE WHITE PAPER

Australia's key product stewardship legislation, the Product Stewardship Act 2011 ('the Act'), has recently been reviewed by the Department of Agriculture, Water and the Environment ('the Department'). The Department made 26 recommendations covering three themesⁱⁱ:

- 01. Overall effectiveness of the Act**
- 02. Product stewardship initiatives under the Act**
- 03. The National Television and Computer Recycling Scheme ('the NTCRS')**

The Australian Government has responded to the review stating it will immediately commence action on all of the recommendations, with implementation already commenced for a number of the recommendationsⁱⁱⁱ.

Recommendation 15 to "assess the feasibility of expanding the NTCRS to include electronic and electrical equipment products", has been responded to by the Australian Government stating it will "assess the options, costs and benefits of developing product stewardship arrangements for electrical and electronic equipment". Further, the Australian Government has advised that it supports broadening the NTCRS to include all electrical and electronic products, so that all consumer products with a plug or battery can be recycled.

The purpose of this White Paper is to provide recommendations on the best options to broaden the scope of the NTCRS to include all electrical and electronic equipment ('EEE').

Australia and New Zealand Recycling Platform Limited ('ANZRP') is an approved co-regulatory arrangement under the Act. It is a not-for-profit ('NFP'), for-industry organisation established to manage members' liability under the NTCRS. ANZRP is funded by over

40 members including leading ITC manufacturers and retailers with strong commitments to sustainability and corporate responsibility. ANZRP focuses on regulatory compliance and meeting its members' high standards for sustainability. ANZRP is a certified B Corporation demonstrating the highest standards of social and environmental performance, public transparency, and accountability – it was the first organisation in the waste management industry in Australasia to become a certified B Corporation.

ANZRP consistently meets the NTCRS outcomes each year with our 2018/19 performance summarised below:

- **Recycling target:** Achieved our recycling target by recycling 21,710 tonnes of NTCRS regulated product.
- **Material recovery target:** Achieved the material recovery target by recovering 93% of all materials recycled and diverting them from landfill and energy from waste.
- **Reasonable access:** Achieved reasonable access by providing households and small businesses with free access to the TechCollect service via 276 public drop-off sites and events across the country.

ANZRP has extensive experience in managing collection and recycling programs for NTCRS regulated product (televisions, printers, computers, parts and peripherals) as well as other EEE. ANZRP is supportive of expanding the scope of the NTCRS to achieve environmental, social and economic improvements.

ANZRP's analysis and recommendations for NTCRS scope expansion are provided in this White Paper under the following parts:

- Benefits of EEE re-use and recycling
- Types of product stewardship legislation in Australia
- Co-regulatory product stewardship for EEE
- NTCRS scope expansion
- Current NTCRS issues to be rectified
- Design changes to an expanded NTCRS
- Government action required



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EEE RE-USE AND RECYCLING

2.0

BENEFITS OF EEE RE-USE AND RECYCLING

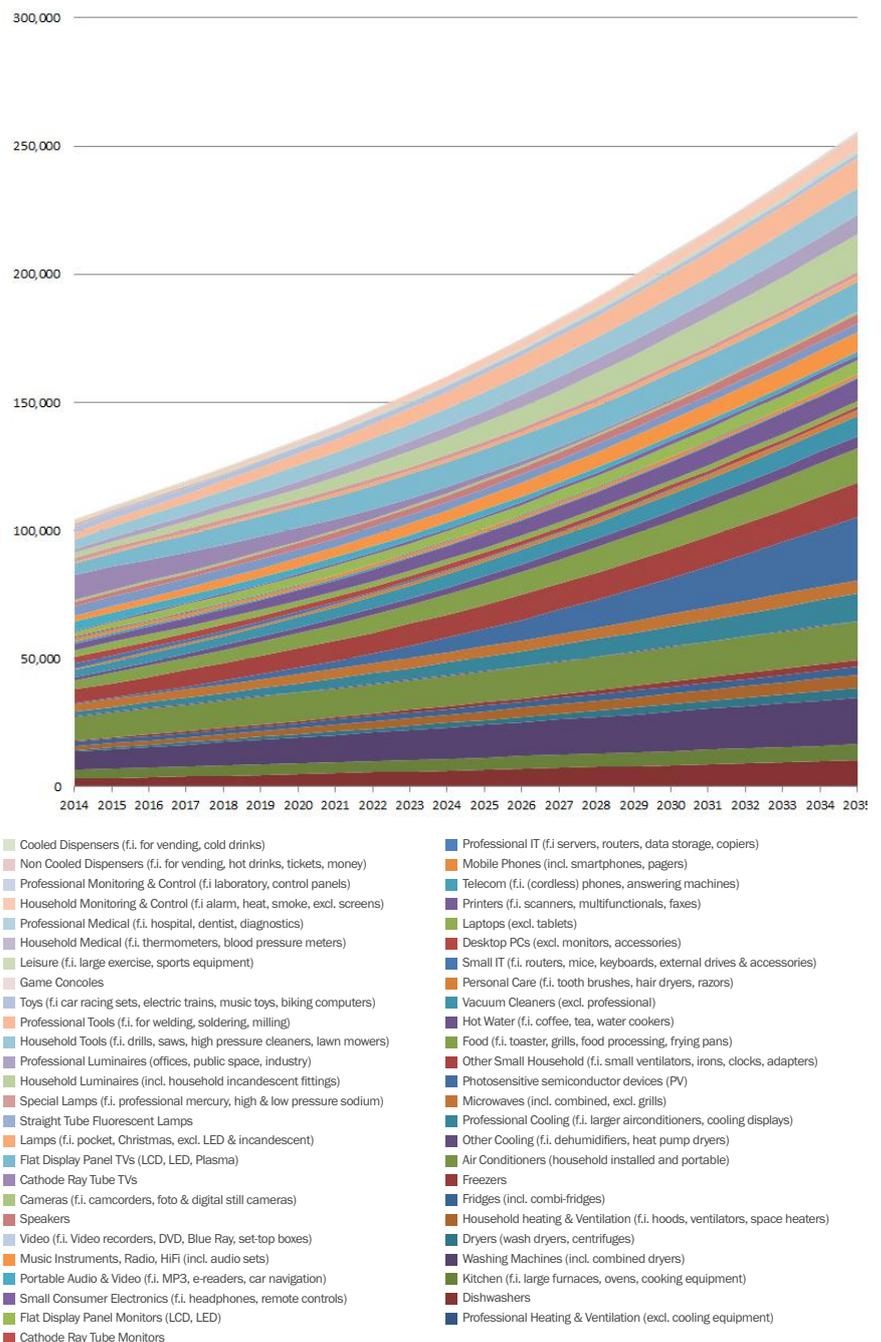
It is well known that EEE is the fastest growing waste stream in Australia.

Reports identify that EEE is increasing at a rate three times faster than municipal waste streams with the average Australian generating approximately 21.3 kg each year and there are many reasons for this. From shorter product lifespans to customer attitudes and behaviours geared towards having the latest and greatest gadget or device which will soon be superseded by the next must have model. We are all guilty of contributing to this trend and we must share responsibility to ensure that these products, and the sometimes hazardous and valuable materials found within them, are safely managed and used to their full potential and not just for single life use. Although Australians are among the highest consumers of EEE across the globe, these trends are not unique to Australia. The amount of EEE used across the world grows by 2.5 million tonnes each year. In 2019, 53.6 million tonnes of waste EEE was generated globally, up 21 percent in just five years, and this volume is predicted to reach 74 million tonnes by 2030^{vii}.

The latest projections available indicate that more than 554,000 tonnes of waste EEE is generated in Australia each year and this figure will only increase with time. The Victorian Government projects that the rate of waste EEE generation in Victoria will increase by four percent each year between 2015 and 2035, as illustrated in Figure 1.

In addition, there are emerging EEE streams that will end up as problem waste streams in future if not addressed. An example is photovoltaic ('PV') panels which are only beginning to come to the end of their life. The sheer volume of EEE waste generation demonstrates the need to work in a collaborative and nationally consistent way to develop proactive policies and regulations that focus on re-using and recycling EEE which will result in benefits for our economy, environment and people. These benefits are discussed in the following sections.

Figure 1: Victorian waste EEE generation projection



Source: State Government of Victoria Department of Environment, Land, Water and Planning (2017). *Managing e-waste in Victoria, Policy Impact Assessment. [Pdf]*. Melbourne: State Government of Victoria. Available at: s3.ap-southeast-2.amazonaws.com/hdp.au.prod.app.vic-engage.files/9315/0837/1389/FINAL_E-waste_PIA_v3.pdf [Accessed 30 Jun. 2020].

2.1

AVOIDANCE OF EEE TO LANDFILL

EEE can contain hazardous materials like mercury, lead, cadmium, chromium, nickel, antimony and brominated flame retardants.

It is estimated that EEE is the source of 40 percent of the lead and 75 percent of the heavy metals found in landfills, and once EEE is disposed of to landfill, crushed and broken, the acidic conditions cause lead and other heavy metals to dissolve and collect as leachate. Other pollutants from EEE in landfills can also be released into the air^{xi}.

Further to this, given the amount of landfill space available in Australia is reducing, Australian jurisdictions are implementing

plans to reduce the community's reliance on landfill disposal.

Therefore, without EEE re-use and recycling frameworks in place, we will continue to see hazardous EEE components disposed of in landfill and the negative impacts associated with this activity.

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2.2

RECOVERY OF THE ECONOMIC VALUE OF EEE

The latest global forecasts show that waste EEE is worth over AUD \$91 billion annually, which is more than the gross domestic product of most countries^{xii}.

Manufacturing EEE can also be costly and extremely energy-intensive. Recent global events like the coronavirus pandemic have shown that we need to become less dependent on international supply chains, especially for critical raw materials found in EEE like antimony, cobalt, graphite and tantalum.

These critical materials have no viable substitutes available on earth and can be found in abundance embedded within EEE. Compared with mining, EEE recycling activities or 'urban mining', emit less carbon into our atmosphere and consume less

water and energy. Urban mining can be more economically viable than extracting valuable minerals from the earth as the resources recovered from urban mining are typically worth more on local and international commodity markets as they have a higher purity content compared with raw minerals. This is because EEE can contain components with up to 50 times higher concentration of valuable metals and minerals than those found in ores extracted from the earth. For example, recycling one tonne of copper uses only 10 percent of the total energy that is used to extract copper from mined copper ore and can be worth up to 90 percent of its original cost. Other non-ferrous metals contained in EEE like nickel, aluminium and lead are also recyclable without effect on their properties.

Reactive metals like lithium commonly used in batteries also have huge potential to be recycled and re-used efficiently in the production of new batteries^{xiv}.

EEE also contains precious metals like gold, silver, copper and nickel, as well as rare earth elements such as indium and palladium. A single piece of EEE can contain up to 60 elements from the periodic table, and it is estimated that up to seven percent of the world's gold may currently be contained within waste EEE^{xvi}. All raw materials, even when not classed as critical, are important for our economy. Conserving all raw materials, precious and rare earth metals found in EEE and keeping them out of our landfills will make Australia's economy, and the global economy, more resource efficient and resilient.

2.3

LIFECYCLE BENEFITS

ANZRP undertakes a lifecycle assessment of its TechCollect program for the collection and recycling of NTCRS regulated product each year.

Over the 2018/19 period it was calculated that the TechCollect program recycled 22,014 tonnes of NTCRS regulated product which achieved the following benefits:

- Prevented 26,165 tonnes of CO₂e from entering the atmosphere. This is equivalent to planting 392,485 trees.
- Saved 135,794 m³ of water use. This is equivalent to the annual average Australian household water consumption for 665 homes.
- Saved 371,756 GJ of energy usage. This is equivalent to the

annual energy consumption of 2,741 Australian homes.

- Prevented 37,005 kg of particulate matter emissions from entering the atmosphere. This is equivalent to 37,340,924 km of diesel truck travel in Australia.

The environmental impacts associated with collecting, transporting, recycling and downstream reprocessing are entirely offset by the benefits associated with avoiding the mining and production of virgin materials, in particular iron, copper, aluminium and plastic.

These significant environmental benefits only relate to NTCRS regulated product managed by ANZRP. If these benefits were extrapolated across all waste EEE generated in Australia each year, they would be substantially amplified. For example, temperature-exchange equipment found in refrigerators and air conditioners can slowly release greenhouse gases – it is estimated that approximately 90 million tonnes of CO₂e leak from scrapyards each year globally^{viii}.

2.4

CRITICAL MATERIALS AND CONFLICT MINERALS

Recycling waste EEE recirculates valuable materials embedded within it, which in turn reduces our demand and reliance on mining and refining the earth's finite resource supplies.

In 2017 the European Commission created a list of 27 critical raw materials that are considered of high importance to the European Union's economy, yet their supply is not readily available. The list is provided in Figure 2 and includes materials that are relied upon in the manufacture of everyday EEE and are essential for further technological advancement (both in Europe and Australia)^{viii}. These critical raw materials are irreplaceable in renewable energy technologies that are crucial for Australian State and Territory Governments' commitments to reach net zero emissions by 2050 e.g. solar panels, wind turbines, electric vehicles, and energy-efficient lighting.

Figure 2: European Union's Critical Raw Materials List

2017 Critical Raw Materials (27)			
Antimony	Fluorspar	Light Rare Earth Elements	Phosphorus
Baryte	Gallium	Magnesium	Scandium
Beryllium	Germanium	Natural graphite	Silicon metal
Bismuth	Hafnium	Natural rubber	Tantalum
Borate	Helium	Niobium	Tungsten
Cobalt	Heavy Rare Earth Elements	Platinum Group Metals	Vanadium
Coking coal	Indium	Phosphate rock	

Source: European Commission (2017), The 2017 list of critical raw materials for the EU.[Pdf]. Brussels: European Commission. Available at: ec.europa.eu/growth/sectors/raw-materials/specific-interest/critical_en [Accessed 1 Jul. 2020].

Another type of finite resource that can be found within waste EEE is conflict minerals. Conflict minerals are minerals that are extracted and sold to fund and perpetuate fighting in conflict zones like the Democratic Republic of the Congo and neighbouring

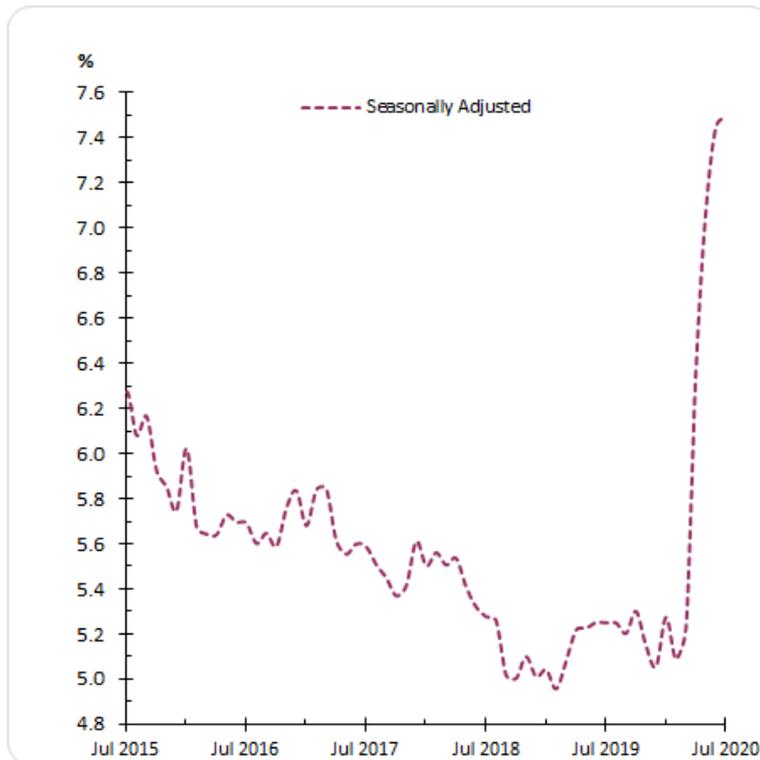
nations. The four most common conflict minerals are tin, tantalum, tungsten and gold, often referred to as '3TG'. Recycling waste EEE can reduce sourcing 3TG from conflict zones.

2.5

JOB CREATION

Australia has just entered its first recession in 29 years and unemployment rates are on the rise with a rate of 7.4 percent recorded in June 2020, an increase of 2.2 percent since June 2019^{xix} – see Figure 3 below.

Figure 3: Australian Unemployment Rate June 2020



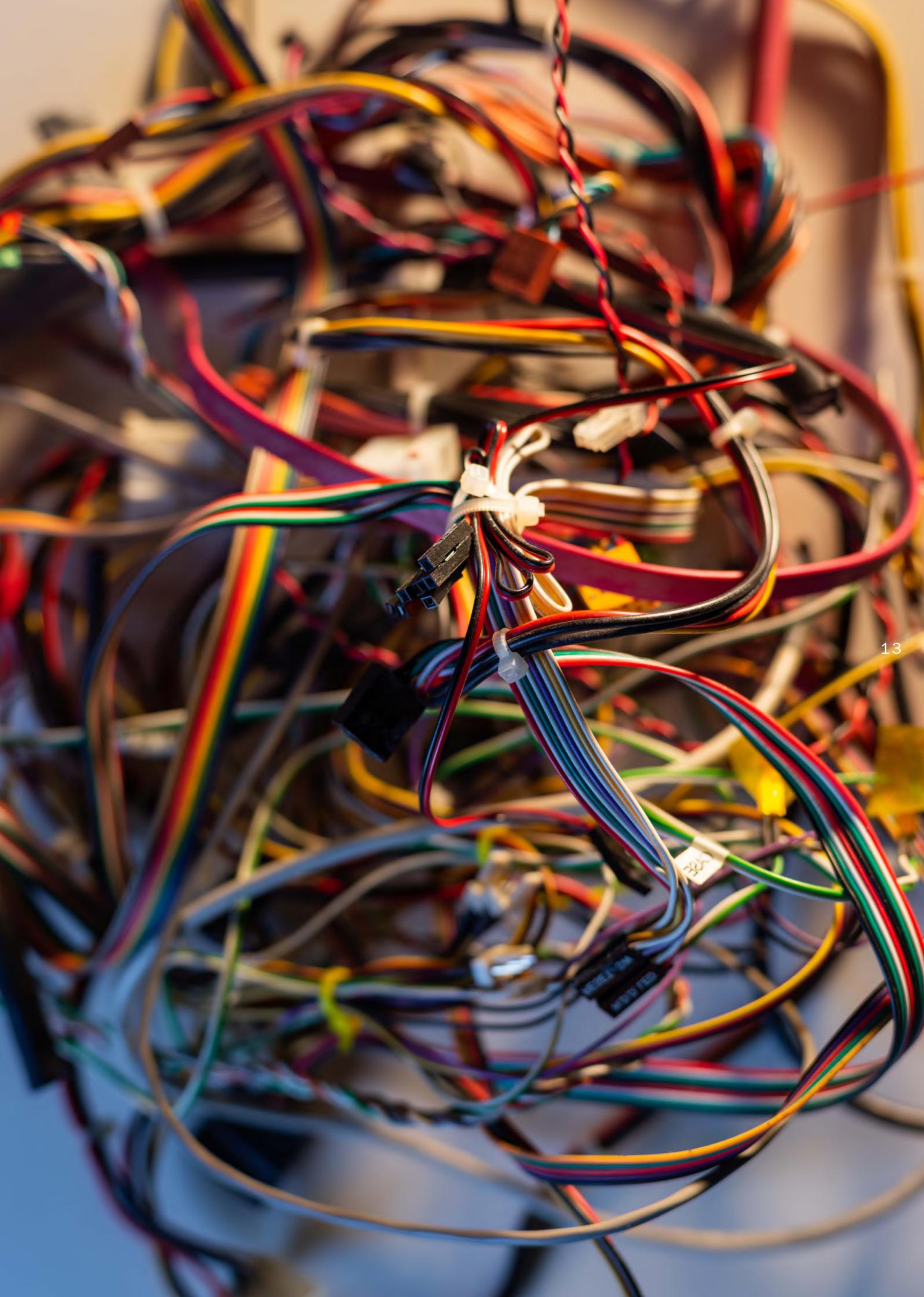
Source: Australian Bureau of Statistics (2020). 6202.0 - Labour Force, Australia, June 2020 [Online] Available at: abs.gov.au/ausstats/abs@.nsf/mf/6202.0 [Accessed 16 Jul. 2020].

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There are significant social benefits associated with responsible waste EEE management. An expanded NTCRS scope to cover all EEE in Australia could help to stimulate the Australian economy through the creation of local, skill-based employment. The Australian Council of Recycling stated that Australia's recycling industry is one of our country's growth industries, supporting a more sustainable

economy, whilst directly employing over 20,000 people and indirectly creating almost 35,000 jobs^{xx}. The estimated direct Full Time Equivalent ('FTE') employment per 10,000 tonnes of waste is 9.2 for recycling and only 2.8 for landfill disposal^{xxi}. On a national level, this corresponds to an estimated direct labour force of 22,243 FTEs in recycling activities and only 6,695 FTEs in landfill operations^{xxii}.

ANZRP's TechCollect program recycling partners have advised that if the scope of the NTCRS was expanded they see substantial opportunity to expand their workforce, including those who employ disabled and disadvantaged workers. Recycling partners were particularly interested in the scope being expanded to include small household EEE, as they already have the capacity and expertise to recycle these items.





PRODUCT STEWARDSHIP LEGISLATION IN AUSTRALIA

3.0

WHAT IS PRODUCT STEWARDSHIP?

At its core, product stewardship is the principle that there should be a shared responsibility for environmental and health impacts of a product across its lifecycle. This principle spans across a product's entire value chain, i.e., manufacture, import, distribution and consumption, as well as management once it is no longer wanted or has reached the end of its useful life.

The key legislation for product stewardship in Australia is the Act, which provides a national framework to support voluntary, co-regulatory and mandatory product stewardship schemes^{xxiii}.

The Act requires that each year the Federal Minister for the Environment publishes a list of products being considered for accreditation or regulation under the Act and the reason(s) why. This provides notification to the community

and industry on which products are being considered for regulated product stewardship if industry does not implement a voluntary product stewardship scheme. EEE was first added to this list in 2016/17.



3.1

VOLUNTARY PRODUCT STEWARDSHIP

Voluntary product stewardship schemes are designed, funded and led by industry. They are most effective when there is a high rate of industry participation, good governance structures in place, and when schemes are designed to appropriately address identified product impacts and/or market failures.

Voluntary schemes are implemented in the absence of regulation thereby avoid cost benefit analysis and regulatory impact assessments required to establish co-regulatory and mandatory product stewardship schemes. Some examples of voluntary product stewardship schemes implemented in Australia include:

- Cartridges 4 Planet Ark for printer cartridge recycling
- Soft Landing for mattress recycling
- PVC Stewardship for the management of PVC products
- FluoroCycle for mercury containing lamp recycling
- MobileMuster for mobile phones

The Act provides for accreditation of voluntary product stewardship schemes that demonstrate that they are designed to meet the objects of the Act and other criteria. The only voluntary product stewardship program accredited under the Act is the Australian Mobile Telecommunication Association's MobileMuster program which has recovered nearly 1,500 tonnes of mobile phones and accessories since it was established in 1998.

There are also voluntary schemes implemented which collect funds through a levy mechanism which can be applied at the point of purchase or when a product is imported into Australia. To collect funds, voluntary arrangements need approval from the Australian Consumer Competition Commission (ACCC) where mandatory public consultation requirements apply. There are several of these ACCC underpinned voluntary schemes operating in Australia including:

- Tyre Product Stewardship Scheme for the development of viable markets for end-of-life tyres
- Paintback for paint and packaging recycling
- drumMuster for agricultural chemical container recycling
- Refrigerant Reclaim Australia for ozone depleting and synthetic greenhouse gas refrigerant reclamation and responsible disposal

Although voluntary product stewardship can avoid regulation and can be faster to implement than co-regulatory and mandatory product stewardship schemes, one of its major downfalls is free-riding. Free-riding is when parties who benefit from a scheme, particularly producers, do not pay their fair share (or any) of the scheme costs. One example is the Cartridges 4 Planet Ark program where it is estimated that up to 18 percent of the product recycled is manufactured by brand owners who do not fund the program. The incidence of free-riding generally increases with the number of producers and the length of the product supply chain.

Where there is a high degree of free-riding or industry unwillingness to support effective product stewardship, coordinated industry-led action can be undermined resulting in significant delays to establishing a voluntary scheme or derailing it altogether. These types of challenges have been experienced in Australia with batteries whereby a voluntary national scheme yet to be established even though batteries are recognised as a high risk product category and have been listed on the Act's priority product list since 2013/14.

3.2

CO-REGULATORY PRODUCT STEWARDSHIP

Co-regulatory product stewardship approaches can be described as a mix of industry action and formal regulation under the Act. The Australian Government sets the operational requirements of a product stewardship scheme and the minimum outcomes that must be achieved by industry. Co-regulatory product stewardship schemes are administered by co-regulatory arrangements. Liable parties, i.e., producers of products, are required

to become a member of and pay fees to a co-regulatory arrangement to acquit their liability. The NTCRS is Australia's only co-regulatory product stewardship scheme with four co-regulatory arrangements approved under the Act.

As co-regulatory product stewardship schemes have regulatory requirements, a cost benefit analysis and regulatory impact assessment must be performed. This includes assessing whether the product

category in question is deemed a sufficient risk to human health and the environment and how mitigating the risk to benefit the community will be achieved.

Co-regulatory product stewardship allows for penalties to be imposed on liable parties who do not join a co-regulatory arrangement, and on co-regulatory arrangements who fail to meet their requirements and outcomes under the Act.

3.3

MANDATORY PRODUCT STEWARDSHIP

Like co-regulatory product stewardship, mandatory product stewardship places a legal obligation on parties to take certain actions in relation to a product. However, the specific action to take is

stipulated under the Act - there is little or no discretion on how the requirements are to be met. There are currently no mandatory product stewardship schemes in place under the Act. Potential actions

that could be stipulated by mandatory product stewardship in future include banning the use of a type of product or requiring a product to be labelled.

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3.4

ALTERNATIVES TO PRODUCT STEWARDSHIP

In addition to product stewardship to establish consistent management approaches for products of national significance, coordinated action can also be mandated by the Australian, State and Territory Governments through the introduction of National Environment Protection Measures ('NEPMs'). The National Environment Protection Council Act 1994 (Cth), and complementary state and territory legislation allow the National Environment Protection Council ('NEPC') to make NEPMs. NEPMs are a special set of national objectives designed to assist in

protecting or managing particular aspects of the environment and to be implemented by each State and Territory Government.

An example is the NEPM for used packaging materials. The goal of this NEPM is to reduce environmental degradation arising from the disposal of used packaging and conserve virgin materials through the encouragement of re-use and recycling of used packaging by supporting and complementing the voluntary strategies in the Australian Packaging Covenant. Those who are required to meet these NEPM requirements can choose to become

a member of the Australian Packaging Covenant Organisation who will provide a supported and guided pathway to comply with the legislative obligations of the NEPM or meet their obligations independently.

Australian State and Territory Governments also have the power to implement EEE to landfill bans and corresponding waste management policies placing obligations on duty holders for EEE management at various points of a product's value chain. This type of intervention approach and the associated strengths and weaknesses are discussed further in Section 4.1 below.

3.5

NATIONAL, STATE AND TERRITORY POLICY ALIGNMENT

3.5.1

National Waste Policy

Australia's 2018 National Waste Policy provides a national framework for collective action across businesses, governments, communities and individuals until 2030 and identifies five overarching principles underpinning waste management in a circular economy:

01. Avoid waste
02. Improve resource recovery
03. Increase use of recycled material and build demand and markets for recycled products
04. Better manage material flows to benefit human health, the environment and the economy
05. Improve information to support innovation, guide investment and enable informed consumer decisions

This policy recognises the opportunities presented by a circular economy approach towards resource management and looks to guide and coordinate all segments of the Australian community to do more with less. However, it does not remove the need for governments, businesses and industries to implement tailored solutions in response to local and regional circumstances, like those that can be established under Australia's product stewardship framework.

It also acknowledges and places preference around higher order interventions that follow Australia's waste hierarchy.

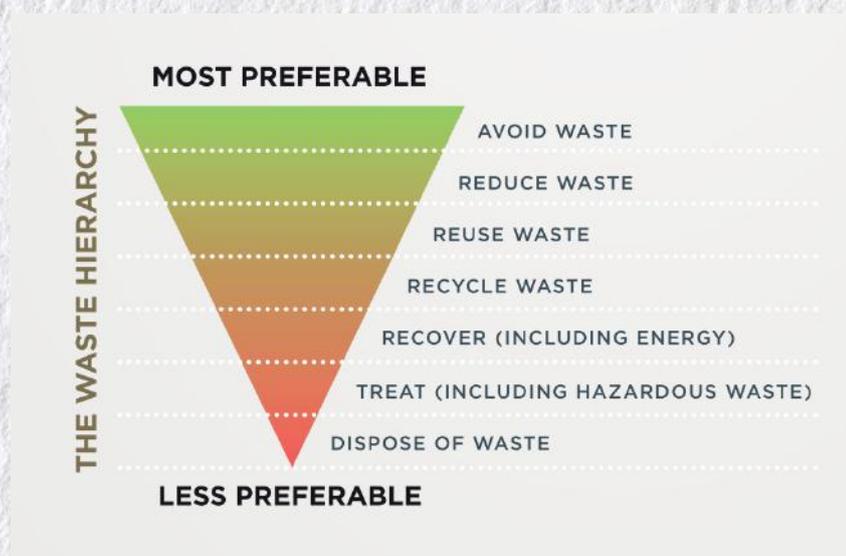
3.5.2

State and territory-led circular economy policies

The Victorian Government recently released its circular economy policy, Recycling Victoria – a 10 year action plan with more than \$300 million of state funding allocated from its landfill levy to fundamentally transform Victoria's recycling sector, reduce waste, create thousands of jobs and set Victoria up for a more sustainable future. The New South Wales Government also has a circular economy policy statement titled 'Too Good To Waste'. Both states agree that product stewardship is a key enabler of a circular economy approach^{xxvii}.

Other jurisdictions are also considering similar circular economy policy approaches. The Western Australian Government released a waste reform consultation paper "Closing the Loop: Waste reforms for a Circular Economy" in February 2020 that considers waste reforms necessary to minimise the production of waste and promote waste material recovery. The Queensland Government has also underlined a circular economy in its Waste Management and Resource Recovery Strategy as a new economic model that will help Queensland become a zero-waste society, and it has established a Circular Economy Lab to support industry participants and their efforts to address entrenched industry challenges and capitalise on emerging opportunities within a circular economy setting.

Figure 4: Waste Hierarchy



Source: Commonwealth of Australia (2018). 2018 National Waste Policy: Less waste, more resources [Pdf] Canberra: Commonwealth of Australia. Available at: environment.gov.au/system/files/resources/d523f4e9-d958-466b-9fd1-3b7d6283f006/files/national-waste-policy-2018.pdf [Accessed 13 Jul. 2020].

3.5.3 Basel Convention

Australia is one of 151 nations who are signatories to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and have agreed to:

- Minimise hazardous waste generation
- Ensure adequate disposal facilities are available
- Control and reduce international movements of hazardous waste
- Ensure environmentally sound management of waste
- Prevent and punish illegal traffic

Under the Convention, signatory nations ensure that any hazardous waste sent internationally must be sent with a hazardous waste permit and with the consent of the receiving nation's relevant border and environmental authorities. However, a recent Basel Convention Ban Amendment will now prohibit all shipments of hazardous waste from OECD countries to non-OECD countries for waste disposal and recovery activities. If a waste is classified as hazardous due to the laws of the exporting or importing country but not according to Article 1(1)(a) of the Convention, the Ban Amendment will not apply if the shipment is for recycling^{xxx}. The Ban Amendment took effect in December 2019 with further amendments expected to be implemented specific to mixed plastic waste and single resin polymers that have not been processed from July 2021.

3.5.4 COAG export ban

Adding further to Australia's waste export commitments, the Council of Australian Governments ('COAG') agreed to implement a ban of certain product and materials streams being exported for overseas treatment or disposal without a licence. The ban will commence on 1 January 2021 with glass and will be expanded over four years to cover mixed plastics, whole tyres, single polymer plastics, paper and cardboard. A draft legislative package will be introduced to the Australian Parliament later in 2020 to enact these bans. COAG also pledged to build Australia's capacity to generate high value recycled commodities and associated demand, which will be a critical element if Australian waste management providers can no longer access offshore markets. The Department has stated that the COAG waste export ban is the first step in taking responsibility for our own waste and using this resource to create jobs, spark innovation, and deliver strong environmental outcomes^{xxxi}.

3.5.5 Funding support

In addition to state infrastructure funding grants available in various jurisdictions across Australia, the Australian Government recently announced a \$190 million commitment for a Recycling Modernisation Fund. This fund is set to generate \$600 million of recycling investment and drive a billion dollar transformation of Australia's waste and recycling capacity^{xxxi}. The Australian Government estimates that more than 10,000 jobs will be created and over 10 million tonnes of waste will be diverted from landfill to be used in the production of useful products^{xxxi}.

Australia's waste and recycling transformation is being further strengthened by additional funding:

- \$35 million to implement commitments under Australia's National Waste Policy Action Plan.
- \$24.6 million to improve national waste data so the Australian Government can measure recycling outcomes and track progress against national waste targets.
- \$14 million to support the establishment of new product stewardship schemes and expand existing schemes through Australia's National Product Stewardship Investment Fund.



CO-REGULATORY PRODUCT STEWARDSHIP FOR FEE

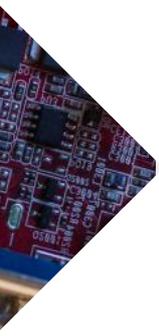
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Even though co-regulatory pathways can in some cases be lengthy and require more government involvement than voluntary approaches, there are many benefits in pursuing this type of product stewardship approach. These benefits are described in the following sections.

4.0

PREVENTS FREE-RIDERS AND LAGGARDS

When properly enforced, co-regulatory product stewardship is effective at establishing an even playing field for all parties deemed liable and directly addresses the issue of free-riding. Liable parties that do not meet their obligations for a co-regulatory scheme can be issued with civil penalties, injunctions or financial sanctions. The Act also provides for civil penalties and sanctions when a co-regulatory arrangement fails to meet the required outcomes of the scheme, including improvement notices or cancellation of an arrangement approval.



Tyre Stewardship Australia ('TSA') administers the voluntary tyre stewardship scheme. Currently TSA receives a levy from eight tyre importer members who represent 43 percent of the Australian passenger and truck tyre market in terms of units (and 26 percent by weight). Yet in 2018/19, the TSA tyre stewardship scheme recycled 64 percent of all tyres recovered in Australia. This demonstrates that TSA tyre importers are paying for more than their share of the market's tyre recovery costs. Given the expected increase in tyre recycling costs once the COAG export ban for tyres commences, TSA members will be further disadvantaged, so there is a risk that the tyre stewardship scheme will collapse. It is unlikely that all tyre importers in the market will participate in the tyre stewardship scheme unless the Australian Government legislates scheme participation.

Another benefit of co-regulatory product stewardship is that the Australian Government imposes timeframes to establish (or expand) a scheme and commence achieving outcomes. Conversely, voluntary product stewardship schemes can take a long time gain industry buy-in to set up a scheme. An example of this is with batteries which have been listed on the Federal Environment Minister's priority product list since 2013/14. In the seven years since then, there has been a lack of support from large battery producer brands to delay and dismiss industry action to develop a nationally consistent product stewardship scheme with shared responsibility across all battery producers. This is disappointing given the hazards and environmental impacts associated with end-of-life management for this product of concern.

In 2018, the National Waste and Recycling Industry Council (NWRIC), a member-based organisation that represents the interests of the more than 500 small waste management businesses in Australia, called on the Australian Government to implement a regulated product stewardship program for batteries by 2020 to protect critical infrastructure and maximise resource recovery. They have stated that regulated product stewardship is now essential given that voluntary efforts by the battery industry have failed to deliver a consumer-friendly national battery recycling scheme, and that very low recycling rates mean that regulatory intervention is the only option^{xxxv}.

4.1

STATES IMPLEMENTING EEE LANDFILL BANS

There are several jurisdictions in Australia with landfill disposal bans in place for all EEE, and there are others considering similar approaches, even though there is no full EEE product stewardship scheme in place (as the Australian Government and not the State Governments administers the Act).

Victoria has the most comprehensive landfill ban which covers all EEE including batteries. The regulatory instruments were supported by a \$1.5 million education and awareness campaign and a \$15 million fund to build Victoria's capacity and capability to safely manage waste EEE in line with key elements of AS/NZS 5377:2013 Collection, storage, transport and treatment of electrical and electronic equipment ('the Standard').

Whilst this landfill ban will achieve considerable environmental and community benefits, there have been several unintended consequences given the scope of the NTCRS does not include all EEE. The main issue is around paying for the collection and recycling of EEE not covered by the NTCRS, i.e., out of scope product. Local council collection sites (e.g. waste transfer stations) with contracts with NTCRS co-regulatory arrangements

expected them to collect and recycle out of scope product free of charge, even though co-regulatory arrangements are not funded to collect and recycle out of scope product. Further, members of the public and businesses expect that they can drop off all waste EEE at local council collection sites. This confusion also resulted in NTCRS collection channels becoming contaminated with out of scope items, presenting an unrecoverable cost for co-regulatory arrangements which can negatively impact on their collection partner relationships and recycling provider service rates.

Another issue with the Victorian EEE landfill ban in the absence of a product stewardship scheme is a low material recovery rate for many out of scope products. For example, if a recycler cuts the cord off a DVD player and recycles the cord but disposes of the remaining

product to landfill, or if the DVD player is sent to a scrap metal recycler then the requirements of the landfill ban would be complied with yet the intent of the ban is only partially met as significant quantities of both hazardous or valuable materials will still end up in landfill. An expanded NTCRS scope that aligns with EEE landfill ban would help to overcome these issues.

South Australia and the Australian Capital Territory also have bans in place, albeit with reduced product scopes compared with Victoria's. In the South Australian government's submission to the review of the Act they openly advocated for an expanded scope of EEE to be included in the NTCRS. If the scope was expanded to cover all EEE, we could expect to see an expansion of their landfill ban scope and more harmonised waste EEE management across state borders which is severely lacking across Australia at present.

4.2

SETS OUTCOMES AND RESULTS IN HIGHER RECYCLING RATES

Compared with other EEE product stewardship schemes and extended producer responsibility ('EPR') programs globally, Australia's NTCRS sets some of the highest operational requirements for co-regulatory arrangements to achieve on behalf of liable parties.

The regulations specify three key outcomes to be achieved and reported on publicly:

- Provide reasonable access to collection services in metropolitan, inner regional, outer regional and remote areas
- Meet annual recycling targets
- Meet the material recovery target

The annual recycling target is the percentage of waste arising that must be collected and recycled. The 2020/21 recycling target is 68 percent and increases by 2 percent each year to 80 percent in 2026/27 period. The material recovery target is the percentage of the product weight that must be recovered

(and not be disposed of to landfill or waste to energy). The target is fixed at 90 percent. These high targets make more EEE available to recyclers than would otherwise be without a co-regulatory scheme, which in turn encourages investment in recycling capacity and therefore reduces the overall price of recycling activities.

In the case of the European Union's WEEE Directive, there is a recovery target of 65 percent across all waste EEE categories and recycling targets range between 70 and 85 percent depending on the waste EEE category.

Voluntary product stewardship schemes operating in Australia do not achieve as

high recycling rates as the NTCRS as they do not have recycling targets. Although the MobileMuster program has collected more than 10.9 million handsets and batteries since the program started in 1998, the amount of mobile phone waste being generated in Australia is increasing. MobileMuster's market research estimates more than 25.5 million unused mobile phones remain stored in homes. Looking at the FluroCycle program it is difficult to know what proportion of lamps are recycled through the program, but sources indicate that up to 95 percent of all mercury containing lighting waste generated in Australia still ends up in landfill^[xxvi]. The proposed voluntary battery product stewardship scheme also does not have proposed collection or recycling targets.

4.3

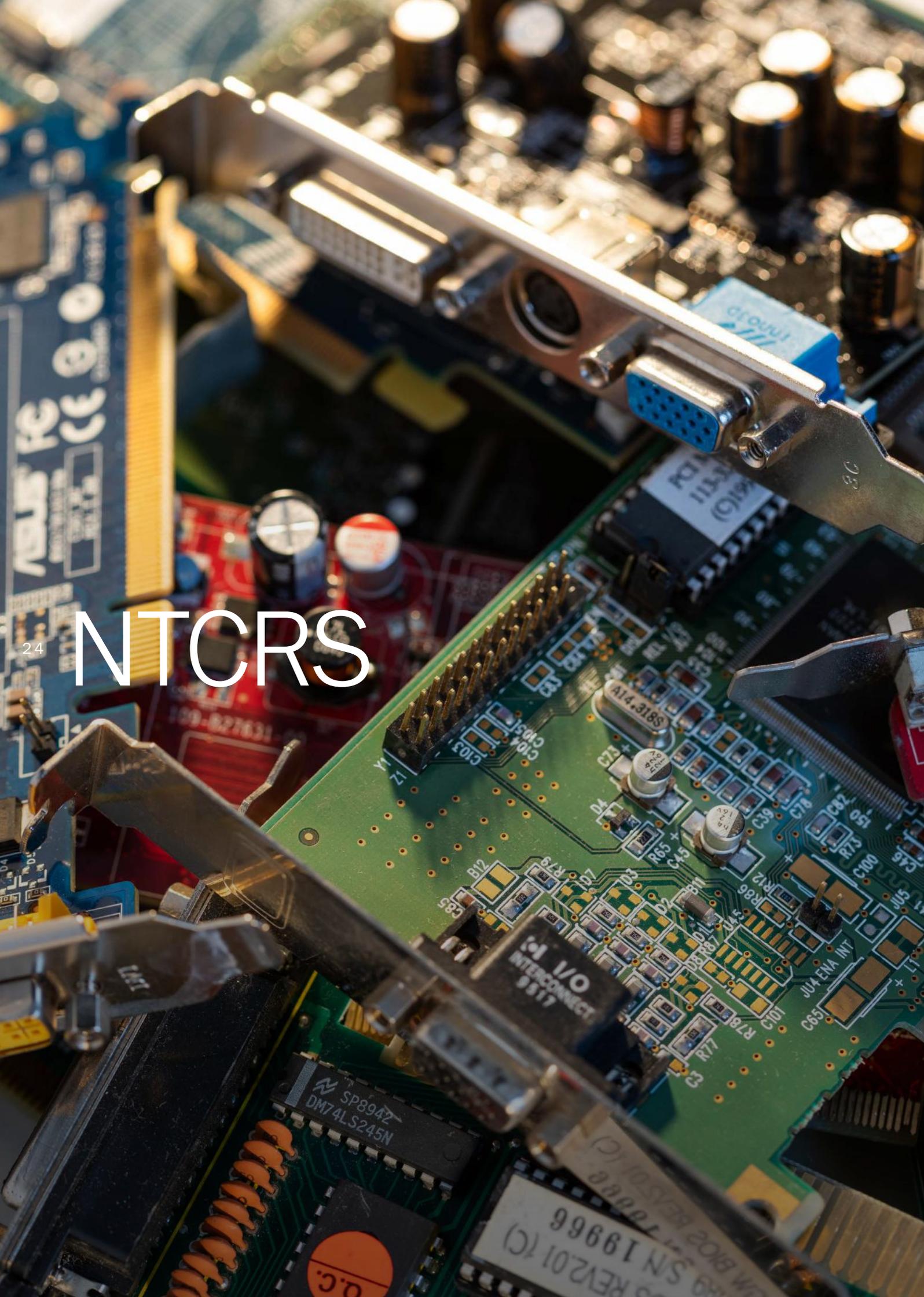
ALLOWS FOR A COMPETITIVE MODEL

Compared with voluntary product stewardship schemes in Australia the co-regulatory NTCRS product stewardship model is unique.

It provides liable parties with a number of co-regulatory arrangements to choose from (four at present), each offering different service models to acquit the calculated obligation of their liable party

members. This competitive product responsibility organisation ('PRO') model helps to drive down scheme operational costs. It also allows liable parties to have the power to decide which co-regulatory

arrangement they align their brand with based upon who can best represent their interests and corporate values in the market (e.g. price, compliance, governance and marketing).



NTCRS

5.0

NTCRS SCOPE EXPANSION

The NTCRS is not without its shortcomings and there is certainly room to improve, but by all accounts, it has been Australia's top performing product stewardship scheme to date and since its operational commencement in 2012, has recovered more than 360,000 tonnes of in-scope products for environmentally sound recycling. As detailed in Section 4.2 above, it sets some of the highest operational targets required of any product stewardship scheme or EPR program globally and has established regular review points to ensure scheme design and operational targets can be updated to meet emerging and future needs.

The NTCRS provides a nationally consistent approach to managing waste televisions, computers, printers and computer peripherals delivering the following environmental and socio-economic benefits:

- Resulted in the recycling of more than 360,000 tonnes of e-waste and therefore landfill diversion since 2012^{xxxvii}.
- Provides a free, safe and convenient drop-off and recycling service to the public and SMEs across the country.
- Resulted in investment in new technologies, increased employment and significantly improved work health safety ('WHS') and environmental management practices by NTCRS recyclers. This has led to a more efficient and vibrant EEE recycling industry which is key to the scheme's success.
- Supports local recycling jobs in Australia, including many facilities that are social enterprises and support disadvantaged workers.
- Supports the transport and logistics sector transporting waste EEE from collection points to recyclers nationally.

Expanding the scope of the NTCRS to cover all EEE, i.e., all products requiring a plug or battery to operate will see these benefits increase.

ANZRP firmly believes that product stewardship should be managed more holistically in Australia, rather than using the current model of individual schemes for each product type or class. This will ensure consistency, increase efficiency, reduce user confusion and make it easier for the Department to monitor and enforce. Managing product stewardship holistically and reducing the number of individual product stewardship programs will be more efficient for industry and the Department. It will reduce overheads, compliance procedures, reporting processes, contractual complexity and duplication of collection and transport services whilst driving economies of scale.

5.1

ECONOMIES OF SCALE

For a large country like Australia, waste EEE is transported over great distances to deliver it to recyclers mostly located in capital cities. Expanding the scope of the NTCRS will result in increased efficiencies in transport as well as recycling and material recovery processes. This is highly likely to lower the NTCRS cost per unit recycled.

Expanding the scope of the NTCRS will also create a higher supply of waste EEE to the market. The volume of this waste EEE would be known (as annual recycling targets would be in place) which will provide certainty to industry and incentivise investment in domestic treatment technologies and facilities for the dismantling of products and recovery of material and will generate end markets for recovered resources in Australia. This would therefore expand the domestic recycling industry and create EEE recycling jobs in both metropolitan and rural areas. Recycling jobs are considered to be predominantly recession proof as recycling rates do not typically fluctuate with the broader economy. Recycling jobs cover a broad skill range including technical (engineering, chemistry, science), commercial (sales, business) and operational.

Based on our assessment of a large EEE recycling facility, with mechanical shredding and separation, recycling costs would reduce by approximately 50 percent if the amount processed per year is doubled. This is a notable shift as it is hard for a single recycler to achieve a large enough volume to justify significant investment under the current NTCRS as total Australian-wide recycling is only about 60,000 tonnes. A scheme expansion to all EEE could increase recycling to more than 500,000 tonnes per year and provide the additional volume required to support numerous large-scale plants in each state.

Other economy of scale benefits include:

- Reduced costs to existing NTCRS liable parties achieved through economies of scale
- Lower cost entry point for new liable parties (i.e., compared with costs that existing liable parties had to pay when they joined the NTCRS eight years ago)
- Convenient and integrated access to EEE collection networks for the community
- Reduced logistics costs due to the availability of cost-effective recycling across Australia
- Consistent education and awareness for the community
- Covers product categories that currently do not have a formal product stewardship scheme in place
- Harmonises EEE management across all Australian states and territories

5.2

REDUCED PUBLIC CONFUSION

There are many waste EEE management services, schemes and programs operating in Australia and the community is fortunate to have access to so many options.

However, these programs can promote conflicting messaging on waste EEE management. Further, some EEE collection points accept certain product categories and not others, and some will charge fees whilst others are funded by formal product stewardship schemes so do not charge fees. These inconsistencies can create confusion and frustration for members of the public looking to manage their waste EEE responsibly and result in them not participating in any programs.

In addition, different states and territories have different policies, legislation and programs in place for waste EEE management. Some states and territories have implemented EEE landfill bans, some have hard rubbish collection models that include EEE, and some have permanent or event-based household hazardous waste collection services that cater for some categories of EEE such as handheld batteries and light globes. These differences between jurisdictions

make it difficult for businesses who operate nationally to responsibly manage waste EEE.

Expanding the scope of the NTCRS to cover all EEE will result in nationally consistent waste EEE management options, messaging and information making it easier for all Australians to responsibly manage their waste EEE.

5.3

REDUCES BURDEN ON LIABLE PARTIES

ANZRP represents liable parties who are required to participate in full EEE product stewardship schemes and EPR programs in jurisdictions across the globe.

They have expressed their preference for a single, full EEE scheme to be implemented in Australia and have strongly recommended against a model where multiple product stewardship schemes are established across individual EEE

categories. Multiple product stewardship schemes result in liable parties having to be members of multiple PROs. This creates a significant administrative burden, extra costs and additional reporting requirements to liable parties.

Multiple product stewardship schemes will also increase the Australian Government's administration, monitoring and enforcement activities and associated costs. PRO overhead costs can be a significant proportion of a PRO's running costs so reducing the number of PROs reduces the overall costs to liable parties.

5.4

SCOPE CONSIDERATIONS

Although ANZRP strongly advocates for a full EEE scope to be managed under the NTCRS, we also recognise that it will be important to consider different requirements for specific EEE product streams and categories. We acknowledge that not all EEE is equal, and that Australia's EEE recycling sector does not currently have the capacity or capability to manage all EEE locally. Further investigation is required to fully understand which product categories can be responsibly managed currently. These investigations may justify the exclusion of some product in the expanded NTCRS, at least initially until local capacity is expanded.

The European Union ('EU') WEEE Directive provides a good benchmark for scope expansion of the NTCRS where six product categories are defined:

- 1 Temperature exchange equipment more commonly referred to as cooling and freezing equipment.** Typical equipment includes refrigerators, freezers, air conditioners and heat pumps.
 - 2 Screens, monitors.** Typical equipment includes televisions, monitors, laptops, notebooks and tablets.
 - 3 Lamps.** Typical equipment includes fluorescent lamps, high intensity discharge lamps and LED lamps.
 - 4 Large equipment.** Typical equipment includes washing machines, clothes dryers, dishwashing machines, electric stoves, large printing machines, copying equipment and PV panels.
 - 5 Small equipment.** Typical equipment includes vacuum cleaners, microwaves, ventilation equipment, toasters, electric kettles, electric shavers, scales, calculators, radio sets, video cameras, electrical and electronic toys, small electrical and electronic tools, small medical devices, and small monitoring and control instruments.
 - 6 Small IT and telecommunication equipment.** Typical equipment includes mobile phones, Global Positioning Systems ('GPS'), pocket calculators, routers, personal computers, printers and telephones.
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Under the EU WEEE Directive there are explicit exclusions for EEE used by the defence forces. Certain EEE products or categories containing radioactive content, or those that are likely to be contaminated with biohazardous substances, may also require tailored management approaches which would deem them unsuitable for inclusion in a full EEE product stewardship scheme, for example ionisation smoke alarms and medical equipment. All additional product streams and categories included would also need to be assessed to establish safe disposal and handling

requirements, for example, managing WHS hazards, ease of separation and potential material yield.

One noteworthy product category exclusion from the EU WEEE Directive product category list above is battery products. In the EU batteries are covered by their own directive, i.e., the Battery Directive. However, batteries could be included in an expanded NTCRS with tailored management requirements if needed, for example, to manage fire hazards associated with lithium-ion batteries. With over 900 NTCRS collection points available, expanding the

scope of the NTCRS to include batteries would be the fastest approach to ensure reasonable access for all Australians to battery recycling.

ANZRP recommends trialling a full EEE pilot program in sample metropolitan, regional and remote areas in each Australian state and territory using a range of collection, transport and recycling service providers across the country. This approach will help to identify current capacity constraints and issues and what actions need to be taken to collect and recycle EEE nationally.





IMPROVEMENTS TO THE CURRENT NTCRS

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Although ANZRP is supportive of the NTCRS to be expanded to cover all EEE, there are some improvements required before any scope expansion is made as outlined in the following sections.

6.0

AUDITING AND ENFORCEMENT

There is currently an uneven playing field between co-regulatory arrangements with some repeatedly not meeting the outcomes and requirements of the Product Stewardship (Televisions and Computers) Regulations 2011 ('the Regulations') without financial penalties being enforced or co-regulatory arrangement approvals being cancelled.

The co-regulatory model of the NTCRS provides competition between co-regulatory arrangements which many believe to be good for industry/liable parties. However, this competition is only equal if the Department comprehensively audits compliance with the Regulations and enforces appropriate penalties where non-compliance is identified. If not, those co-regulatory arrangements who spend the necessary resources to ensure compliance are at a financial disadvantage to those who do not.

Some examples of potential non-compliance with the Regulations include:

- Co-regulatory arrangements have not met the Recycling Target Outcome and the Reasonable Access Outcome, in some cases, over consecutive years. To date, the only action taken by the Department is to issue an improvement notice requiring the co-regulatory arrangement to take all reasonable steps to meet the Outcome in future years.
- The introduction of the e-waste landfill ban in Victoria has resulted in NTCRS reasonable access sites accepting EEE other than NTCRS regulated product. There is the potential that this tonnage is reported by co-regulatory arrangements to achieve the Recycling Target Outcome.
- To achieve the Reasonable Access Outcome, collections of television or computer products cannot be refused on the grounds of the type of the product. However, some reasonable access sites refuse television product (in particular CRTs) as they are expensive to recycle.
- To achieve the Recycling Target Outcome, NTCRS regulated product

must be recycled at a facility certified to the Standard and in accordance with the Standard, where 'recycling' is defined as initial processing of product and includes disassembly. Organisations can undertake initial recycling without certification and then send this material to a certified recycler for 'final' recycling and recognition under the NTCRS. Valuable (and potentially hazardous) parts can also be extracted at these uncertified sites, not meeting NTCRS requirements.

- NTCRS regulated product may be exported to non-OECD countries for recycling in contravention of the Basel Convention. For example, in October 2017 the Basel Action Network installed GPS trackers in two LCD screens and dropped them off at retail stores that were part of a public drop-off program managed by an NTCRS co-regulatory arrangement. The two devices were traced to Hong Kong's New Territories area in China, i.e., a non-OECD country^{xii}.
- There are opportunities for NTCRS regulated product to be double counted. Firstly, recyclers supply co-regulatory arrangements with certificates of destruction ('CODs') for a fee for NTCRS regulated product that they have collected from their own customers and then recycled (referred to as 'ad-hoc volume'). There is the potential for recyclers to supply these CODs to more than one co-regulatory arrangement who then both count this tonnage towards meeting their Recycling Target Outcome. Secondly, some recyclers are downstream processors for other recyclers such as for televisions/screens. Both

recyclers could issue a COD for this television/screen volume potentially resulting in double counting.

- CODs can be traded and aggregated such that the certification status of the original recycler becomes unclear to the purchaser of the CODs.
- Co-regulatory arrangements are required to meet the Material Recovery Target ('MRT') Outcome of greater than 90%. To do this, all of its recycling partners must trace material flows to each downstream processing stage to the point of final disposition/disposal and obtain information from downstream processors including material recovery rates. There is no auditing scheme in place to check the traceability of downstream material flows.

The above issues are best audited by the Department (or their agent) as they require an overview of the whole scheme that is not available to an individual co-regulatory arrangement. This will also provide a consistency in approach by each co-regulatory arrangement, for example, an audit is required to ensure that co-regulatory arrangements are tracing material flows and calculating their material recovery rate in accordance with the Department's Material Recovery Measurement and Reporting Methodology for the National Television and Computer Recycling Scheme publication.

The Australian Government has released the Draft Recycling and Waste Reduction Bill 2020 which includes additional compliance and enforcement provisions. The Australian Government has also advised that the Department has "commenced work on a compliance framework and guidance

for the NTCRS and will be engaging with co-regulatory arrangements, liable parties and stakeholders early in the 2020-21 scheme year”, and that the Department will “consider appropriate ways to strengthen the assurance regime to cover such issues as collections, transport and storage, overseas recycling and downstream processing to end-of-life fate”^{xiii}. The draft bill and work commenced by the Department are supported by ANZRP.

It is recommended that the following be implemented as part of the compliance framework and strengthened assurance regime:

- Update the legislation to provide details on an auditing standard that must be used to conduct an audit over co-regulatory arrangements’ annual reports. An example of a suitable and robust standard is ASAE 3000 Assurance Engagements Other than Audit or Reviews of Historical financial Information.
- Include a requirement in the legislation that co-regulatory arrangements are to ensure that NTCRS regulated product is recycled by a company approved by the Federal Environment Minister (with the Minister maintaining an approved list of recyclers who have been vetted by the Department).
- Develop an audit and assurance program schedule for the scheme which can be managed and performed by suitably qualified and experienced consultants (e.g. a financial auditing firm with competence in traceability of accounts and material flows and engineering consultants with specific experience in EEE recycling and downstream processing practices). Key components of the program should include:
 - Perform audits of reasonable access sites in order to (1) confirm sites listed on a co-regulatory arrangement’s website actually exist and collect NTCRS regulated product, (2) do not refuse televisions or other types of

NTCRS regulated product or brands of products (or alternative arrangements are in place), (3) that initial processing is not being undertaken if the site is not certified to the Standard and (4) ensuring no fees are charged to households or small businesses.

- Perform site audits and unannounced spot checks of recycling facilities used by co-regulatory arrangements involving inspecting the facility and equipment used and reviewing documentation. Check for (1) conformance with the Standard including downstream material traceability, and (2) compliance with the Hazardous Waste (Regulation of Exports and Imports) Act 1989 (Cth) (i.e., inspect loads for export and documentation to confirm that material counted towards a co-regulatory arrangement’s recycling target has not been illegally exported to non-OECD countries or exported as ‘working product’). Further, GPS trackers could be used to check that NTCRS regulated product is not disposed of to landfill, treated at a facility that is not certified to the Standard or illegally exported.
- Perform audits over co-regulatory arrangement annual reports including reviewing calculations and supporting evidence (e.g. CODs, downstream vendor records) to demonstrate how a co-regulatory arrangement has determined it has met the Recycling Target Outcome and the MRT Outcome.
- Perform a whole-of-scheme audit to check for double counting.

A potential way to trace material recycled in Australia and to avoid double counting is to have a Department administered database (which could be outsourced to a consultant or clearing house) which generates CODs with a unique identifier. Only CODs generated by this system would be able to be used to count towards a co-regulatory arrangement’s recycling target. The database would have an interface where recycling facilities could logon and generate CODs for NTCRS regulated products they recycle, providing supporting information that can be verified. The database would also have an interface where co-regulatory arrangements could retire CODs each financial year (including for ad-hoc volume).

A potential way to ensure responsible downstream processing of NTCRS product is to implement a downstream vendor certification program. This method is used in Europe for a recycling facility to be certified to the WEEELABEX scheme – certified recycling facilities can only use certified downstream vendors. Certification audits are performed by accredited certification bodies/auditors. A similar model could be set up in Australia using the Standard. Recyclers would only be able to send components/separated material to downstream vendors that have been certified to the Standard by a JAS- ANZ accredited auditor. This could potentially be expanded to allow downstream vendors to be certified to an international standard/scheme that the Department deems appropriate (e.g. eStewards, R2, WEEELABEX) by a suitably accredited auditor.

If the above recommendations are not implemented, the effectiveness, credibility and ongoing viability of the NTCRS will continue to be jeopardised.

6.1

REASONABLE ACCESS

Again, there is an uneven playing field between co-regulatory arrangements with some providing a robust collection network to meet the Reasonable Access Outcome whilst others do not. To achieve the Reasonable Access Outcome, collection services can be events. Events are used widely and can successfully service the community.

However, as there is no time period for the length of an event or minimum service requirements, little resources can be put into running events that are actually successful (i.e. collect NTCRS regulated product). Further, a co-regulatory arrangement can rely heavily on events to achieve the Reasonable Access Outcome. If well timed, events can be run for one to two months a year, meeting reasonable access requirements, yet resulting in the community having no service for 20 months, which is not in the spirit of the NTCRS. Investment in promoting events to meet the Reasonable Access Outcome in interstate, outer regional and remote locations can be minimised to avoid collecting too much material which is expensive to transport from these locations.

It is recommended that the legislation be updated so that each reasonable access area or town must be covered by a collection service(s) that accepts all covered product, regardless of product type, size or weight. The legislation should also be updated (or supporting guidelines prepared) to provide minimum service requirements for reasonable access collection sites and services. These should include:

- Communicating the site/event name, days and hours of operation, location, products accepted and contact details on the co-regulatory arrangement website.
- On-site signage stating which television and computer products are accepted.
- Providing the relevant Local Government with sufficient notice of a collection event (to give it time to promote the event to residents).
- Having a minimum duration time for events (e.g. six hours).

Under the NTCRS, each co-regulatory arrangement must provide the community with reasonable access to its collection and recycling service as follows:

- For each metropolitan area, the number of collection services available in each financial year must at least equal the population of that area divided by 250,000 and rounded up to the closest whole number
- For inner regional areas, at least one service must be provided within 100km of the centre point of every town of 10,000 people or more in each financial year
- For outer regional areas, at least one service must be provided within 150km of the centre point of every town of 4,000 people or more in each financial year
- For remote areas, at least one service must be provided within 200km of the centre point of every town of 2,000 people or more, once every two financial years

These requirements are expected to provide around 98 percent of the population with reasonable access to collection services. However, efficient and equitable access to collection services, particularly in outer regional and remote locations, remains an issue.

Requiring each of the four co-regulatory arrangements to have a collection service in each outer regional and remote area is inefficient and costly when we consider the large transport distances to be covered and the waste EEE generation rates in these areas compared with metropolitan and regional centres. It would be more efficient if only one provider was required to perform a quality

collection service that covered the needs of the outer regional/remote town. This could be achieved via an 'allocation' model for outer regional and remote locations managed by a consultant or 'clearing house', similar to models implemented in Europe (e.g. Austria, Denmark, Germany, Ireland, Sweden and the UK) and Illinois.

A more stable and cost-effective method would be to issue a request for tender for servicing of all rural and outer regional locations with a minimum period of service (e.g. three years). Tender submissions should include the type of collection service, location, partners (e.g. local council, retailer, community group), days and hours of operation, products accepted, collection unit type, communication and promotion plan, details of conformance to the Standard (i.e. collection and storage requirements) and fees. The Department would assess submissions based upon meeting regulatory requirements, quality and cost of collection service.

The Department would then award reasonable access contracts to providers for the locations they were successful for.

The Department would aggregate total costs and then proportionally allocate to each co-regulatory arrangement.

6.2

EARLIER NOTIFICATION OF ANNUAL TARGETS

A significant improvement to the administration of the NTCRS would be a timely notification of annual recycling targets (i.e. Recycling Target Outcome) to co-regulatory arrangements. Currently, annual targets are typically issued as late as October/November each year (or even later), i.e., four to five months into the financial year.

This causes significant management challenges for co-regulatory arrangements to plan for collections, which cascades to recyclers who then reflect this uncertainty in higher prices.

The Australian Government has advised that Department will “review the annual scheme timeline” and provide “timely information to co-regulatory administrators on their liabilities” . It is

recommended that the recycling target is determined no later than April each year (for the next financial year) and is based on the previous full year data.

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6.3

RESOURCING AT THE DEPARTMENT

Given the recent commitments made by the Australian Government to improve the NTCRS including increasing monitoring and enforcement activities^{xliv}, adequate resourcing (staff and technology tools) at the Department needs to be ensured before any scope expansion can be undertaken.

6.4

CERTIFICATION AUDIT SCHEME TO BE PROPERLY MANAGED

There are issues with the certification of recycling facilities to the Standard as not all auditors are appropriately experienced in EEE recycling practices and the boundary of the audit scheme does not extend to downstream vendors.

To achieve the Recycling Target Outcome, television or computer products must be recycled at a facility certified to the Standard and in accordance with the Standard. As some auditors are not experienced in EEE recycling practices and associated WHS and environmental risks, they do not perform a rigorous audit and facilities receive certification when they are not meeting key components of the Standard (e.g. WHS risk assessment and management, EEE processing and handling and storage of EEE on impermeable surfaces with weatherproof coverings). In addition, surveillance/re-

certification audits to the Standard are only performed annually yet there are no other audits by the Department to confirm that recyclers are recycling in accordance with the Standard.

The following is recommended:

- Update the legislation to require certification audits to the Standard to be completed by JAS-ANZ accredited auditors.
- Work with JAS-ANZ to update the certification audit scope for recyclers

to adequately cover downstream material traceability to final disposition/disposal.

- Work with JAS-ANZ to conduct training for accredited auditors to the Standard on EEE dismantling and shredding processes, associated health, safety and environmental risks, material downstream traceability and downstream vendor due diligence. This could be performed by a suitably qualified and experienced consultant.





DESIGN CHANGES TO AN EXPANDED NTCRS

7.0

PRODUCT CATEGORIES AND ASSOCIATED TARGETS

As noted in Section 5.4, further investigation is required to understand how the NTCRS could best be expanded to cover all EEE. This includes all aspects of the scheme's performance and operation, especially for product recovery and recycling targets, safe handling, disposal, storage, transport and treatment. These investigations may determine that liable party contributions and scheme performance targets need to be tailored across different EEE product categories and identify product impacts or market failures which require targeted focus and funding support to address. Scheme targets may also need to be introduced progressively or reviewed at regular intervals to ensure they remain achievable, especially if higher order interventions like re-use play a greater role.

The scope of EEE is wide and it includes an array of equipment that are made of different materials, have distinct lifespans and waste arisings. Waste EEE stocks and flows will need to be assessed periodically to track waste EEE exports, confirm waste arising assumptions and ensure recycling targets remain achievable. Regular social research needs to be performed to understand how the

attitudes and behaviours of waste EEE generators are changing and how product stewardship education campaigns can do more to address behaviours like product hoarding which can hinder a co-regulatory arrangement's ability to meet annual recycling targets.

As an initial measure, ANZRP recommends trialling a full EEE pilot

program in sample metropolitan, regional and remote areas in each Australian state and territory. This approach will help to identify recycling and material recovery processes for different EEE product categories under current capacity and will inform the development of suitable material recovery rates and scheme performance targets for individual products and categories.

7.1

RE-USE

Product repair and re-use initiatives represent an untapped tool in Australia's product stewardship toolkit and at present, no product stewardship scheme operating in the country includes targets or incentives for this type of activity. There is already an established re-use market for a variety of EEE including laptops, computers, multi-function printer devices, mobile phones and other ITC products. In the context of batteries and PV panels, re-use could make renewable energy options more accessible to the community, particularly in low socio-economic groups.

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ANZRP supports sensible product stewardship interventions that align with Australia's waste management hierarchy, i.e., re-use before recycling wherever possible. Product re-use provides a number of benefits within the interest of national supply chains such as retaining valuable resources locally and creating local skill-based jobs. The resale value of repaired or refurbished products are generally higher than the price obtained for selling commodities from recycled products. Re-use is also a key driver in propelling a more circular and lower-carbon economy in Australia.

If re-use is to be covered by the NTCRS, consideration around how re-use targets be set or how initiatives contribute to, interact with, or complement recycling targets will be required. The NTCRS requires all volume collected to be recycled which can incentivise lower order management and may penalise liable parties who perform re-use activities under their internal producer responsibility programs as these activities are not considered when determining their annual liability.

ANZRP represents producers who operate globally and import waste EEE for repair in Australia from countries like New Zealand. It is important to ensure equipment being imported (or exported) for re-use is not classified as waste product and does not attract hazardous waste consignment costs. It also needs to be ensured that producers are not penalised for performing repair and re-use in regions like the Asia Pacific ('APAC') and would recommend a coordinated approach with APAC partners.

Product repair and re-use initiatives are becoming more common place in jurisdictions like Europe. Spain for example, has set a national preparing for re-use target as part of the National Framework Plan for Waste Management (2016-2022). This framework aims to achieve 50 percent preparing for re-use and recycling and has complemented another preparing for re-use target implemented in 2015 via a Royal Decree and focused on waste EEE. It requires three percent of large household appliances and four percent of IT equipment to be prepared for re-use from 2018^{xv}.

However, the WEEE Forum (an international association representing forty producer responsibility organisations across the globe) argues against preparation for re-use targets but rather proposes measures that promote circular economy activities. Instead of targets it recommends that product stewardship schemes be supported by a strong set of standards around disassembly encouraging eco-design. It also recommends a legislated waste hierarchy and national framework that supports a circular economy, such as remanufacturing using recovered commodities, mandating consumer awareness and investment in re-use, and new business models like product leasing and a sharing economy.

It is recommended that more work is undertaken to consult with industry and investigate this issue more closely, including ways in which re-use measures can be best integrated with the NTCRS.

7.2

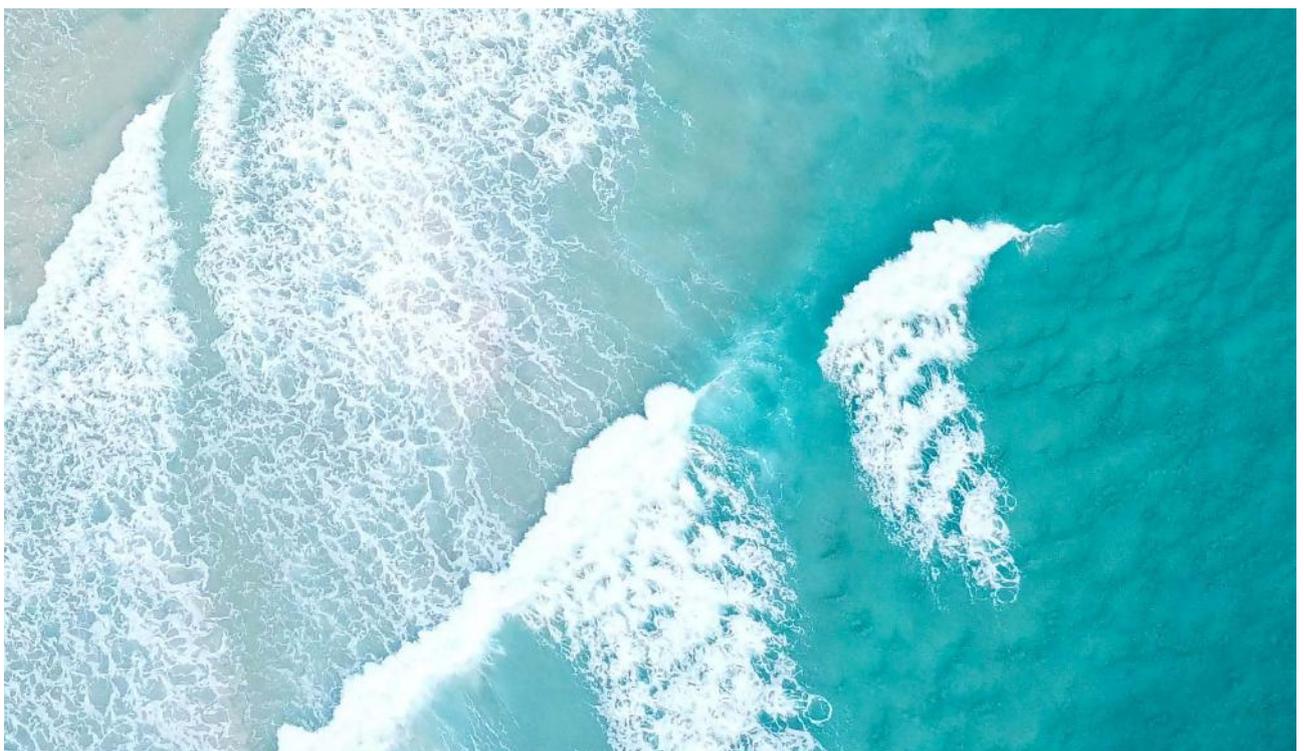
FEES

It is important to consider how an expanded NTCRS could best be funded and there are two primary approaches to consider. The first funding model is often referred to as a ‘pay as you put’ model which means that funds are collected for every new EEE or device placed on the market. In some international product stewardship schemes these fees are ‘visible’ at the point of purchase of a new product where consumers see what portion of the total product cost is used to fund scheme activities. The other, more common model is the ‘pay as you go’ model, where liable parties cover scheme costs once products are collected and recycled based upon a waste arising calculation. The NTCRS uses the pay as you go model.

ANZRP believes the current pay as you go model for the NTCRS is appropriate for an expanded scope. There can be long periods between selling a product and the product being collected for recycling. In the case of PV panels this can be between 15–45 years due to the long product lifespan. The cost of recycling a panel now is likely to be

very different to the cost of recycling at the end of its life. There have been examples in Europe where PROs’ pay as you put schemes end up accumulating large cash reserves because the future costs of collection and recycling have not been estimated accurately, in part due to fluctuating commodity prices.

ANZRP does not recommend using visible fees at point of purchase, as this can lead to additional administrative costs and set rigid price structures for PROs and liable parties. This approach would also entail a significant amount of training for retailers and their staff, many of whom have already shown a reluctance to play any role in national product stewardship schemes for various priority products.



7.3

PROBLEMATIC EEE STREAMS

Some EEE streams are more problematic to manage than others, and there are also treatment capability gaps in Australia's waste EEE management system. This results in achieving low material recovery rates. The main reason for this is a lack of embedded value or resource incentive for recyclers to invest in more sophisticated treatment techniques.

In the case of PV panels, there are many recyclers in the market. However, they cannot recover more than the aluminium frame component which represents less than 20 percent of a typical PV panel by weight. The remaining components are either stockpiled or sent to landfill. Ionisation smoke alarms are also problematic given they contain traces of radioactive content (americium), which makes them difficult to handle and therefore recycle.

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EEE with high plastic content can also be problematic, particularly those containing brominated plastics which can require specialised treatment. The rise of plastics usage in EEE is creating issues for recyclers as EEE tends to utilise multiple resins. Mixed resin plastics is a low value commodity, yet many recyclers do not have sorting technology to enable individual resins to be separated into higher value, single resin streams.

ANZRP recommends that all waste EEE product categories be properly assessed to identify any material properties that result in them being a hazard to manage and to understand recycling and repair capacity and material recovery rates that can be achieved. This assessment process should involve both the waste EEE management sector and product producers. This assessment can then identify whether certain product categories should be excluded from an expanded NTCRS, or whether they should be included albeit with specific treatment methods stipulated (e.g. energy from waste) and/or lower material recovery rates. It can also identify where the Australian Government can support industry to invest in recycling technology via funding for research and infrastructure.

The inclusion of a MRT in the current NTCRS has already forced co-regulatory arrangements and their recycling partners to research and invest in new recycling technologies (supported via government grant funding). For example, following the China National Sword policy and reduced export markets for mixed plastic, many recyclers are increasing their investment in plastic recycling technology including polymer sorting or technology to manufacture products made from recycled EEE plastic. Another emerging issue is LCD screen panel glass which is coated in a plastic film so is challenging to recycle via traditional glass channels. As such, trials are being undertaken to recycle this material via new channels. These examples show that by including problematic products in the NTRCS, the industry (supported by governments) will work to develop recovery solutions.





7.4

RETAILER PARTICIPATION

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Retail stores are a convenient place for consumers to drop off unwanted EEE, especially when consumers make a replacement purchase. Many retailers have agreements with NTCRS co-regulatory arrangements to offer drop-off services to consumers at their stores. All retail stores should be encouraged to provide drop-off points where viable (taking into consideration that there will be limitations on the size of EEE that can be accepted). Retailers could also be encouraged to allow customers to book in the collection of used EEE at the same time as when they receive a delivery of a new product (e.g. a service provided by some retailers of white goods and mattresses). Under the EU WEEE Directive, where retailers meet set floor space requirements and product type sales, they are required to provide a take-back service or fund a local government (equivalent) service.

ANZRP believes retailers can play an important role to educate and make consumers aware of the NTCRS, particularly as when the consumer is purchasing a new device, they are potentially considering what to do with their unwanted product. Ideally, retailers could provide information about the scheme at point of sale advising consumers how to find out where and how they can dispose of their unwanted

or waste EEE (e.g. website details printed on receipts or a card or flyer available in store).

Retailers also receive 'dead on arrival' stock and warranty return of faulty EEE that have been brought back to their stores by consumers. A survey by ANZRP of its Member companies (brand owners) found that warranty returns and 'dead on arrival' EEE comprise up to 2 percent of all EEE sales. Reverse logistics and/

or asset management companies are contracted by some brand owners to collect and manage these products. Some brand owners make arrangements with the reverse logistics and asset management companies to have this EEE collected for recycling. Encouraging this practice with all parties who engage a retail channel to manage faulty EEE from retail stores would increase the rates of EEE re-use or recycling.



GOVERNMENT ACTION REQUIRED

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In order for an expanded NTCRS to operate and function well into the future, ongoing government support is essential. Summarised below are key points of the type of ongoing support required from each tier of government in Australia.

8.0

FEDERAL

- Enforcement of a scheme's legislated requirements is critical to ensure an even playing field for co-regulatory arrangements and liable parties. In order to achieve this, a well-resourced federal regulator is required.
- Sustainable procurement strategies that stimulate market demand for materials recovered through EEE product stewardship schemes should be implemented to encourage investment in on-shore recycling thereby reducing the costs of the product stewardship scheme as there is more demand for the recycled commodities it produces. Any sustainable procurement initiatives should be set at the federal level allowing for adoption and complementary funding program development at the state and local level.
- The Australian Government should work closely with State and Territory Governments to enhance funding programs available to increase local processing capacity and capability and to support new product stewardship investigations through the recently endorsed Product Impact Management Strategy ('PIMS') and the Assessment, Action and Escalation ('AAE') process for priority product of national significance.
- A federally led education and awareness campaign on the scheme and benefits of product stewardship should be implemented with participation by co-regulatory arrangements and all tiers of government.

8.1

STATE AND TERRITORY

- Continued funding for collection and treatment infrastructure (that meet the key requirements of the Standard) and skill-based training is required to increase the capacity of ensure safe and environmentally responsible collection and treatment operations.
- As with the federal tier, State and Territory Governments should implement sustainable procurement practices that market demand for materials recovered through EEE product stewardship schemes. Victoria's recently announced sustainable procurement policy 'Recycled First' is a good example which identifies these practices as fundamental to close the loop on circular economics and support ongoing product stewardship development.

8.2

LOCAL

- Continue to support waste EEE collection partners and provide community access to council-owned/managed services and infrastructure that can collect waste EEE, for example, hard rubbish collections, transfer stations and council buildings like libraries and community centres.
- Promote all waste EEE collection points operating within a council's jurisdiction (e.g. via council website and newsletters) to make it clear to the community on how to manage unwanted or end-of-life products.
- Ingrain sustainable procurement practices under business as usual arrangements and work closely with State and Territory Governments to access funding support required to increase local government demand for recycled content across all procurement activities.



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Authors:

Carla Vasconi
Michael Dudley

Enquiries:

carla.vasconi@anzrp.com.au



ANZRP.COM.AU | TECHCOLLECT.COM.AU
Level 5, 455 Bourke Street, Melbourne VIC 3000
T +613 9020 2222 | F +613 8609 1269

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