

Asia Pacific Overview



GLOBAL PRODUCT STEWARDSHIP COUNCIL

Russ Martin
Chief Executive Officer

Conference on Canadian Stewardship

Banff, Canada

1 October, 2015



Sustaining Members include



Queensland
Government



Corporate Members Include

Panasonic



call2recycle®



ORRA



Perchards





Government Members Include



Australian Government
Department of the Environment



Ministry of
Environment



Government of South Australia
Zero Waste SA

Organisation/Local Government/Industry Association/Other Members Include



Product Stewardship Society
Sustaining a Healthier Tomorrow



GLOBALPSC ADVISORY GROUP

David Lawes

David Lawes
& Associates
BC Used Oil
Management
Association



Jay Illingworth

Electronic
Products Recycling
Association (EPRA)



Mark Kurschner

Product Care
Association



Melissa Walsh Innes

Innes & Company LLC



Richard Barnish

DHL Envirosolutions



Joachim Quoden

Extended Producer
Responsibility
Alliance (EXPRA)
Joachim Quoden
Law Firm

Sophi MacMillan

Vinyl Council
of Australia

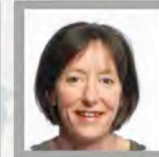
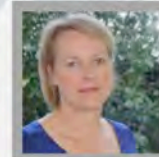
Australian PVC
Industry Product
Stewardship
Program

John Gertsakis

Infoactiv
Logistics Solutions

Dr Helen Lewis

Helen Lewis
Research
Australian Battery
Recycling Initiative



Kylie Hughes

Queensland
Department of
Environment and
Heritage Protection



Cheri Scholtz

PET Recycling
Company (PETCO)

Dana Peterson

New Zealand
Ministry for the
Environment



Developing Countries



GLOBAL PRODUCT
STEWARDSHIP COUNCIL

Electrical and Electronic Equipment (EEE)

Figure 3. Sales of major electrical and electronic equipment in China (1995-2011)

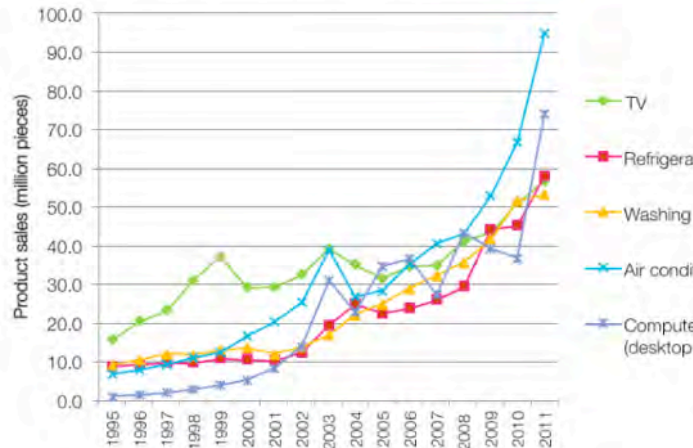
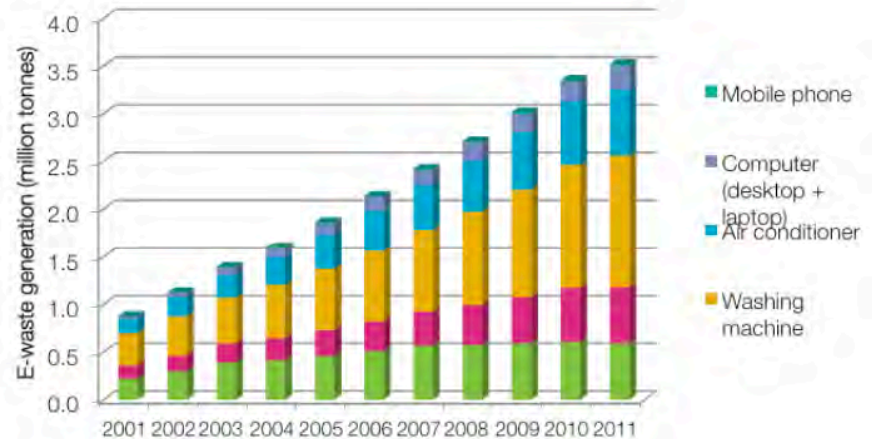
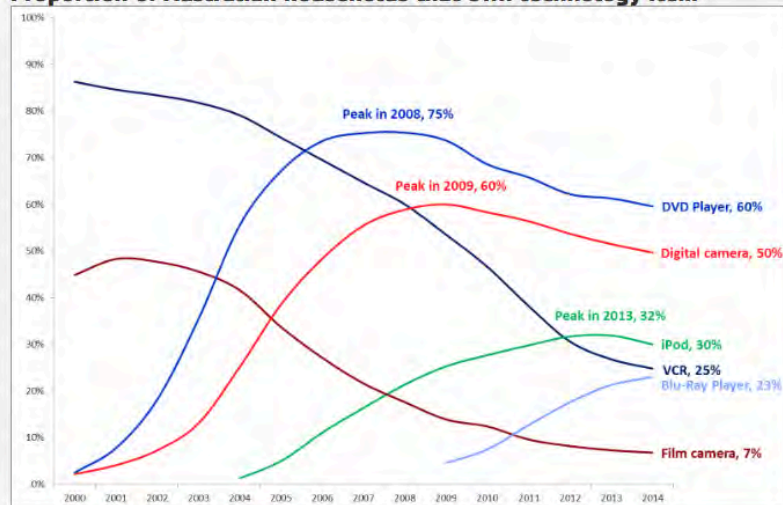


Figure 5. Generation of e-waste in China 2001-2011 (in million of tonnes)



Proportion of Australian households that own technology item



Source: Roy Morgan Single Source, January 2000 - December 2014. Average annual sample n = 54,034 Australians 14+

IT equipment collection amounts



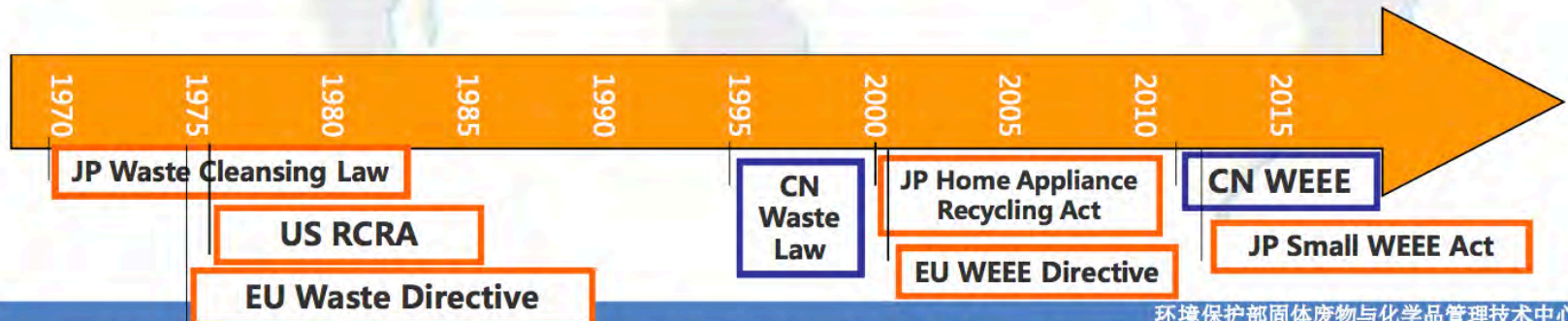
the Waste IT equipment recycling volume increased 24.4 times in 2012, as compared to 1998.

相較1998年廢資訊品收集量增加24.4倍。



Progress of E-waste Regulations in China

| Year | Legislation |
|------------|--|
| 1995, 2005 | Law on the Prevention and Control of Environmental Pollution by Solid Wastes |
| 2002, 2012 | Law on Clean Production Promotion |
| 2006 | <i>China RoHS (by MIIT)</i> |
| 2008 | <i>Measures on E-waste (by MEP)</i> |
| 2009 | Law on Circular Economy Promotion |
| 2011-2012 | China WEEE Regulation and its supporting policies |





MEP

E-waste Legislation System

**Clean Production
Promotion Law**

**Solid Waste Pollution
Prevention Law**

**Circular Economy
Promotion Law**

**Regulations on the Management of the Recovery and Treatment of Waste
Electronic and Electrical Products**

China RoHS

**Renewable Resource
Collection Measures**

**WEEE Collection
Measures (draft)**

**E-waste Pollution Prevention
and Control Measures**
**WEEE Treatment Facility Qualification
Measures**

**WEEE Treatment Fund
Management Measure**

**Design, Manufacture,
Importation**

Consumption

Collection

Transport

**Dismantle, Recycle,
Disposal**

**Catalogue, Multi-collection, Centralized Treatment, Development Plan,
Qualification Licensing, Treatment Subsidies**

Evolution of Producer Responsibility in Taiwan

| Year | Features | Milestone |
|------------|--|---|
| 1998 - now | <p>回收基管會成立(公辦公營)</p> <p>The eight recycling funds are administered by EPA</p> <p>Recycling Fund Management Board</p> | <ul style="list-style-type: none"> ▶ 1998/03: Home appliances listed as Regulated Recyclable waste (RRW) by EPA ▶ 1998/06: Subsidize the waste appliances storage site (44 companies with 67 sites) ▶ 1998/06: Waste IT equipment collection station (Subsidize the Public) ▶ 2002: EPA promulgated standards for the methods and facilities for the collection, storage, and recycling of waste appliances and waste IT <i>equipment</i> ▶ 2007: Electrical fans and keyboards were listed as RRW by EPA ▶ 2011: EPA promulgated waste home appliance <u>takeback</u> system |



Taiwan RRW – Product Fees, Subsidized Collections

Regulated recyclable waste (RRW)

公告應回收廢棄物

容器 Containers

1. 鐵容器
Iron
container



2. 鋁容器
Aluminum
container



3. 玻璃容器
Glass
container



4. 紙容器
Paper
container



5. 塑膠容器
Plastic
container



6. 農藥廢容器
Pesticide
container



7. 乾電池
General battery



9. 輪胎
Tire



8. 機動車輛
Automobile/Motorcycle



10. 鉛蓄電池
Lead-acid
battery



11. 資訊物品
IT
equipment



12. 電子電器
Home
appliance



13. 照明光源
Light
bulbs/tubes



行政院環境保護署
Environmental Protection Administration
Executive Yuan, R.O.C. (Taiwan)

• 責任業者需繳費 Recycling fee must be collected



10



GLOBAL PRODUCT
STEWARDSHIP COUNCIL

Evolution of E-waste Recovery Options

Changing costs / availability of manual labour

Formalisation of 'informal' collections and reprocessing

Need to ensure recycling through responsible reprocessors

Potential for 'micro-recycling' and smart city growth

Importance of third-party certification



GLOBAL PRODUCT
STEWARDSHIP COUNCIL

New Zealand Product Stewardship

13 accredited voluntary product stewardship schemes

No mandatory schemes

Proposed prioritisation of waste streams discussion paper:

- ◆ WEEE
- ◆ tyres
- ◆ agrichemicals and farm plastics
- ◆ refrigerants and other synthetic greenhouse gases

Ministry for Environment will focus on Resource Management Act rather than EPR

Possible expansion of accreditation and ecolabelling roles

Australia Product Stewardship

1 mandatory scheme for used oil

Co-regulatory (EPR) schemes

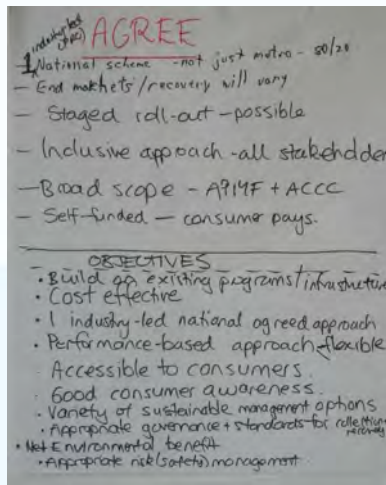
- packaging and WEEE

Accredited voluntary product stewardship

- MobileMuster and FluoroCycle
- tyres, paint and vinyl possible in near future

Conditional regulatory approval for 15c/L paint levy

Voluntary approach developed for handheld batteries



GLOBAL PRODUCT
STEWARDSHIP COUNCIL

Product Stewardship Act 2011

Framework

Criteria for prioritisation:

National markets

Hazardous substances

Business opportunities

Consumer willingness to pay

Significant costs associated with end-of-life management

Material conservation and resource recovery, and associated benefits such as reducing greenhouse gas emissions

\$147 million (CAD 139 million) net savings



GLOBAL PRODUCT
STEWARDSHIP COUNCIL

Co-Regulatory Approaches in Australia

Industry support for legislation to address free riders

Australian Packaging Covenant



- ◆ National Environment Protection (Used Packaging Materials) Measure (NEPM) first adopted 2000, last amended 2011
- ◆ eligible parties face enforcement actions for not voluntarily participating
- ◆ 925 signatories with a 95% compliance rate in 2013

National Television and Computer Recycling Scheme (NTCRS)

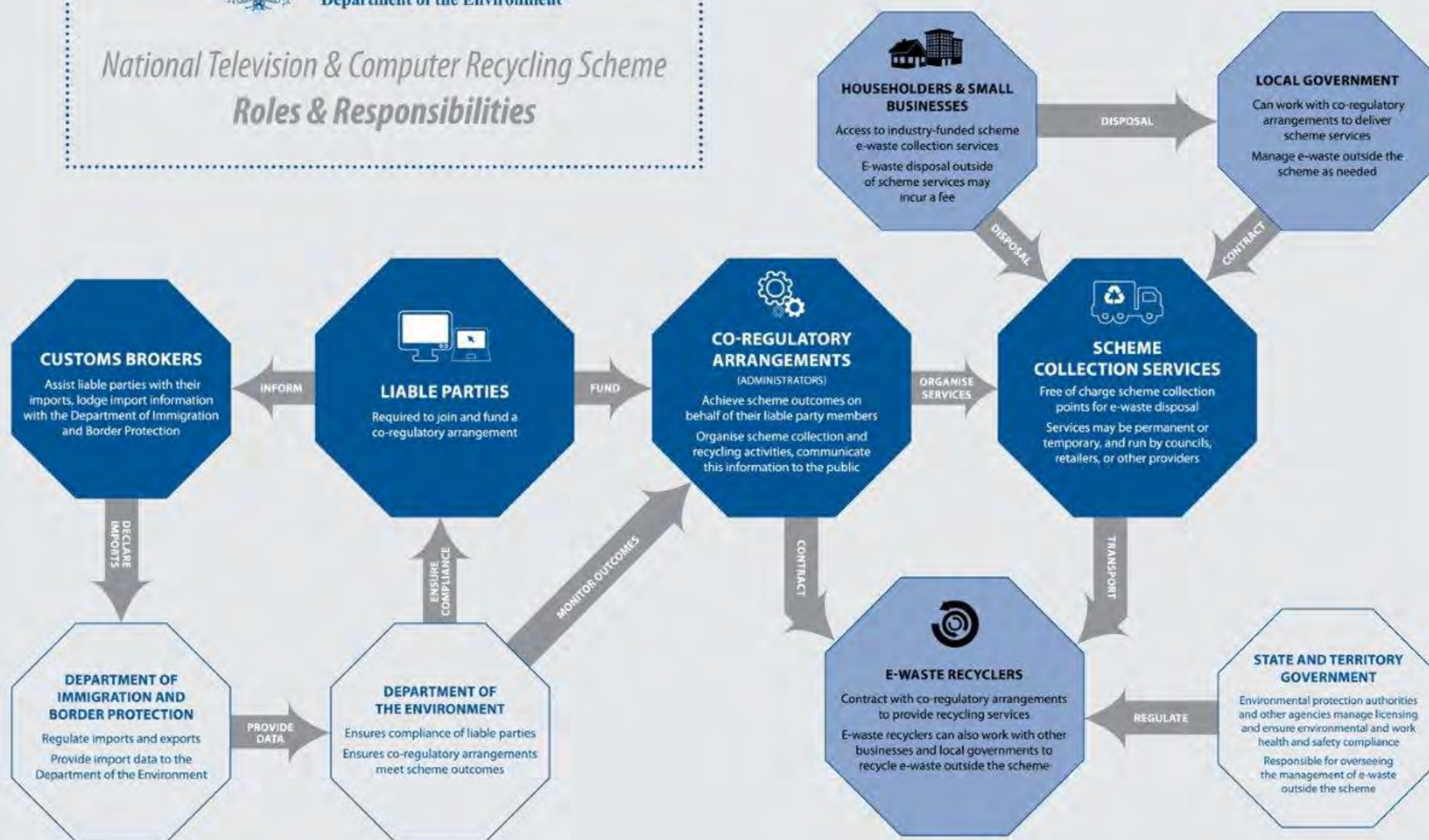
- ◆ Product Stewardship (Televisions and Computers) Regulations 2011
- ◆ producers and importers of designated products over certain volumes are required to join an approved 'co-regulatory arrangement'
- ◆ 100% of liable parties complied with their obligations to join a co-regulatory arrangement in 2012-13

Available if needed, but neither has had to be enforced to date



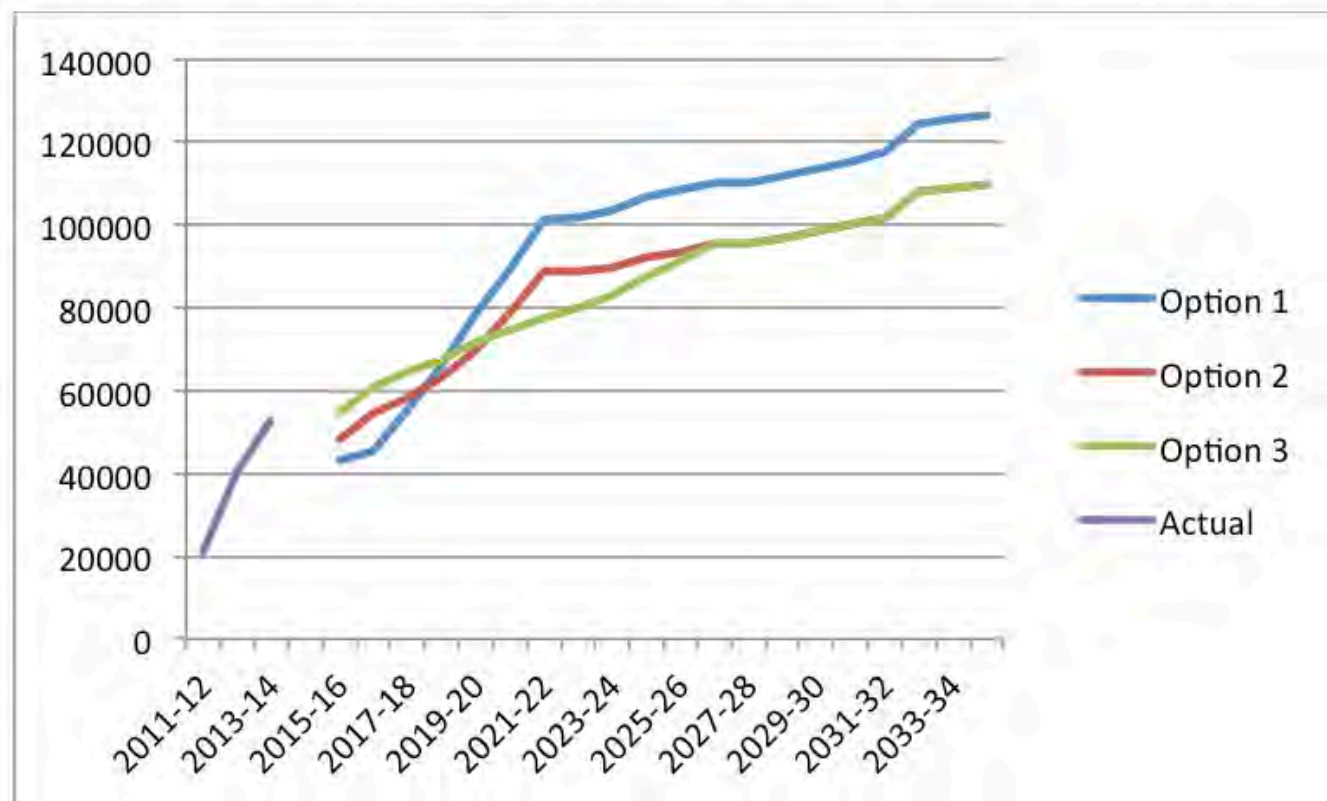
Australian Government
Department of the Environment

National Television & Computer Recycling Scheme Roles & Responsibilities



Operational Review and Amended Targets

Figure 4: Projected recycling trajectories under Options 1, 2 and 3 (tonnes)



Product Stewardship for Packaging in Australia

Ongoing debate over packaging recycling, litter and deposits

Packaging Covenants and Used Packaging NEPM since 1999

Packaging Impacts Consultation Regulation Impact Statement (RIS)

Consideration of regulating packaging under the *Product Stewardship Act 2011*

National Bin Network – Industry to voluntarily fund an additional A\$20 million (CAD18.9 million) p.a. to increase recycling at home and away from home + reduce litter

Packaging Impacts Decision RIS

Australian Packaging Impacts Decision RIS

| | Options Examined |
|--|--|
| Non-regulatory | Option 1 - National Waste Packaging Waste & Litter Strategy |
| Co-regulatory under <i>Product Stewardship Act 2011</i> | Option 2a - Co-regulatory packaging stewardship. No increase over current APC recycling & litter targets. |
| | Option 2b – All consumer packaging. Focus on away from home beverage container recycling and litter. Packaging litter target. |
| | Option 2c – Option 2b + higher packaging recycling target |
| | Option 2d - Focuses solely on beverage container recycling & litter. 80% beverage container recycling rate by 2025. |
| Co-regulation under NEPM | Option 2e – Keeps current APC & NEPM, with substantial increase in the level of industry funding (CAD 18.9M, CAD 33.1M, CAD 47.3M p.a. modelled) |
| Mandatory | Option 3 - Mandatory Advance Disposal Fee (ADF) on all packaging |
| | Option 4a – 10 cent (CAD 0.095) CDS featuring RVMs |
| | Option 4b – CDS with deposit based on system costs. More collection options. |
| | Option 4c – 10 cent CDS based on current South Australian model |

Australia Packaging Impacts Decision RIS Results

| Option | Costs Present Value CAD million | Benefits Present Value CAD million | Net Present Value CAD million | Benefit Cost Ratio | Recycling Cost Effectiveness per Tonne CAD |
|---------------|---------------------------------------|--|-------------------------------------|--------------------------|--|
| 1 | 234 | 304 | 69.9 | 1.3 | 170 |
| 2a | 404 | 449 | 45.6 | 1.1 | 158 |
| 2b | 945 | 874 | -71.4 | 0.9 | 240 |
| 2c | 1,307 | 1,420 | 112.8 | 1.1 | 215 |
| 2d | 831 | 730 | -100.7 | 0.9 | 258 |
| 2e (CAD18.9M) | 444 | 519 | 75.1 | 1.2 | 163 |
| 2e (CAD33.1M) | 578 | 670 | 92.6 | 1.2 | 172 |
| 2e (CAD47.3M) | 693 | 836 | 143.8 | 1.2 | 174 |
| 3 | 1,304 | 1,420 | 115.9 | 1.1 | 215 |
| 4a | 5,025 | 1,449 | -3,576.2 | 0.3 | 1,321 |
| 4b | 5,113 | 1,467 | -3,645.8 | 0.3 | 1,334 |
| 4c | 5,708 | 1,418 | -4,289.9 | 0.2 | 1,566 |

Indicative exchange rate: A\$1 = CAD 0.95



GLOBAL PRODUCT
STEWARDSHIP COUNCIL

Some Trends to Consider

Product stewardship / EPR increasingly important to sustainability and increasingly expected across supply chains

Expanded range of products

- within electronics
- beyond electronics

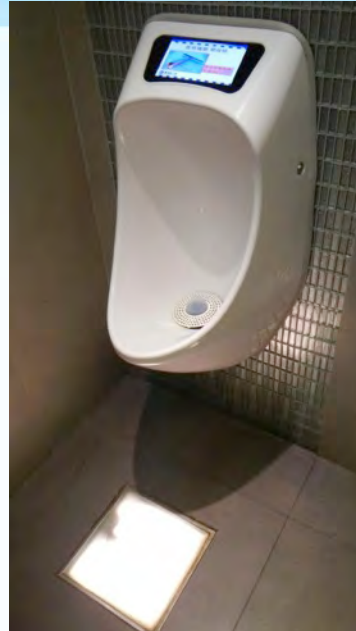
Consolidated collections

- simplified education
- potential economies of scale

Collaborative multi-stakeholder approaches

Need for market development for recovered materials

More diverse products, blurring of categories



GLOBAL PRODUCT
STEWARDSHIP COUNCIL

Not just end-of-life, but across supply chains & addressing production/usage/consumption



GLOBAL PRODUCT
STEWARDSHIP COUNCIL



GLOBAL PRODUCT STEWARDSHIP COUNCIL



www.GlobalPSC.net



info@GlobalPSC.net



facebook.com/GlobalPSC



[@GlobalPSC](https://twitter.com/GlobalPSC)



[Global Product Stewardship Council Public Group](#)



Phone +61 2 9449 9909



Fax +61 2 9449 9901