



INDUSTRY WORKING GROUP REPORT

SUMMARY OF PRODUCT  
STEWARDSHIP CASE STUDIES





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## Summary of Product Stewardship Case Studies

Report prepared by Libby Chaplin, Australian Battery Recycling Initiative on behalf of the Industry Working Group.

### **For more information contact**

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## PURPOSE OF THE SUMMARY REPORT










The purpose of this report is to summarise a selection of existing product stewardship / extended producer responsibility schemes with the intent of informing the debate in Australia regarding establishment of a national stewardship scheme.

## APPROACH







This summary includes review of:

- European Battery Stewardship Compliance Schemes
  - European Union Battery Directive
  - Belgium Environmental Producer Responsibility Scheme
  - Finland Environmental Producer Responsibility Scheme
- American Battery Stewardship Approaches
  - Vermont Product Stewardship Program
  - Washington State Renewable Energy Cost-Recovery Incentive Program
- Australian Battery Stewardship Programs
  - Batteryback
  - ExitCycle
  - Batteryworld
  - ALDI
  - IKEA
- Australian Product Stewardship Approaches
  - National Television and Computer Recycling Scheme (NTCRS)
  - Tyre Stewardship Scheme
  - Paintback
  - DrumMuster
  - Fluorocycle
  - MobileMuster

Where available, the following is provided:







	<b>Who runs</b>		<b>Enforcement</b>
	<b>Scheme type</b>		<b>industry engagement: e.g. Who / how many manufacturers or importers</b>
	<b>Scope</b>		<b>% of industry engagement</b>
	<b>National coverage</b>		<b>Scheme outcomes</b>
	<b>Description</b>		<b>Who pays for which parts of the scheme/cost sharing</b>
	<b>Performance measures</b>		<b>What are the costs that are shared</b>
	<b>Instrument for industry engagement / cost recovery</b>		






## EUROPEAN BATTERY STEWARDSHIP COMPLIANCE SCHEMES

PROGRAM		EUROPEAN UNION BATTERY DIRECTIVE	
	<b>Scheme type</b>	<ul style="list-style-type: none"> <li>Regulatory.</li> </ul>	
	<b>Scope</b>	<ul style="list-style-type: none"> <li>The Directive applies to: <ul style="list-style-type: none"> <li>All types of batteries and accumulators, regardless of their shape, volume, weight, material composition or use.</li> <li>All batteries and accumulators placed on the market and it explicitly prohibits the placing on the market products containing mercury or cadmium and is considered in two categories. <ul style="list-style-type: none"> <li>Industrial and Automotive <ul style="list-style-type: none"> <li>Backup power supply, electric vehicles (+ ebikes), batteries connected to renewable energy system.</li> </ul> </li> <li>Portable batteries <ul style="list-style-type: none"> <li>Batteries, button cell, battery pack that an average person can carry by hand.</li> </ul> </li> </ul> </li> </ul> </li> </ul>	
	<b>National coverage</b>	<ul style="list-style-type: none"> <li>EU Coverage with national implementation in each EU member state.</li> </ul>	
	<b>Program Description</b>	<ul style="list-style-type: none"> <li>The Battery Directive sets out an Extended Producer Responsibility (EPR) framework</li> <li>Established in 1991, revised in 20016 with next revision expected in 2018.</li> <li>In a nutshell, the Directive establishes requirements: <ul style="list-style-type: none"> <li>Batteries are collected, and properly treated and recycled.</li> <li>Ban landfilling or incinerating of 'automotive and industrial' batteries.</li> <li>Ensure battery recycling processes must meet minimum levels of efficiency.</li> <li>Prohibit the use of: <ul style="list-style-type: none"> <li>Mercury in all batteries, and</li> <li>Cadmium in portable batteries, although with certain exemptions,</li> </ul> </li> </ul> </li> <li>Member States are required to ensure that appropriate collection schemes are in place for waste portable batteries and accumulators. Such schemes must: <ul style="list-style-type: none"> <li>Enable end-users to discard waste portable batteries or accumulators at an accessible collection point in their vicinity, having regard to population density.</li> <li>Require distributors take back waste portable batteries or accumulators at no charge when supplying portable batteries or accumulators, unless an assessment shows that alternative existing schemes are at least as effective in attaining the environmental aims of this Directive.</li> </ul> </li> </ul>	
	<b>Board Members</b>	<ul style="list-style-type: none"> <li>Panasonic</li> <li>Duracell</li> <li>Energizer</li> <li>Interface Americas</li> <li>Varta</li> <li>The Johnson Foundation</li> </ul>	<ul style="list-style-type: none"> <li>Spectrum Brands (Rayovac),</li> <li>Matthews Strategic Services, LLC,</li> <li>Panasonic Energy Corporation,</li> <li>Sony Electronics, Inc,</li> <li>Saft America, Inc.</li> </ul>
	<b>Instrument for industry engagement / cost recovery</b>	<ul style="list-style-type: none"> <li>Member states are required to transpose collection scheme requirements into national legislation including ensuring that appropriate collection schemes are in place for waste portable batteries and accumulators.</li> </ul>	

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PROGRAM		EUROPEAN UNION BATTERY DIRECTIVE	
	<b>Enforcement</b>	<ul style="list-style-type: none"> <li>Member States are required to establish rules on the penalties Directive infringements and ensure that they are implemented.</li> <li>Enforcement varies by member state and includes financial incentives and penalties for infringements<sup>i</sup></li> <li>EU Member States are required to regularly calculate and report annual sales of portable batteries to end-users using a formal method (2008/763/EC).</li> </ul>	
	<b>Performance measures</b>	<b>Portable Collection Rates</b> 2012: 25% 2016: 45%	<b>Industrial and Automotive Collection Rate</b> 100%
	<b>Scheme outcomes</b>	<ul style="list-style-type: none"> <li>In 2015<sup>ii</sup>, 222,000 tonnes or an estimated 10.5 billion portable batteries were reported to have been placed on the market of the EEA plus Switzerland in 2015, while around 91,000 tonnes of waste portable batteries were reported as collected.</li> <li>This equates to a collection rate on a current year basis of 41%, up from 25% in 2010.</li> </ul>	
	<b>Industry Engagement:</b> E.g. # of manufacturers or importers	<ul style="list-style-type: none"> <li>Minimum rules for operating national collection and recycling schemes, requiring:               <ul style="list-style-type: none"> <li>Member states be responsible for implementing the Directive through national legislation, regulations and administrative provisions.</li> <li>Accessible collection points be provided for consumers in their neighbourhood, free of charge without obligation to buy a new battery.</li> <li>Distributors to take back waste batteries when supplying new ones.</li> <li>Producers provide take back and collection requirements for all batteries (including how producers must finance these schemes).</li> </ul> </li> <li>Each EU Member State is required to keep a register of producers who place batteries on the national market to avoid 'free-riders'</li> </ul>	
	<b>% of industry engagement</b>	<ul style="list-style-type: none"> <li>Varies by member state.</li> </ul>	
	<b>Who pays for which parts of the scheme/cost sharing</b>	<ul style="list-style-type: none"> <li>The Directive includes a flexible approach to enable financing schemes to reflect differing national circumstances. Some member states implement a single not-for profit Collection Scheme, while others operate on a competitive basis.</li> </ul>	

PROGRAM		BELGIUM ENVIRONMENTAL PRODUCER RESPONSIBILITY SCHEME	
	<b>Who runs</b>	<ul style="list-style-type: none"> <li>Bebat</li> </ul>	
	<b>Scheme type</b>	<ul style="list-style-type: none"> <li>Regulatory Environmental Producer Responsibility Scheme.</li> </ul>	
	<b>Scope</b>	<ul style="list-style-type: none"> <li>Portable batteries.</li> </ul>	
	<b>National coverage</b>	<ul style="list-style-type: none"> <li>Yes – One not for profit scheme.</li> </ul>	
	<b>Program Description</b>	<ul style="list-style-type: none"> <li>The EU Battery Directive was transposed into Belgian legislation at a national level, for batteries (&amp; other products) via an Eco-Tax Law from 1993 to the end of 2012.</li> </ul>	






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PROGRAM		BELGIUM ENVIRONMENTAL PRODUCER RESPONSIBILITY SCHEME	
	<b>Board members</b>	<ul style="list-style-type: none"> <li>▪ Duracell</li> <li>▪ Energizer</li> <li>▪ Memorex</li> </ul>	<ul style="list-style-type: none"> <li>▪ Panasonic</li> <li>▪ Varta</li> </ul>
	<b>Instrument for industry engagement / cost recovery</b>	<ul style="list-style-type: none"> <li>▪ The Eco-Tax Law of July 1993, amended 2003, establishes an excise tax on products deemed to cause environmental nuisance, including batteries, which are taxed at a rate of EUR 0.5 per unit.</li> <li>▪ The Eco-Tax law is transposed in the three regions: Flanders, Brussels and Wallonia. Each region has their own Environmental Agreements or Conventions<sup>iii</sup> for defining producer responsibilities.</li> <li>▪ The Agreements stipulate operational details for the collective battery management organisation. The renewable agreements which have a duration of 3-5 years, confirm BEBAT as the 'compliance organisation'.</li> </ul>	
	<b>Enforcement</b>	Authorities must guarantee a level playing field for everybody <sup>iv</sup>	
	<b>Performance measures</b>	<b>Portable Collection Rates</b>	<b>Industrial and Automotive Collection Rate</b>
		<ul style="list-style-type: none"> <li>▪ 2012: 25%</li> <li>▪ 2016: 45%</li> </ul>	<ul style="list-style-type: none"> <li>▪ 100%</li> </ul>
	<b>Scheme outcomes</b>	<ul style="list-style-type: none"> <li>▪ Bebat<sup>v</sup> outcomes include: <ul style="list-style-type: none"> <li>▪ Collection rates of 40% to 60% (in 2015: 55%) achieved since the mid-nineties. &gt;3480 † collected in 2016</li> <li>▪ 95% System awareness by consumers</li> <li>▪ &gt; 24.500 active collection points: <ul style="list-style-type: none"> <li>&gt;11.000 retail (shops)</li> <li>&gt;6.000 schools</li> <li>&gt;5.000 companies</li> <li>&gt;500 recycling parks</li> </ul> </li> <li>▪ Average distance to next collection point: 400 m</li> <li>▪ ±1 collection point per 500 inhabitants</li> </ul> </li> </ul>	
	<b>Industry engagement e.g. # manufacturers or importers</b>	<ul style="list-style-type: none"> <li>▪ Bebat<sup>vi</sup> reports &gt;2000 participants, more than 24.500 active collection points</li> <li>▪ Bebat has stated that it collects 87% of batteries available for collection</li> </ul>	
	<b>% of industry engagement</b>	<ul style="list-style-type: none"> <li>▪ % not known, but given performance, likely to be high</li> </ul>	
	<b>Who pays for which parts of the scheme/cost sharing</b>	<ul style="list-style-type: none"> <li>▪ Up to 2013, producers were required to pay an eco-tax of EUR 0.5 per battery placed on the market unless they achieved a collection rate of 45% from 2010 and 50% in 2012 through an agreed compliance organisation (currently Bebat).</li> <li>▪ Retailers and distributors must take back batteries free of charge from end-users.</li> <li>▪ Municipalities are not obligated to collect waste portable batteries (hence BEBAT must pay a fee for the use of the municipal facilities if municipalities do collect waste batteries).</li> <li>▪ Bebat charges a 100% fee for putting on the market of portable batteries (except industrial &gt;25kg). Surplus money is used for: <ul style="list-style-type: none"> <li>▪ Increased marketing and awareness and collections the year after</li> <li>▪ Future proofing against bankruptcy of some members or market changes.</li> </ul> </li> </ul>	

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PROGRAM		FINLAND ENVIRONMENTAL PRODUCER RESPONSIBILITY SCHEME
	<b>Who runs</b>	<ul style="list-style-type: none"> <li>Recser and ERP.</li> </ul>
	<b>Scheme type</b>	<ul style="list-style-type: none"> <li>Regulatory.</li> </ul>
	<b>Scope</b>	<ul style="list-style-type: none"> <li>Portable batteries.</li> </ul>
	<b>National coverage</b>	<ul style="list-style-type: none"> <li>Regulatory Environmental Producer Responsibility Scheme.</li> </ul>
	<b>Program Description</b>	<ul style="list-style-type: none"> <li>Environmental Producer Responsibility Scheme under the EU Batteries Directive</li> <li>Initially transposed into national law in 2004.</li> <li>The law requires all businesses placing batteries and accumulators on the Finnish market register as producers of batteries and accumulators and fulfil obligations.</li> <li>Producers must registration and fulfil other producer responsibility obligations through two approved producer-controlled organisations: Recser and ERP.</li> <li>A new Decree on Batteries (520/2014) was adopted in July 2014 to bring waste batteries legislation in line with the recent Waste Act and the new WEEE Decree. <ul style="list-style-type: none"> <li>The new Decree sets minimum collection points requirements and revised registration and authorisation procedures for compliance organisations.</li> </ul> </li> <li>Retailers must receive portable batteries and accumulators without obligations to buy a new product. <ul style="list-style-type: none"> <li>The retailer take-back obligation plays an important role as municipalities have no obligation or right to collect waste batteries. Stricter enforcement against free-riders would generate more funds for awareness campaigns.</li> </ul> </li> </ul>
	<b>Board members</b>	<ul style="list-style-type: none"> <li>Affiliations not listed.</li> </ul>
	<b>Instrument for industry engagement / cost recovery</b>	<ul style="list-style-type: none"> <li><b>Producers</b> are responsible for collection and treatment according to market share.</li> <li><b>Retailers</b> must take back batteries from end-users free of charge without obligation of purchase. Wholesalers are not obligated to take back waste portable batteries.</li> <li><b>Collective organisations</b> must be approved and must be wholly controlled by producers and have the means to finance operations for at least six months.</li> <li><b>Municipalities</b> have no obligation to collect products subject to producer responsibility, but some allow containers to be placed at municipal collection sites.</li> </ul>
	<b>Enforcement</b>	<ul style="list-style-type: none"> <li>The Environmental Protection Act (86/2000) (28.2.4) requires an environmental permit is required for treatment of waste batteries and accumulators.</li> <li>Treatment facilities must use the best available technology in their processes.</li> </ul>







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PROGRAM		FINLAND ENVIRONMENTAL PRODUCER RESPONSIBILITY SCHEME					
	Performance measures	<table border="1"> <thead> <tr> <th>Portable Collection Rates</th> <th>Industrial and Automotive Collection Rate</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> <li>2012: 25%</li> <li>2016: 45%</li> </ul> </td> <td>100%</td> </tr> </tbody> </table>		Portable Collection Rates	Industrial and Automotive Collection Rate	<ul style="list-style-type: none"> <li>2012: 25%</li> <li>2016: 45%</li> </ul>	100%
Portable Collection Rates	Industrial and Automotive Collection Rate						
<ul style="list-style-type: none"> <li>2012: 25%</li> <li>2016: 45%</li> </ul>	100%						
	Scheme outcomes	<ul style="list-style-type: none"> <li>Collections               <ul style="list-style-type: none"> <li>Collection volume increased<sup>vii</sup> by 18% in 2013 and 10% in 2014, while POM decreased by -2% in both years.</li> <li>In 2015, the negative POM trend reversed (+7%) and collection increased by 3%.</li> <li>The collection rate climbed from 33% in 2012 to 47% in 2015.</li> <li>Prior to scheme implementation the collection rate was approximately 15%.</li> </ul> </li> <li>The level of recycling efficiency achieved in 2011 was:               <ul style="list-style-type: none"> <li>Alkaline batteries: 60-80 % depending on recycling plant</li> <li>Lead-acid batteries: 85-92 % depending on recycling plant</li> <li>Nickel-Cadmium batteries: 75-80 % depending on recycling plant</li> <li>Nickel-Metal Hydride batteries: 90 %</li> <li>Lithium batteries 90 %.</li> </ul> </li> <li>Collection network: 13,000 points, for portable batteries. 1,400 points for car batteries - mainly located in retail shops &amp; auto repair shops.</li> </ul>					
	Industry engagement e.g. # manufacturers or importers	<ul style="list-style-type: none"> <li>% not known, but given performance, likely to be high.</li> </ul>					
	% of industry engagement	<ul style="list-style-type: none"> <li>% not known, but given performance, likely to be high.</li> </ul>					
	Who pays for which parts of the scheme/cost sharing	<ul style="list-style-type: none"> <li>Compliance organisations manage waste battery collection and awareness campaigns.</li> </ul>					

## AMERICAN BATTERY STEWARDSHIP APPROACHES

PROGRAM	VERMONT <sup>viii</sup> PRODUCT STEWARDSHIP PROGRAM
	Who runs <ul style="list-style-type: none"> <li>Call2Recycle.</li> </ul>
	Scheme type <ul style="list-style-type: none"> <li>Regulatory.</li> </ul>
	Scope <ul style="list-style-type: none"> <li>Primary Batteries non-rechargeable battery weighing two kilograms or less, including alkaline, carbon-zinc, and lithium metal batteries.</li> <li><b>Rechargeable batteries</b> are currently collected and recycled under a voluntary stewardship program operated by Call2Recycle. Rechargeable batteries covered under Call2Recycle's program are: Nickel Cadmium (Ni-CD), Nickel Metal Hydride (Ni-MH), Lithium Ion (Li-Ion), Nickel Zinc (Ni-Zn), and Small Sealed Lead (SSLA/Pb).</li> <li>Excludes products that contain or are sold with primary batteries.</li> <li>A review of the Act is scheduled for 2019, at which time the Act requires recommendations for amendments including whether additional manufacturers of batteries or battery containing products should be included.</li> </ul>
	National coverage <ul style="list-style-type: none"> <li>No.</li> </ul>





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	PROGRAM	VERMONT <sup>viii</sup> PRODUCT STEWARDSHIP PROGRAM
	<b>Program Description</b>	<ul style="list-style-type: none"> <li>▪ Vermont Act No. 139. relating to establishing a Chapter 168. Product Stewardship for Primary and Rechargeable Batteries<sup>ix</sup>. This law:               <ul style="list-style-type: none"> <li>▪ Requires manufacturers of primary batteries sold in VT to register with the Agency of Natural Resources (ANR) by 1/3/15 and provide a Stewardship Plan to manage the proper recycling and/or disposal of all primary batteries sold in Vermont.</li> <li>▪ Does not require producers of rechargeable batteries to participate. Instead it allows for registration of rechargeable battery stewardship organizations, which may then seek reimbursements from a primary battery producer or stewardship organization (and vice versa).</li> </ul> </li> <li>▪ The plan is required to allow any retailer that sells batteries and any municipality to serve as a collector for the program.</li> <li>▪ Stewardship plans must specify provisions for program implementation with those retailers, municipalities, and certified solid waste management facilities acting as collection facilities under a program. No transportation or recycling cost shall be imposed on retailer.</li> </ul>
	<b>Board members</b>	<ul style="list-style-type: none"> <li>▪ Panasonic</li> <li>▪ Duracell</li> <li>▪ Energizer</li> <li>▪ Interface Americas</li> <li>▪ Varta</li> <li>▪ The Johnson Foundation</li> <li>▪ Spectrum Brands (Rayovac)</li> <li>▪ Matthews Strategic Services, LLC</li> <li>▪ Sony Electronics, Inc</li> <li>▪ Saft America, Inc.</li> </ul>
	<b>Instrument for industry engagement / cost recovery</b>	<ul style="list-style-type: none"> <li>▪ Producers of a primary battery shall not sell, offer for sale, or deliver to a retailer for subsequent sale unless they are registered under an approved Stewardship Plan(s).</li> <li>▪ Retailers are prohibited from selling or offering for sale a primary battery on or after 1/ 1/16 unless the producer has an approved stewardship plan or is exempt.               <ul style="list-style-type: none"> <li>▪ The retailer will inform consumers about collection options through educational materials supplied by the stewardship organization.</li> <li>▪ Note that the Act includes anti-trust authorized conduct.</li> </ul> </li> </ul>
	<b>Enforcement</b>	<ul style="list-style-type: none"> <li>▪ The law includes provisions for producer to producer reimbursement and private right of action. The Agency is not involved with these provisions.</li> <li>▪ An independent auditor must verify the reasonableness of the reimbursement request, including the costs sought for reimbursement, and the reimbursable costs assessed by each of the two programs.</li> </ul>
	<b>Performance measures</b>	<ul style="list-style-type: none"> <li>▪ The battery stewardship organization must submit a report to include:               <ul style="list-style-type: none"> <li>▪ Weight of primary batteries collected in the prior calendar year.</li> <li>▪ Estimated %, by weight, of rechargeable batteries collected in prior year.</li> <li>▪ % of primary batteries collected from producers who are not participating in an approved stewardship plan based on periodic sorting by reporting producer.</li> </ul> </li> <li>▪ Collection rate achieved in the prior calendar year including an estimate of total sales data for primary batteries sold in the State for the previous 3 years.</li> <li>▪ Locations and contact information for all collection points.</li> <li>▪ Examples and description of educational materials used to increase collection,</li> <li>▪ Description of management practices of collected primary batteries.</li> <li>▪ Any material changes to the primary battery stewardship plan.</li> <li>▪ Cost of plan implementation for collection, recycling, education, &amp; outreach.</li> </ul>






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PROGRAM		VERMONT <sup>viii</sup> PRODUCT STEWARDSHIP PROGRAM																																								
	<b>Scheme outcomes</b>	<ul style="list-style-type: none"> <li>▪ Scheme outcomes were documented in the Call2Recycle plan, including<sup>x</sup> and the 2016 Vermont Primary Battery Annual Report:               <ul style="list-style-type: none"> <li>▪ 21 primary battery producers representing 70+ brands,</li> <li>▪ 102 consumer collection points.</li> </ul> </li> </ul>																																								
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	<b>Industry Engagement: E.g. Number of manufacturers or importers</b>	<ul style="list-style-type: none"> <li>▪ Primary battery stewardship organization must be appointed by one or more producers to act as an agent on behalf of a producer(s) to design, submit, implement and administer a primary battery stewardship plan.</li> <li>▪ Rechargeable battery stewardship organizations can register with ANR in order to seek reimbursement for collected primary batteries from the producer or stewardship organization representing the collected primary battery.</li> </ul>																																								
	<b>% of industry engagement</b>	<ul style="list-style-type: none"> <li>▪ 21 primary battery producers representing 70+ brands.</li> </ul>																																								
	<b>Cost sharing / who pays for which parts of the scheme</b>	<ul style="list-style-type: none"> <li>▪ Manufacturers are required to pay an administrative fee of \$15,000 to VANR.</li> <li>▪ Costs are to be identified by the manufacturer in their Stewardship Plan.</li> <li>▪ Packaging, transportation, and recycling will be paid for by the manufacturer. Consumers will be able to recycle their primary batteries at no cost under this program effective January 1, 2016.</li> </ul>																																								


# INDUSTRY WORKING GROUP REPORT

## Summary of Product Stewardship Case Studies









PROGRAM		WASHINGTON STATE RENEWABLE ENERGY COST-RECOVERY INCENTIVE PROGRAM
	<b>Scheme type</b>	<ul style="list-style-type: none"> <li>Regulatory</li> </ul>
	<b>Scope</b>	<ul style="list-style-type: none"> <li>PV modules: <ul style="list-style-type: none"> <li>The smallest non-divisible, environmentally protected assembly of PV cells or other PV collector technology and <b>ancillary parts</b> intended to generate electrical power under sunlight. The definition excludes those that are part of a consumer electronic device.</li> <li>The scope of <b>ancillary parts</b> is yet to be determined, however according to Seago Jackson: Strategic Advisor, Prevention and Product Stewardship at Seattle Public Utilities, there may be interest in including battery storage systems in the interpretation, or if not, it will likely be pursued in a similar but separate Bill in the future.</li> </ul> </li> </ul>
	<b>National coverage</b>	<ul style="list-style-type: none"> <li>State based, but preparers of the Bill recognised that many stakeholders including 'manufacturers' prefer a national approach.</li> <li>This was accommodated in the Bill by the inclusion of a provision that states that in lieu of preparing a stewardship plan, a manufacturer may participate in a national program if it is substantially equivalent to the intent of the state program.</li> <li>It is important to note that while this national program is an option, the criteria for it is quite strict and includes that the national program must have an enforcement mechanism. A national regulated stewardship program could meet the criteria, a voluntary scheme would not.</li> </ul>
	<b>Program Description</b>	<ul style="list-style-type: none"> <li>In July 2017, Washington State passed legislation to promote a sustainable, local renewable energy industry through modifying renewable energy system tax incentives and guidance for renewable energy system component recycling.</li> <li>It requires manufacturers to prepare, implement, and update a takeback and recycling system for photovoltaic (PV) modules as described in their stewardship plan.</li> <li>Plans are to be based on Washington State guidance and must: <ul style="list-style-type: none"> <li>Identify how manufacturers will finance takeback and recycling.</li> <li>Accept all PV modules sold in or into the state.</li> <li>Describe how the program will minimize release of hazardous substances and maximize recovery of other components, including rare earth elements and commercially valuable materials.</li> <li>Provide for takeback at locations in the region where the modules were used that are as convenient as reasonably practicable, and if no such location exists, include an explanation for the lack of such.</li> <li>Identify how relevant stakeholders, (consumers, installers, building demolition firms, and recycling and treatment facilities), will receive information required to properly dismantle, transport, and treat the end-of-life PV modules.</li> </ul> </li> <li>Plans must be implemented, periodically updated and approved by the Department.</li> </ul>
	<b>Instrument for industry engagement / cost recovery</b>	<ul style="list-style-type: none"> <li>The scheme targets manufacturers, the definition of which is quite detailed, however in essence it uses a tiered approach to include manufacturers, assemblers, brand owners, importers and in some cases retailers.</li> <li>Beginning 1/1/2021, no manufacturer may sell or offer for sale a PV module in or into the state unless the manufacturer has submitted to its a stewardship plan and received plan approval.</li> </ul>





# INDUSTRY WORKING GROUP REPORT

## Summary of Product Stewardship Case Studies

PROGRAM		WASHINGTON STATE RENEWABLE ENERGY COST-RECOVERY INCENTIVE PROGRAM
	<b>Enforcement</b>	<ul style="list-style-type: none"> <li>Manufacturers that sell or offer for sale a PV module in or into the state after 1/1/2021 will receive a written warning informing it that it must submit a plan or participate in a plan within 30 days.</li> <li>Penalties for non-compliance may be subject to a penalty of up to \$10,000 for each sale of a PV module in or into the state after the initial warning.</li> <li>A manufacturer may appeal a penalty issued within 180 days of receipt of the notice.</li> </ul>
	<b>Performance measures</b>	<ul style="list-style-type: none"> <li>Stewardship plans are required to establish performance goals, including for a rate of combined reuse and recycling of collected PV modules as a % of the total weight of PV modules collected, which rate no less than 85 %.</li> </ul>
	<b>Scheme outcomes</b>	<ul style="list-style-type: none"> <li>The scheme is at the establishment phase; however, outcomes are required to be reported upon in annual reports to be submitted by Manufacturers documenting implementation of the plan and performance of established goals.</li> </ul>
	<b>Industry Engagement: E.g. Number of manufacturers or importers</b>	<ul style="list-style-type: none"> <li>Manufacturers are required to implement a self-directed stewardship program to ensure the convenient, safe, and environmentally sound takeback and recycling of PV modules and their components and materials.</li> <li>Each manufacturer must prepare and submit a <b>stewardship plan</b> which describes how manufacturers will finance the takeback program: collection, management, and recycling of PV modules and residuals sold in or into the state by the manufacturer at no cost to the last owner or holder.</li> </ul>
	<b>% of industry engagement</b>	<ul style="list-style-type: none"> <li>100% of those that meet the definition of 'manufacturer'.</li> </ul>
	<b>Who pays for which parts of the scheme/cost sharing</b>	<ul style="list-style-type: none"> <li>Manufacturers are required to finance implementation of their stewardship plan.</li> <li>The department may collect a flat fee from participating manufacturers to recover costs associated with the plan guidance, review, and approval.</li> <li>Stewardship plans are required to identify how manufacturers will finance the takeback and recycling system, and include an adequate funding mechanism to finance the costs including: <ul style="list-style-type: none"> <li>Collection, management, and recycling of photovoltaic modules and residuals sold in or into the state by the manufacture.</li> <li>A mechanism that ensures that photovoltaic modules can be delivered to takeback locations without cost to the last owner or holder.</li> </ul> </li> </ul>






## AUSTRALIAN BATTERY STEWARDSHIP PROGRAMS

	PROGRAM	BATTERYBACK <b>BATTERYback</b>
	Who runs	<ul style="list-style-type: none"> <li>Australian Battery Recycling Initiative.</li> </ul>
	Scheme type	<ul style="list-style-type: none"> <li>Voluntary.</li> </ul>
	Scope	<ul style="list-style-type: none"> <li>Handheld batteries.</li> </ul>
	National coverage	<ul style="list-style-type: none"> <li>No.</li> </ul>
	Program Description	<ul style="list-style-type: none"> <li>Batteryback is a limited voluntary take-back service the Australian Battery Recycling Initiative in Victoria. Collection bins are provided at:               <ul style="list-style-type: none"> <li>10 Bunnings Stores</li> <li>1 Michaels Camera Shop</li> </ul> </li> <li>The Australian Battery Recycling Initiative is currently reviewing the potential for program expansion, however this is unlikely in the short term without a national stewardship scheme to generate funds necessary for broader roll out.</li> </ul>
	Instrument for industry engagement / cost recovery	<ul style="list-style-type: none"> <li>Limited.</li> <li>Fee for service.</li> </ul>
	Scheme outcomes	<ul style="list-style-type: none"> <li>5148.53 kgs collected in 2017.</li> </ul>
	Cost sharing / who pays for which parts of the scheme	<ul style="list-style-type: none"> <li>ABRI pays for administration and arranges collection and processing via a contractor.</li> <li>Bunnings pays for collection and processing.</li> <li>Canon provides funding for collection and processing at Michaels Camera stores.</li> </ul>

	PROGRAM	EXITCYCLE
	Who runs	<ul style="list-style-type: none"> <li>Lighting Council Australia</li> </ul>
	Scheme type	<ul style="list-style-type: none"> <li>Voluntary</li> </ul>
	Scope	<ul style="list-style-type: none"> <li>Emergency and exit lighting batteries generated by the commercial and government sectors:               <ul style="list-style-type: none"> <li>Commercial and government buildings (including offices, retail outlets, hotels and entertainment venues)</li> <li>Industrial operations (including mines, industrial facilities and warehouses), and</li> <li>Institutions (including universities, hospitals, schools and sports venues).</li> </ul> </li> <li>The scheme does not apply directly to householders.</li> </ul>
	National coverage	<ul style="list-style-type: none"> <li>Currently a QLD Pilot</li> </ul>





# INDUSTRY WORKING GROUP REPORT






## Summary of Product Stewardship Case Studies






	PROGRAM	EXITCYCLE
	<b>Program Description</b>	<ul style="list-style-type: none"> <li>▪ In Australia, it is estimated that approximately 95 per cent of emergency and exit lighting batteries currently end up in landfill each year.</li> <li>▪ In 2015, a twelve-month pilot was launched to encourage recycling of emergency and exit lighting batteries.</li> <li>▪ The was to reduce the amount of cadmium and lead entering the environment from end-of-life emergency and exit lighting batteries by continuously increasing the recycling of these batteries.</li> <li>▪ The objective will be achieved through:               <ul style="list-style-type: none"> <li>▪ A voluntary scheme established in Queensland that recognises businesses and organisations that commit to recycling of their end-of-life emergency and exit lighting batteries.</li> <li>▪ An active communications strategy targeting businesses, government organisations, peak bodies, media partners, electrical contractors, battery recyclers and collectors, emergency and exit lighting suppliers and key stakeholders to:                   <ul style="list-style-type: none"> <li>▪ Recruit Signatories to the scheme</li> <li>▪ Work directly with Signatories to develop recycling programs appropriate to their business models. Signatories are given access to technical advice, tools and networks to help them participate in battery recycling.</li> <li>▪ Implementation of a promotional and recognition strategy to highlight the commitments and achievements of Signatories.</li> </ul> </li> </ul> </li> </ul>
	<b>Instrument for industry engagement / cost recovery</b>	<ul style="list-style-type: none"> <li>▪ Signatories receive recognition through:               <ul style="list-style-type: none"> <li>▪ Listing on the EXITCYCLE website</li> <li>▪ The entry for a Signatory is listed under one or more categories with the organisation's logo and link to its website (if available).</li> <li>▪ A certificate issued by the Administrator acknowledging Signatory status</li> <li>▪ Use of the EXITCYCLE logo</li> </ul> </li> <li>▪ Signatory commitments vary depending on user type               <ul style="list-style-type: none"> <li>▪ Commercial Users                   <ul style="list-style-type: none"> <li>▪ Required to demonstrate that ongoing arrangements to recycle at least 95% of their end-of-life emergency and exit lighting batteries are in place and are consistent with the ExitCycle Guidelines<sup>xii</sup>.</li> </ul> </li> </ul> </li> </ul>
	<b>Performance measures</b>	<ul style="list-style-type: none"> <li>▪ Number of Signatories</li> <li>▪ Recycling rate of emergency and exit lighting batteries that can be attributed to EXITCYCLE</li> <li>▪ The number of inquiries by phone and email, downloads from the EXITCYCLE website, publications distributed, media inquiries and articles printed, as proxy measures of the level of awareness of the need to recycle emergency and exit lighting batteries and the EXITCYCLE scheme. The number of email inquiries and downloads are to be based on unique user identity or internet address.</li> </ul>
	<b>Scheme outcomes</b>	<ul style="list-style-type: none"> <li>▪ 18 Signatories</li> <li>▪ Development of education materials.</li> <li>▪ No recycling data available.</li> </ul>
	<b>Cost sharing / who pays for which parts of the scheme</b>	<ul style="list-style-type: none"> <li>▪ Pilot funding provided by the QLD Government</li> </ul>

# INDUSTRY WORKING GROUP REPORT



## Summary of Product Stewardship Case Studies

PROGRAM	ALDI
 Scheme type	<ul style="list-style-type: none"> <li>Voluntary.</li> </ul>
 Scope	<ul style="list-style-type: none"> <li>All batteries.</li> </ul>
 Program Description	<ul style="list-style-type: none"> <li>Retailer drop off service.</li> </ul>
 Cost sharing / who pays for which parts of the scheme	<ul style="list-style-type: none"> <li>Free for domestic consumers.</li> </ul>

PROGRAM	BATTERY WORLD
 Program Description	<ul style="list-style-type: none"> <li>Retailer drop off service.</li> </ul>
 Scope	<ul style="list-style-type: none"> <li>All batteries.</li> </ul>
 Scheme type	<ul style="list-style-type: none"> <li>Voluntary.</li> </ul>
 Scheme outcomes	<ul style="list-style-type: none"> <li>8,000 tonnes collected since inception in 2005.</li> </ul>
 Cost sharing / who pays for which parts of the scheme	<ul style="list-style-type: none"> <li>Free for domestic consumers.</li> <li>Fees apply for bulk or commercial quantities.</li> </ul>

PROGRAM	IKEA
 Scheme type	<ul style="list-style-type: none"> <li>Voluntary.</li> </ul>
 Scope	<ul style="list-style-type: none"> <li>All batteries.</li> </ul>
 National coverage	<ul style="list-style-type: none"> <li>Yes.</li> </ul>
 Program Description	<ul style="list-style-type: none"> <li>Retailer drop off service.</li> </ul>
 Cost sharing / who pays for which parts of the scheme	<ul style="list-style-type: none"> <li>Free for domestic consumers.</li> </ul>







### Australian Product Stewardship Approaches

PROGRAM	NATIONAL TELEVISION AND COMPUTER RECYCLING SCHEME (NTCRS)
 Who runs	<ul style="list-style-type: none"> <li>Arrangements</li> </ul>
 Scheme type	<ul style="list-style-type: none"> <li>Co-regulatory.</li> </ul>








# INDUSTRY WORKING GROUP REPORT





## Summary of Product Stewardship Case Studies

PROGRAM		NATIONAL TELEVISION AND COMPUTER RECYCLING SCHEME (NTCRS)
	Scope	<ul style="list-style-type: none"> <li>Televisions, computers, printers and computer products.</li> </ul>
	National coverage	<ul style="list-style-type: none"> <li>Yes.</li> </ul>
	Description	<ul style="list-style-type: none"> <li>The Product Stewardship Act &amp; the Product Stewardship (TV &amp; Computers) Regulations 2011 sets out the <b>co-regulatory framework</b> for the <a href="#">NTCRS</a></li> <li>In 2014–15, co-regulatory arrangements include four required outcomes: <ul style="list-style-type: none"> <li>Provision of reasonable access to collection services in metropolitan, inner regional, outer regional and remote areas.</li> <li>Meeting annual recycling targets in proportion to members' import liability.</li> <li>Achieving a material recovery rate of at least 90 % from recycled products.</li> <li>Effective governance and management of the arrangement's activities.</li> </ul> </li> <li>Consumers and small businesses are provided with access to free recycling services. Waste is to be accepted regardless of age or brand.</li> <li>Arrangements are required to provide reasonable access to collection services in metropolitan and regional areas.</li> </ul>
	Performance measures	<ul style="list-style-type: none"> <li>Targets <ul style="list-style-type: none"> <li>The Department of Environment and Energy calculates annual scheme targets for television and computer waste.</li> <li>The regulations specify the formula which calculates 'waste arising' in the financial year and multiplying this by the scheme % target for that year.</li> <li>The formula is designed to account for an average of import and manufacturing data for the preceding three years with an adjustment for exports and growth.</li> <li>2012/13 Target was 30%, rose to 50% for 2015/16 and is set to reach 80% by 2026/27.</li> </ul> </li> <li>Materials Recovery <ul style="list-style-type: none"> <li>90% of the materials must be recovered and reprocessed into reusable materials.</li> </ul> </li> <li>Implications for inclusion of batteries: <ul style="list-style-type: none"> <li>Current NTCRS targets would likely require redesign due to industry concerns and the different nature of batteries - weight, source, etc.</li> </ul> </li> </ul>
	Instrument for industry engagement / cost recovery	<ul style="list-style-type: none"> <li>Liable parties pay the Arrangement to which is a member of, a rate per tonne collected based on their specific imports in the prior year multiplied by the current year target.</li> </ul>
	Enforcement <sup>xiii</sup>	<ul style="list-style-type: none"> <li>Conducted by the Department of Environment and Energy. Regulation applies to two key groups: liable parties and administrators of co-regulatory arrangements.</li> <li>Substantial civil penalties apply to a liable party that fails to become a member of an approved co-regulatory arrangement.</li> </ul>

# INDUSTRY WORKING GROUP REPORT







## Summary of Product Stewardship Case Studies

PROGRAM		NATIONAL TELEVISION AND COMPUTER RECYCLING SCHEME (NTRCS)	
	<b>Number of manufacturers or importers</b>	<b>Arrangement (Product Stewardship Organisation)</b>	<b>Number of Liable Parties (2015/2016)</b>
		ANZPR <sup>xiv</sup>	48
		MRI 2015/16 <sup>xv</sup>	27
		EPSA <sup>xvi</sup>	27
		E-Cycle Solutions <sup>xvii</sup>	23
<b>Total</b>		<b>125</b>	
	<b>% of industry engagement</b>	<ul style="list-style-type: none"> <li>96% (Outcomes Report).</li> </ul>	
	<b>Scheme outcomes<sup>xviii</sup></b>	<ul style="list-style-type: none"> <li>44,730.5 tonnes of e-waste were recycled under the scheme in 2014–15.</li> <li>1,677 longer-term and event-based collection services were made available around Australia.</li> <li>130 TV and computer companies were identified as liable parties with obligations under the scheme.</li> <li>By 30 June 2015, 127 of these parties had met their obligation to join and fund a co-regulatory arrangement.</li> </ul>	
	<b>Who pays for which parts of the scheme/cost sharing</b>	<ul style="list-style-type: none"> <li>Brand owners or liable parties pay a rate per tonne, to the Arrangement it is a member of, for each tonne collected based on their specific imports in the prior year multiplied by the current year target.</li> <li>Cost of recycling                             <ul style="list-style-type: none"> <li>Liable parties fund recycling through the Co-regulatory arrangement of their choice in line with the 50% recycling target (2015/16).</li> </ul> </li> <li>The cost of managing the remaining 50 per cent of available e-waste continues to be the responsibility of state, territory and local government.</li> </ul>	
	<b>What are the costs that are shared</b>	<ul style="list-style-type: none"> <li>This membership fee covers costs of                             <ul style="list-style-type: none"> <li>Collection &amp; aggregation</li> <li>Transport</li> <li>Recycling (in accordance with AS5377)</li> <li>Promotion and marketing</li> <li>Administration</li> <li>Profit (if for-profit).</li> </ul> </li> </ul>	

PROGRAM		MOBILEMUSTER
	<b>Who runs</b>	<ul style="list-style-type: none"> <li>Australian Mobile Telecommunications Association (AMTA).</li> </ul>
	<b>Scope</b>	<ul style="list-style-type: none"> <li>Mobile phones and mobile phone peripherals.</li> </ul>
	<b>Scheme type</b>	<ul style="list-style-type: none"> <li>Voluntary.</li> </ul>
	<b>National coverage</b>	<ul style="list-style-type: none"> <li>Yes.</li> </ul>

# INDUSTRY WORKING GROUP REPORT






## Summary of Product Stewardship Case Studies

PROGRAM		MOBILEMUSTER																																																
	<b>Program Description</b>	<ul style="list-style-type: none"> <li>MobileMuster which was established in 1998, provides a free mobile phone recycling program that accepts all brands and types of mobile phones, plus their batteries, chargers and accessories.</li> <li>MobileMuster became accredited under the <u>Product Stewardship Act 2011</u> in 2014.</li> <li>Mobile phone users can also pick up a reply-paid satchel from AusPost outlets and post back their mobiles and accessories for recycling for free.</li> </ul>																																																
	<b>Instrument for industry engagement / cost recovery</b>	<ul style="list-style-type: none"> <li>42 cents per handset, split between the manufacturer (30 cents) and network carriers based on market share (12 cents).</li> <li>Levy is paid on each handset the members import into the country.</li> <li>Levies are paid to AMTA, who manages the program on behalf of the industry.</li> </ul>																																																
	<b>Enforcement</b>	<ul style="list-style-type: none"> <li>Not applicable.</li> </ul>																																																
	<b>Performance measures</b>	<table border="1"> <thead> <tr> <th>Key Performance Indicators<sup>xix</sup></th> <th>Target</th> <th>Actual</th> </tr> </thead> <tbody> <tr> <td colspan="3"><b>Collections</b></td> </tr> <tr> <td>Mobile Phone Collections (weight – tonnes)</td> <td>75.0</td> <td>79.1</td> </tr> <tr> <td>Annual Collection Rate, Available Phones (%)</td> <td>57.5%</td> <td>68.5%</td> </tr> <tr> <td>Annual Collection Rate, Net Imports (%)</td> <td>8.6%</td> <td>10.3%</td> </tr> <tr> <td>Estimated Number Handsets &amp; Batteries (units – millions)</td> <td>1.01</td> <td>1.06</td> </tr> <tr> <td colspan="3"><b>Recycling</b></td> </tr> <tr> <td>Diversion from Landfill</td> <td>97%</td> <td>99%</td> </tr> <tr> <td>Recycling Rate</td> <td>&gt;90%</td> <td>99%</td> </tr> <tr> <td colspan="3"><b>Consumer Behaviour</b></td> </tr> <tr> <td>Personal Storage Rate (% users with 2 or more handsets at home)</td> <td>37%</td> <td>34%</td> </tr> <tr> <td>Disposal to Landfill Rate</td> <td>2%</td> <td>2%</td> </tr> <tr> <td>Awareness of Mobile Phone Recycling</td> <td>&gt;80%</td> <td>77%</td> </tr> <tr> <td colspan="3"><b>Industry Participation</b></td> </tr> <tr> <td>Manufacturers</td> <td>58%</td> <td>40%</td> </tr> <tr> <td>Mobile Network Carriers</td> <td>91%</td> <td>86%</td> </tr> </tbody> </table>	Key Performance Indicators <sup>xix</sup>	Target	Actual	<b>Collections</b>			Mobile Phone Collections (weight – tonnes)	75.0	79.1	Annual Collection Rate, Available Phones (%)	57.5%	68.5%	Annual Collection Rate, Net Imports (%)	8.6%	10.3%	Estimated Number Handsets & Batteries (units – millions)	1.01	1.06	<b>Recycling</b>			Diversion from Landfill	97%	99%	Recycling Rate	>90%	99%	<b>Consumer Behaviour</b>			Personal Storage Rate (% users with 2 or more handsets at home)	37%	34%	Disposal to Landfill Rate	2%	2%	Awareness of Mobile Phone Recycling	>80%	77%	<b>Industry Participation</b>			Manufacturers	58%	40%	Mobile Network Carriers	91%	86%
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	<b>Industry Engagement: E.g. Who/how many manufacturers or importers</b>	<ul style="list-style-type: none"> <li>Handset manufacturers (Microsoft, Samsung, Motorola, HTC, Huawei, ZTE, Alcatel, Oppo, HMD Global, Google).</li> <li>Network carriers (Telstra, Optus, Vodafone, Virgin Mobile).</li> </ul>																																																

# INDUSTRY WORKING GROUP REPORT





## Summary of Product Stewardship Case Studies

PROGRAM		MOBILEMUSTER
	<b>% of industry engagement</b>	<ul style="list-style-type: none"> <li>77% of the major brands in the industry participating in the program.</li> </ul>
	<b>Cost sharing / who pays for which parts of the scheme</b>	<ul style="list-style-type: none"> <li>industry has invested over \$42 million into the program which has recycled over 11 million handsets and batteries since it was established in 1998<sup>xx</sup>.</li> </ul>

PROGRAM		TYRE STEWARDSHIP SCHEME
	<b>Who runs</b>	<ul style="list-style-type: none"> <li>Tyre Stewardship Australia (TSA)</li> </ul>
	<b>Scheme type</b>	<ul style="list-style-type: none"> <li>Voluntary scheme authorised by the Australian Consumer and Competition Commission (ACCC).</li> </ul>
	<b>Scope</b>	<ul style="list-style-type: none"> <li>Applies to: <ul style="list-style-type: none"> <li>All vulcanised rubber tyres entering the Australian market for the first time.</li> <li>Tyres that are loose replacements for use on, or fitted to, motorised vehicles &amp; non-motorised trailers towed behind motorised vehicles.</li> <li>But is not limited to, tyres for motorcycles, passenger cars, box trailers, caravans, light commercial vehicles, trucks and truck trailers, buses, mining and earth moving vehicles, cranes, excavators, graders, farm machinery, and forklifts.</li> </ul> </li> </ul>
	<b>National coverage</b>	<ul style="list-style-type: none"> <li>Yes.</li> </ul>
	<b>Description<sup>xxi</sup></b>	<ul style="list-style-type: none"> <li>The Tyre Stewardship Scheme is: <ul style="list-style-type: none"> <li>A voluntary, industry led program with the primary aim of increasing the recycling rate of end-of-life tyres, including reducing the amount of end of life tyres damaging the environment via landfill, illegal dumping or undesirable export while increasing the recycling rate of end of life tyres.</li> <li>Based on changing the commercial behaviour of all companies in the supply chain (importers, retailers, collectors, recyclers etc) through an accreditation system that requires all parties to only deal with other accredited parties.</li> <li>Was authorised by the ACCC in 2013 for an initial 5-year period. The Authorisation permits the collection of a levy of 25cent per EPU which may be passed on to consumers. In addition, the Authorisation permits companies to only enter into agreements with other entities that are accredited and protects them from legal challenge.</li> </ul> </li> <li>Authorisation resulted in the establishment of the <a href="#">Tyre Stewardship Australia</a> as a not-for-profit company to administer the Tyre Stewardship Scheme.</li> <li>Initial parties to the scheme: <ul style="list-style-type: none"> <li>The Australian Tyre Industry Council, Federal Chamber of Automotive Industries, Australian Motor Industry Federation and the Australian Tyre Recyclers Association. It has evolved into a company-based membership arrangement.</li> <li>Came together to develop the Guidelines and support the establishment of Tyre Stewardship Australia; and have agreed these Guidelines.</li> </ul> </li> </ul>





# INDUSTRY WORKING GROUP REPORT





## Summary of Product Stewardship Case Studies

PROGRAM	TYRE STEWARDSHIP SCHEME
 <p><b>Instrument for industry engagement / cost recovery</b></p>	<ul style="list-style-type: none"> <li>▪ Scheme participants are required to:               <ul style="list-style-type: none"> <li>▪ Make commitments requiring scheme participants to play their part in ensuring end-of-life tyres (EOLTs) are disposed in using an environmentally sound use</li> <li>▪ Commitments are enforced via random and risk-based audits</li> <li>▪ Failure to adhere to commitments made through participation in the scheme may lead to revocation of a Participant's accreditation.</li> <li>▪ Commitments include technical specifications for categories of participants:                   <ul style="list-style-type: none"> <li>▪ Tyre importers and vehicle manufacturers and importers</li> <li>▪ Retailers</li> <li>▪ Fleet operators</li> <li>▪ Local governments</li> <li>▪ Collectors</li> <li>▪ Recyclers</li> <li>▪ Miners (still being negotiated although The Minerals Council of Australia has endorsed the Scheme).</li> </ul> </li> </ul> </li> <li>▪ Enter in to enterprise to enterprise agreements or contractual arrangements between individual businesses and organisations, which give effect to the industry wide commitments.</li> </ul>
 <p><b>Performance measures</b></p>	<ul style="list-style-type: none"> <li>▪ Performance measures and targets including:               <ul style="list-style-type: none"> <li>▪ The number of Participants in the scheme.</li> <li>▪ % of tyre importers and vehicle manufacturers and importers that are participants in the scheme, the aim being to achieve greater than 90% of tyre and vehicle importers in the scheme within 5 years of commencement.</li> <li>▪ Resource recovery and recycling rates of EOLTs that can be attributed to the scheme.</li> <li>▪ National resource recovery and recycling rates of end-of-life tyres.</li> <li>▪ increase in the % of EOLTs that are going to an environmentally sound use</li> <li>▪ Volume of tyre derived products sold or provided for environmentally sound use.</li> <li>▪ Number of users of TSA website.</li> </ul> </li> </ul>
 <p><b>Enforcement</b></p>	<ul style="list-style-type: none"> <li>▪ ACCC uses a range of compliance tools<sup>xxii</sup> to prevent breaches of the Act e.g. business and consumer education and working closely with stakeholders and other agencies.</li> <li>▪ The ACCC resolves many matters administratively but the Act includes a range of enforcement remedies: court-based outcomes and court enforceable undertakings.</li> </ul>
 <p><b>Industry Engagement: E.g. Number of manufacturers or importers<sup>xxiii</sup></b></p>	<ul style="list-style-type: none"> <li>▪ Number of TSA accredited tyre retailers approached 1,300 with a nationwide coverage that ensures most consumers have a choice of TSA accredited tyre retailer.</li> <li>▪ All TSA accredited recyclers and collectors are audited annually to ensure they are TSA compliant. As of 30/6/17, 23 recycler and collector compliance audits were completed.</li> <li>▪ Local, state and federal fleets are significant generators of EOLTs and their public exposure enables TSA to communicate its message to a wider audience.</li> <li>▪ In the 2016/17, NT Fleet became the first state or territory fleet to become accredited.</li> <li>▪ Three additional regional/rural local government authorities also gained accreditation.</li> </ul>

# INDUSTRY WORKING GROUP REPORT





## Summary of Product Stewardship Case Studies

PROGRAM		TYRE STEWARDSHIP SCHEME
	<b>% of industry engagement</b>	<ul style="list-style-type: none"> <li>TSA accredited operators handle &gt; 70% of the available EOLTs managed in Australia.</li> </ul>
	<b>Scheme outcomes<sup>xxiv</sup></b>	<ul style="list-style-type: none"> <li>A tyre stewardship fund is used to support the activities of the scheme and for investment in research and development for new technologies and market development.</li> <li>In 2016/17 \$540,000 worth of projects contracted with a further \$320,000 of projects approved bringing the total potential R&amp;D investment in 2016/17 to \$860,000.</li> <li>Industry participation (see above).</li> </ul>
	<b>Who pays for which parts of the scheme/cost sharing</b>	<ul style="list-style-type: none"> <li>The scheme imposes a levy on tyre importers (that is, importers of loose tyres and vehicle manufacturers and vehicle importers).</li> <li>Levy is a \$0.25 per passenger car tyre equivalent, adjusted annually for CPI, or an equivalent membership fee.</li> <li>Levy is intended to fund the operation of the Scheme, including for market development and research – but not to directly fund the collection and recycling of end of life tyres.</li> <li>In 2015 TSA received a total revenue of approximately \$660,000 and had repaid five of the original advances from importers.</li> </ul>
	<b>What are the costs that are shared</b>	<ul style="list-style-type: none"> <li>2015 funds were invested in communications, website development and design and implementation of the accreditation scheme totalled approximately \$200,000.</li> <li>TSA establishment and management fees totalled approximately \$236,000.</li> <li>Priorities for future expenditure including the establishment of a small executive team and costs associated with accreditation, auditing, and communications.</li> <li>Majority of revenue goes to a Stewardship Fund for market development initiatives.</li> </ul>

PROGRAM		PAINTBACK
	<b>Who runs</b>	<ul style="list-style-type: none"> <li>Paint Stewardship Limited (PSL).</li> </ul>
	<b>Scheme type</b>	<ul style="list-style-type: none"> <li>Voluntary scheme authorised by the ACCC.</li> </ul>
	<b>Scope</b>	<ul style="list-style-type: none"> <li>Certain architectural and design (A&amp;D) paints and woodcare products.</li> </ul>
	<b>National coverage</b>	<ul style="list-style-type: none"> <li>Yes.</li> </ul>






# INDUSTRY WORKING GROUP REPORT





## Summary of Product Stewardship Case Studies

PROGRAM		PAINTBACK
	<b>Program Description</b>	<ul style="list-style-type: none"> <li>▪ Paintback is an industry led scheme with the core goal to provide a nationally co-ordinated approach to the collection and disposal of A&amp;D paints in Australia.</li> <li>▪ The ACCC<sup>xxv</sup> granted authorisation to the Australian Paint Manufacturers' Federation, Paint Stewardship Limited (PSL) and certain paint manufacturers to support a National Paint Stewardship Scheme.</li> <li>▪ PSL contracts with state, territory and local governments and waste service providers for the collection and safe disposal of waste A&amp;D paint.</li> <li>▪ The Scheme design and the ACCC application was informed by: <ul style="list-style-type: none"> <li>▪ Economic Modelling "APMF (2014) Key Assumptions Used for Economic Modelling for a Future Waste Paint Product Stewardship Scheme".</li> <li>▪ A Stocks and Flows report Nolan (2014) Study into stocks and flows, market analysis and processing capacity of waste paint.</li> </ul> </li> <li>▪ The Scheme's elements are: <ul style="list-style-type: none"> <li>▪ Establishment of a corporate entity, PSL, to operate the Scheme</li> <li>▪ Charging the levy on all sales of A&amp;D paint by scheme members to any consumer, whether trade or retail, and remitting the levy to PSL</li> </ul> </li> <li>▪ The scheme was rolled out in three stages <ul style="list-style-type: none"> <li>▪ Stage 1: To capital cities, through a combination of existing permanent sites and mobile collection services.</li> <li>▪ Stage 2: Extend the collections to key regional cities and rural locations.</li> <li>▪ Stage 3: Extend the collections with the aim of 85 % of Australia's population within either 20 km of a metro collection site or 40 km of a regional site.</li> </ul> </li> </ul>
	<b>Instrument for industry engagement / cost recovery</b>	<ul style="list-style-type: none"> <li>▪ Industry members sign the PSL 'Waste Paint Agreement' which requires them to: <ul style="list-style-type: none"> <li>▪ Impose and collect the levy.</li> <li>▪ Remit the levy to PSL in set periods.</li> <li>▪ Confidentially provide detailed information to PSL about sales, including the net volume of A&amp;D paint sold, the amount of levy contributed and the total GST applicable to the levy remittance.</li> <li>▪ Pay interest on any levy remittance not paid within the required period</li> <li>▪ Identify on customer invoices those products that incur the levy and the total amount of levy payable. This obligation will not apply if a Scheme member's IT and invoicing systems are not sophisticated enough to undertake this process, however a Scheme member will only be exempted from this obligation after applying to PSL.</li> </ul> </li> </ul>
	<b>Enforcement</b>	<ul style="list-style-type: none"> <li>▪ ACCC uses a range of compliance tools<sup>xxvi</sup> to prevent breaches of the Act e.g. business and consumer education and working closely with stakeholders and other agencies.</li> <li>▪ The ACCC resolves many matters administratively but the Act includes a range of enforcement remedies: court-based outcomes and court enforceable undertakings.</li> </ul>
	<b>Performance measures</b>	<ul style="list-style-type: none"> <li>▪ The scheme establishes expected collection goal for of unwanted paint &amp; packaging over a five-year period: <ul style="list-style-type: none"> <li>▪ Current goal to collect &amp; treat 45 million kgs by 2021 .</li> <li>▪ Estimates are based on confidential modelling prepared by the Applicants. <ul style="list-style-type: none"> <li>▪ Estimates indicate that, based on the Nolan Consulting report, over 75% of waste paint generated each year is expected to be collected by Year 5.</li> </ul> </li> </ul> </li> </ul>

# INDUSTRY WORKING GROUP REPORT

## Summary of Product Stewardship Case Studies









PROGRAM		PAINTBACK
	<b>Industry Engagement:</b> E.g. Number of manufacturers or importers	<ul style="list-style-type: none"> <li>Any paint manufacturer or importer can be a member of the Scheme by signing the Waste Paint Agreement.</li> <li>The following APMF members are signatories to the Waste Paint Agreement: <ul style="list-style-type: none"> <li>DuluxGroup (Australia) Pty Ltd.</li> <li>Valspar Paint (Australia) Pty Ltd.</li> <li>PPG Industries Australia Pty Ltd.</li> <li>Henry Haymes Pty Ltd.</li> </ul> </li> <li>Resene Paints (Australia) Ltd.</li> </ul>
	<b>% of industry engagement</b>	<ul style="list-style-type: none"> <li>These initial participants account for approximately 90 per cent (by volume) of all A&amp;D paint supplied in Australia.</li> </ul>
	<b>Scheme outcomes</b>	<ul style="list-style-type: none"> <li>47 collection sites established, 3 mobile events held in 2016 collecting 36,000 kilograms.</li> <li>12.5 million people live within 20km of a Paintback site: that is 60% of the total population.</li> <li>Since launch, over 1 million kgs of unwanted paint &amp; packaging diverted from landfill.</li> </ul>
	<b>Cost sharing / who pays for which parts of the scheme</b>	<ul style="list-style-type: none"> <li>Signatories pay 15 cents per litre levy.</li> <li>PSL manages the scheme on behalf of members and covers costs associated with: <ul style="list-style-type: none"> <li>Scheme administration including contracting with state, territory and local governments and waste service providers for collection and safe disposal of waste A&amp;D paint (the waste paint collection program), including using and expanding existing disposal facilities.</li> <li>Levy management and collection.</li> <li>Undertaking education, awareness and information activities to promote the waste collection operations.</li> <li>Monitoring, auditing and reporting on the development of the Scheme.</li> </ul> </li> </ul>
	<b>What are the costs that are shared</b>	<ul style="list-style-type: none"> <li>Administering a program of research into new end-of-life uses for waste A&amp;D paint and collection processes, including establishing an independent Research Advisory Committee to advise PSL's board on priority areas, undertake robust assessments of any proposals and provide expert advice.</li> </ul>

PROGRAM		DRUMMUSTER
	<b>Who runs</b>	<ul style="list-style-type: none"> <li>AgStewardship Australia Limited (Agsafe Limited is a subsidiary of CropLife Australia and runs industry stewardship services in Australia for the agricultural and veterinary sector<sup>xxvii</sup>. Agsafe delivers daily operation of the Programs on behalf of AgStewardship Australia).</li> </ul>
	<b>Scheme type</b>	<ul style="list-style-type: none"> <li>Voluntary scheme authorised by the ACCC</li> </ul>
	<b>Scope</b>	<ul style="list-style-type: none"> <li>Used containers for crop production and on-farm animal health chemicals.</li> </ul>
	<b>National coverage</b>	<ul style="list-style-type: none"> <li>Yes</li> </ul>



# INDUSTRY WORKING GROUP REPORT


## Summary of Product Stewardship Case Studies

PROGRAM		DRUMMUSTER
	<b>Program Description</b>	<ul style="list-style-type: none"> <li>drumMUSTER® is a voluntary Stewardship program established to facilitate collection and recycling of used containers for crop production and on-farm animal health chemicals.</li> <li>Eligible non-returnable, metal and plastic containers are cleaned of residue by farmers and delivered to one of more than 780 collection sites across Australia.</li> <li>Collection operations of the program (as administered by Agsafe), rely on the support of local government and other collection agencies.</li> <li>Remote area collections are facilitated by coordinating with station properties to aggregate stockpiles at neighbouring farms and arranging for collections via a dedicated truck run. drumMUSTER also works with aerial sprayers and provides on-farm collections where drum volumes are high.</li> </ul>
	<b>Instrument for industry engagement / cost recovery</b>	<ul style="list-style-type: none"> <li>Containers with the drumMUSTER logo have a 4-cent/lit levy included in the cost of the chemical at purchase, which covers the collection of these. The levy is passed on to end-users on the purchase of eligible containers.</li> </ul>
	<b>Enforcement</b>	<ul style="list-style-type: none"> <li>ACCC uses a range of compliance tools to prevent breaches of the Act e.g. business and consumer education and working closely with stakeholders and other agencies.</li> <li>The ACCC resolves many matters administratively but the Act includes a range of enforcement remedies: court-based outcomes and court enforceable undertakings.</li> </ul>
	<b>Performance measures</b>	<ul style="list-style-type: none"> <li>Participation by AgVet chemical manufacturers and suppliers</li> <li>Drum collection</li> <li>Drum return rates</li> <li>Convenience and access</li> </ul>
	<b>Industry Engagement, e.g. # of manufacturers or importers</b>	<ul style="list-style-type: none"> <li>100 AgVet chemical manufacturers and suppliers</li> </ul>
	<b>% of industry engagement</b>	<ul style="list-style-type: none"> <li>90 percent of the market</li> </ul>
	<b>Scheme outcomes</b>	<ul style="list-style-type: none"> <li>1,975,076 containers collected in 2017 and 31,066,367 collected since program inception<sup>xxviii</sup>.</li> <li>Currently there are approximately 455 collection agencies around Australia, including 366 councils and shires<sup>xxix</sup>.</li> </ul>
	<b>Cost sharing / who pays for which parts of the scheme</b>	<ul style="list-style-type: none"> <li>According to the AgStewardship ACCC application, the program operates on a user-pays basis and offer efficiency benefits compared to a regulated approach in terms of business compliance costs and effective use of publicly funded resources.</li> </ul>
	<b>What are the costs that are shared</b>	<ul style="list-style-type: none"> <li>The levy pays for the collection of these eligible, clean chemical containers. The drums are inspected by collection agencies, transported, processed then recycled into wheelie bins, signage, pipes, containers and fence posts.</li> <li>50% of the levy is allocated to a qualified service provider (for example, The Weed's Network) for the purposes of researching and implementing strategies to reduce the number of drums collected and to reduce the amount of hazardous chemicals being distributed in the containers.</li> <li>The program also includes:</li> </ul>

# INDUSTRY WORKING GROUP REPORT





## Summary of Product Stewardship Case Studies

PROGRAM		DRUMMUSTER
		<ul style="list-style-type: none"> <li>▪ Identification and implementation of methods for cleaning empty containers that avoid contaminating the cleaning site and/or surrounding environ, such as waterbodies, dams, or farm household buildings.</li> <li>▪ Development of guidelines to ensure that cleaning does not result in chemicals being mixed during the cleaning process to create even more hazardous by-products as a number of commonly used AgVet chemicals are known to increase in toxicity when combined.</li> </ul>

PROGRAM		FLUOROCYCLE
	<b>Who runs</b>	<ul style="list-style-type: none"> <li>▪ Lighting Council of Australia.</li> </ul>
	<b>Scheme type</b>	<ul style="list-style-type: none"> <li>▪ Voluntary accredited scheme under the Product Stewardship Act.</li> </ul>
	<b>Scope</b>	<ul style="list-style-type: none"> <li>▪ Applies to waste mercury-containing lamps generated by the commercial and public lighting sectors. It does not apply directly to house-holds, but does recognise collectors of house-hold lamps). Collectively, these sectors are the major generators of waste mercury-containing lamps in relation to: <ul style="list-style-type: none"> <li>▪ Public lighting (including streets, roads, parks).</li> <li>▪ Commercial and government buildings (including offices, retail outlets, hotels and entertainment venues).</li> <li>▪ Industrial operations (including mines, industrial facilities and warehouses).</li> <li>▪ Institutions (including universities, hospitals, schools and sports venues).</li> </ul> </li> </ul>
	<b>National coverage</b>	<ul style="list-style-type: none"> <li>▪ Yes.</li> </ul>
	<b>Program Description</b>	<ul style="list-style-type: none"> <li>▪ FluoroCycle<sup>xxx</sup> is a product stewardship scheme that seeks to increase the national recycling rate of waste mercury-containing lamps. The scheme includes: <ul style="list-style-type: none"> <li>▪ Recognition for businesses and organisations that commit to recycling of their waste lamps.</li> <li>▪ An outreach program targeting industry associations and individual companies to: <ul style="list-style-type: none"> <li>▪ Recruit members to the scheme.</li> <li>▪ Work directly with members to develop recycling programs appropriate to their business models. Members are given access to technical advice, tools and networks to help them participate in lamp recycling.</li> </ul> </li> <li>▪ A promotional and recognition strategy to highlight member achievements.</li> </ul> </li> </ul>
	<b>Instrument for industry engagement / cost recovery</b>	<ul style="list-style-type: none"> <li>▪ Initially FluoroCycle was a partnership between government and industry, delivered jointly by Lighting Council Australia and the Australian Government on behalf of environment ministers. The Australian Government provided funding to engage Lighting Council Australia to manage day-to-day operations.</li> </ul>
	<b>Enforcement</b>	<ul style="list-style-type: none"> <li>▪ Not applicable.</li> </ul>
	<b>Performance measures</b>	<ul style="list-style-type: none"> <li>▪ The performance of the FluoroCycle scheme in achieving its objective is to be measured by the following means:</li> </ul>

# INDUSTRY WORKING GROUP REPORT






## Summary of Product Stewardship Case Studies

PROGRAM		FLUOROCYCLE
		<ul style="list-style-type: none"> <li>Number of Signatories.</li> <li>Recycling rate of mercury-containing lamps that can be attributed to FluoroCycle; and the national recycling rate of mercury-containing lamps.</li> <li>Awareness activities including numbers of:               <ul style="list-style-type: none"> <li>Inquiries by phone and email.</li> <li>Downloads from the FluoroCycle website.</li> <li>Publications distributed, media inquiries and articles printed.</li> </ul> </li> <li>Performance measures and data requirements were designed to be refined with experience in order to improve understanding of the scheme's performance and recycling rates and inform any decisions on the scheme's strategic direction.</li> </ul>
	<b>Scheme outcomes</b>	<ul style="list-style-type: none"> <li>Not known.</li> </ul>
	<b>Industry Engagement:</b> E.g. Number of manufacturers or importers	<ul style="list-style-type: none"> <li>Signatories include:               <ul style="list-style-type: none"> <li><b>Commercial Users:</b> A Commercial User is a business or organisation that has committed to recycle all the waste mercury-containing lamps generated by one or more specified sites over which it exercises operational control. In this context, 'site' refers to a building, factory, industrial facility, institution, retail space or location.</li> <li><b>Facilitators:</b> Facilitators have a range of roles in ensuring that waste mercury-containing lamps are recycled, ie collected and processed.</li> </ul> </li> </ul>
	<b>% of industry engagement</b>	<ul style="list-style-type: none"> <li>Not known.</li> </ul>
	<b>Who pays for which parts of the scheme/cost sharing</b>	<ul style="list-style-type: none"> <li>The Lighting Council of Australia is responsible for:               <ul style="list-style-type: none"> <li>Day to day project management, administration and implementation of the scheme</li> <li>Recruitment/induction of Signatories</li> <li>Liaison with industry bodies</li> <li>Preparation of reports to the 'Governance Committee'</li> <li>Financial management of the scheme</li> <li>Oversight of annual Signatory self-certification process</li> <li>Ensure confidentiality of information about Applicants and Signatories is maintained and their privacy is protected</li> <li>Conduct random or risk-based monitoring and audit of adherence to these Guidelines and the Signatory Guide to FluoroCycle Branding.</li> </ul> </li> </ul>

PROGRAM		AUSTRALIAN PACKAGING COVENANT
	<b>Who runs</b>	<ul style="list-style-type: none"> <li>Australian Packaging Covenant Organisation (APCO).</li> </ul>
	<b>Scheme type</b>	<ul style="list-style-type: none"> <li>Co-regulatory.</li> </ul>
	<b>Scope</b>	<ul style="list-style-type: none"> <li>The Australian Packaging Covenant<sup>xxxii</sup> applies to businesses in a supply chain that are consumers of packaging or packaged products that have an annual turnover of \$5 million or more.</li> </ul>
	<b>National coverage</b>	<ul style="list-style-type: none"> <li>Yes.</li> </ul>




# INDUSTRY WORKING GROUP REPORT

## Summary of Product Stewardship Case Studies

PROGRAM		AUSTRALIAN PACKAGING COVENANT			
	<b>Program Description</b>	<ul style="list-style-type: none"> <li>the <i>National Environment Protection (Used Packaging Materials) Measure 2011 (NEPM)</i> and Australian Packaging Covenant establish the co-regulatory arrangements for managing packaging waste in Australia.</li> <li>The National Packaging Covenant is an agreement between the Australian Packaging Covenant Organisation Ltd. (APCO), (made up of industry participants in the packaging supply chain), and commonwealth, state and territory governments.</li> <li>The Covenant is endorsed by environment ministers.</li> </ul>			
	<b>Instrument for industry engagement / cost recovery</b>	<ul style="list-style-type: none"> <li>The Commonwealth annually provides APCO with a list of possible Brand Owners that may be eligible under the Covenant.</li> <li>Signatories contribute membership fees that support the administration of the Covenant, the provision of services to Signatories and projects.</li> <li>Membership fees apply only to Signatories that are Brand Owners: businesses involved in the packaging supply chain and industry associations.</li> <li>Local government associations and community groups who choose to support the Covenant as Signatories are not required to contribute to the Covenant's funds.</li> </ul>			
	<b>Enforcement</b>	<ul style="list-style-type: none"> <li>The National Environment Protection (Used Packaging Materials) Measure 2011 (NEPM) requires businesses to choose between: <ul style="list-style-type: none"> <li>Becoming a Signatory to the Covenant with associated obligations for contributing to national efforts in managing packaging waste, or</li> <li>Meeting compliance obligations specified in the National Environment Protection (Used Packaging Materials) Measure 2011 (NEPM), which are implemented by the laws and other arrangements of participating states and territories where a business sells or distributes its products.</li> </ul> </li> <li>NEPM provides free-rider protection to ensure Signatories are not competitively disadvantaged by participating in the Covenant.</li> <li>Signatories fulfilling their obligations under the Covenant are exempt from the NEPM requirements of participating jurisdictions, as are industries or industry sectors that achieve equivalent outcomes to the Covenant.</li> <li>APCO undertakes independent audits of: <ul style="list-style-type: none"> <li>Signatory annual reports and action plans for meeting Covenant obligations.</li> <li>National Brand Owner packaging to identify Brand Owners that are not Signatories and to enable the compliance options open to these Brand Owners to be highlighted.</li> </ul> </li> </ul>			
	<b>Performance measures</b>	<ul style="list-style-type: none"> <li>The Covenant is implemented through a Strategic Plan which identifies performance indicators Sustainable Packaging Guidelines assist in optimising the outcomes from the Covenant.</li> <li>Annual reporting against the performance indicators in the Plan are provided to environment ministers by APCO through the Government Officials Group.</li> </ul>			
	<b>Scheme outcomes<sup>xxxii</sup></b>	<b>Financial Year</b>	<b>Total Consumption not including plastics and non-beverage aluminium (kt)</b>	<b>Total Recycled not including plastics and non-beverage aluminium (Processed &amp; Exported) (kt)</b>	<b>Calculated Recycling Rate</b>
		2010-11	3 840.6	2 559.8	67.3%
		2011-12	3 980.5	2 597.9	65.3%
		2012-13	4 054.1	2 692.5	66.4%
		2013-14	4 045.4	2 704.9	66.9%

# INDUSTRY WORKING GROUP REPORT

## Summary of Product Stewardship Case Studies

PROGRAM		AUSTRALIAN PACKAGING COVENANT			
		2014-15	4 168.3	2 637.9	63.3%
		2015-16	4 230.2	2 763.2	65.3%
		% +/- pa	2.1	1.5	
	<b>Industry Engagement:</b> E.g. Number of manufacturers or importers	<ul style="list-style-type: none"> <li>Not known, likely to be high given the co-regulatory nature of the scheme.</li> </ul>			
	<b>% of industry engagement</b>	<ul style="list-style-type: none"> <li>Not known, likely to be high given the co-regulatory nature of the scheme.</li> </ul>			
	<b>Who pays for which parts of the scheme/cost sharing</b>	<ul style="list-style-type: none"> <li>Government can co-fund projects that align with the Strategic Plan.</li> <li>Industry's contribution is via APCO membership fees.</li> <li>The strategic plan identifies funding for specific periods based on funding principles, which requires that funding for governance, administration, and projects, monitoring and reporting.</li> </ul>			

## KEY CONTACTS FOR FEEDBACK

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## END NOTES

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- <sup>i</sup> Frequently Asked Questions on Directive 2006/66/EU on Batteries and Accumulators and Waste Batteries and Accumulators (2014)
- <sup>ii</sup> Study on behalf of the European Portable Battery Association (EPBA) (2016) "The Collection of Waste portable Batteries in Europe in View of the Achievability of the Collection Targets set by Batteries Directive 2006/66/EC"
- <sup>iii</sup> Tsiarta, C. Watson, S., & Hudson, J. (2015) "Final Implementation Report for the Directive 2006/66/EC on Batteries and Accumulators"
- <sup>iv</sup> Benny Van Den Steen, Bebat (2017) "Battery collection in Belgium"
- <sup>v</sup> Benny Van Den Steen, Bebat (2017) "Battery collection in Belgium"
- <sup>vi</sup> Benny Van Den Steen, Bebat (2017) "Battery collection in Belgium"
- <sup>vii</sup> Study on behalf of the European Portable Battery Association (EPBA) (2016) "The Collection of Waste portable Batteries in Europe in View of the Achievability of the Collection Targets set by Batteries Directive 2006/66/EC"
- <sup>viii</sup> Vermont Agency of Natural Resources (2014) Primary Battery Stewardship Law (Act 139) Summary Sheet
- <sup>ix</sup> <https://legislature.vermont.gov/assets/Documents/2014/Docs/ACTS/ACT139/ACT139%20As%20Enacted.pdf>
- <sup>x</sup> Vermont Primary Battery Product Stewardship Plan Pursuant to 10 V.S.A. Chapter 168 Act 139 (2016)
- <sup>xi</sup> 2016 Call2Recycle Vermont Primary Battery Annual Report
- <sup>xii</sup> Australian Lighting Council & QLD Government (2015) "ExitCycle Guidelines Version 1"
- <sup>xiii</sup> <http://www.environment.gov.au/protection/national-waste-policy/publications/factsheet-national-television-and-computer-recycling-scheme-operation>
- <sup>xiv</sup> ANZRP (2016) Annual Report 2015 - 2016
- <sup>xv</sup> MRI PSO Product Stewardship Arrangement 2015-16 Annual Report
- <sup>xvi</sup> EPSA Product Stewardship Televisions and Computers ANNUAL REPORT 2015/16
- <sup>xvii</sup> Annual Report 2016 Co-regulatory Arrangement - National Television and Computer Recycling Scheme
- <sup>xviii</sup> National Television and Computer Recycling Scheme Outcomes 2014–15 October 2016
- <sup>xix</sup> <https://www.mobilemuster.com.au/about/>
- <sup>xx</sup> <https://www.mobilemuster.com.au/about/>
- <sup>xxi</sup> Tyre Stewardship Australia (2015) TSA Report to ACCC, Report to ACCC on Implementation of the Tyre Stewardship Scheme
- <sup>xxii</sup> <https://www.accc.gov.au/about-us/australian-competition-consumer-commission/compliance-enforcement-policy#the-accc-and-its-compliance-and-enforcement-options>
- <sup>xxiii</sup> Tyre Stewardship Australia (2017) Annual Report 2016/2017
- <sup>xxiv</sup> National Television and Computer Recycling Scheme Outcomes 2014–15 October 2016
- <sup>xxv</sup> <https://www.accc.gov.au/media-release/accc-authorises-levy-for-national-paint-product-stewardship-scheme>
- <sup>xxvi</sup> <https://www.accc.gov.au/about-us/australian-competition-consumer-commission/compliance-enforcement-policy#the-accc-and-its-compliance-and-enforcement-options>
- <sup>xxvii</sup> ACCC Determination (2014) "Application for revocation and substitution of authorisation A91105 lodged by AgStewardship Australia Limited in respect of arrangements to impose a levy on the sale of agricultural and veterinary chemicals"
- <sup>xxviii</sup> <http://www.drummuster.org.au/>
- <sup>xxix</sup> ACCC Determination (2014) "Application for revocation and substitution of authorisation A91105 lodged by AgStewardship Australia Limited"
- <sup>xxx</sup> Lighting Council Australia (2013) "Fluorocycle Guidelines"
- <sup>xxxi</sup> (2017) "Australian Packaging Covenant"
- <sup>xxxii</sup> IndustryEdge Pty Ltd and Equilibrium OMG Pty Ltd (2017) "National Recycling and Recovery Surveys (NRRS) Paper Packaging, Glass Containers, Steel Cans & Aluminium Packaging" Prepared for the Australian Packaging Covenant Organisation