BOOMERANG ALLIANCE

Level 2, 362 Kent Street, Sydney NSW 2000
Telephone 02 8221 8836 Facsimile 02 9299 4411
Email admin@boomerangalliance.org

Submission to the EPHC's consultation Regulatory Impact Statement for Televisions and Computers

The Boomerang Alliance welcomes the opportunity to make a submission to the development of the Regulatory Impact Statement (RIS) for Televisions and Computers. We do so in anticipation of the finalisation, in November 2009, of product stewardship arrangements for computers and televisions, as promised by environment ministers, which will go part way towards resolving 10 years of consideration of this issue.

Executive Summary

The Boomerang Alliance believes that the EPHC should implement a single, national administered scheme for both end-of-life televisions and computers that covers historic and orphan waste as part of producer responsibilities. Such a scheme should be designed so that it can easily accommodate in future a wider range of waste electrical and electronic appliances.

The Boomerang Alliance believes that the RIS provides excellent justification for government intervention and supports Option 8, with a second preference of Option 7, for implementation.

Need for a scheme

The RIS makes a comprehensive argument on the need for a scheme, providing data on a range of environmental impacts. There are some omissions, however, that, if included, would make the case for a scheme even stronger. These additional impact and benefit areas confirm the value of the Choice Modelling which accounts for areas that are otherwise difficult to quantify. We outline some additional impact and benefit areas below.

Embodied energy

The embodied greenhouse gas emissions in televisions and computers are a critical impact area that is not included in the current RIS. The emissions from the manufacture of these products largely occur outside Australia. However, this is no reason to ignore them. Just as the conserving raw materials is a valid goal independent of the geographical source of raw materials, the reduction of global greenhouse gas emissions is in the interests of Australia's long term sustainability. We have collated some indicative figures from various sources to indicate the size of this impact area.

- The Carbon Reduction Institute in Australia has conducted a lifecycle analysis of a number of laptops for a large manufacturer which shows an average of 1.4 tonnes per laptop. Leaving out televisions, separate monitors and computer peripherals, the 4.5 million

assembled PCs and laptops sales in 2007/08[1] contain around 6.3 million tonnes of embodied greenhouse gas emissions.[2]

- The repair, reuse and remanufacturing of computers would save the greatest amount of these embodied emissions. Currently these activities are sub-economic because the benefits they create are treated as an unrecognised positive externality. Only a small amount of operators are currently able fulfill this role, largely because they operate on a not-for-profit basis. Wesley Business Services E-Recycling program, for example, provided employment and training opportunities for people with a disability.[3] Its recent closure, however, is indicative of the difficulties that remanufacturers currently face.[4]
- Sustainability Victoria states that for every tonne of material recycled through their Byteback program, 5.46 tonnes of greenhouse gas emissions are avoided.[5] The RIS states that in 2007/08, 88,8000 tonnes of television and computers was disposed of in landfill. This equates to 484,000 tonnes of greenhouse gas emissions.

Contamination of resource recovery options

The contamination of resource recovery options is another impact area that does not appear in the RIS, further confirming the value of the Choice Modelling. As Australia moves from an era of landfilling towards advanced resource recovery operations, the importance of diverting end-of-life electronic products from landfills grows.

The ability of televisions and computers to 'toxify' an entire potential resource stream is real but, as yet, not quantified. However, it has been well established that a small percentage of hazardous waste can contaminate what would otherwise be 'clean' output such as compost.

The example below concerns used lead acid batteries (ULAB) only, but has relevance for the large quantities of electronic waste currently being dumped in Australian landfills.

> "One ULAB disposed of incorrectly into a municipal solid waste collection system, and not removed prior to entering a resource recovery facility for mixed MSW, could contaminate 25 tonnes of MSW and prevent the recovery of the organic resources within this waste (estimated at 25 per cent of the waste inputs, or 6.5 tonnes) because of lead levels in excess of 500 mg/kg. The contaminated product would have to be landfilled because of elevated lead content, contributing to an associated greenhouse gas liability from the decomposition of degradable organic carbon into landfill gas."[6]

Recent audits of an Australian alternative waste facility show that 3.17% of incoming waste is comprised of hazardous materials, including electronic waste.[7]

Landfill externality costs

As is noted in the RIS, there is little understanding of the "combined impact on the environment" of the disposal to landfill of products containing internationally identified

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[1] *EPHC, Consultation Regulatory Impact Statement: Televisions and Computers*, July 2009, p. 1.
[2] Carbon Reduction Institute (available on request)
[3] *People with disabilities reap rewards from erecycling,* PC World. http://www.pcworld.idg.com.au
[4] http://www.wesleymission.org.au/
[5] http://www.sustainability.vic.gov.au
[6] *An Extended Producer Responsibility Rationale for Used Lead Acid Batteries*, Warnken ISE, October 2007.
[7] Source currently confidential (available on request)

hazardous materials. In this situation, the precautionary principle should be applied. The 1992 Rio Declaration on Environment and Development states that:

> "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

Furthermore, televisions and computers are not the only products disposed to landfill containing these hazardous materials. The Australian Government does not restrict the definition of electronic scrap to end-of-life televisions and computers.[8] The Basel Convention sets conditions whereby any item of "waste electrical and electronic assemblies or scrap" may be classified as hazardous.[9]

Establishing national recycling infrastructure

The positive externalities resulting from the implementation of national recycling infrastructure for televisions and computers also does not appear in the report, again confirming the value of the Choice Modelling.

Beyond kerbside recycling, the infrastructure created by a national scheme would comprise the next, essential, piece of convenient collection infrastructure needed to separate contaminating products from other materials. Such infrastructure could be expanded to cater for mobile phones, fluorescent tubes, batteries and all other forms of resource intensive and problematic waste that should be diverted from landfill.

Such infrastructure would decontaminate the material going to organic resource recovery operations, reduce pressure on already loss-making kerbside recycling systems, improve the quality of materials and prices collected at kerbside and create several thousand jobs.

The Boomerang Alliances believes that the RIS presents a powerful case for the introduction of a scheme for televisions and computers, but that this could be bolstered by the inclusion of, or expansion on a range of issues.

Need to address all electronic waste

There is a clear need for a scheme that can eventually include all end-of-life electronic products (including batteries). The scheme should be designed, therefore, as a first step towards a systemic solution for all problem products.

In clarifying the objectives of a RIS, the executive summary appears to confirm this approach:

> "The objectives of a regulatory impact statement when considering government intervention should include broad-ranging concepts that can be applied to a range of problems."

The proposed television and computer scheme could address a much wider range of problems than it currently does and the RIS presents a tacit admission that the EPHC should design a

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[8] *Electronic scrap - A hazardous waste*, Department of the Environment and Heritage, February 2004.
[9] Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.

scheme for televisions and computers that can easily be modified to accommodate all other e-waste.

There is long continuity of government intention towards this goal. In 1999, for example, the then Australian and New Zealand Environment and Conservation Council (ANZECC) instructed Environment Australia to "identify best practice in waste management and product stewardship" with respect to "electrical and electronic appliances".[10] The department subsequently released a discussion paper in 2001 in partnership with the Australian Electrical and Electronic Manufacturers' Association (AEEMA) and the Consumer Electronic Suppliers Association (CESA).[11]

This paper talked of "a product stewardship agreement" delivering a "whole-of-life approach to the management of the design, manufacture, distribution, use and waste stage of electrical and electronic appliances."[12] The paper also identified five priority product categories, being:

1. Personal computers, office equipment and peripherals;
2. Televisions, VCRs and home entertainment electronics;
3. Major home appliances;
4. Small appliance, including personal care and electrical accessories;
5. Lighting equipment.

As is stated in the RIS:

> "In 2002 Environment Ministers agreed that national action was required in relation to waste electrical and electronic equipment. On behalf of the EPHC, a multi-jurisdictional working group, known as the Electrical Equipment Product Stewardship Sub-Group, examined the issue of waste electrical and electronic equipment and identified televisions and computers as first priorities for action..."

The Boomerang Alliance agrees with this decision, and notes the prescience of it. However, seven years on, a RIS is being prepared for televisions and computers without any apparent consideration of the wider list of priority products contained in the 2001 discussion paper.

This desire to respond to the entirety of waste electrical and electronic appliances is currently evident in many jurisdictions. The Senate Standing Committee on Environment, Communications and the Arts recently recommended that the EPHC "finalise and/or develop EPR initiatives for the various forms of e-waste as a matter of priority."[13]

Although limiting their latest EPR priority statement to televisions and computers,[14] the NSW Government also lists mobile phones, batteries and "other electrical products" as being wastes of concern "suited to management by EPR schemes".[15]

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[10] *Developing a Product Stewardship Strategy for Electrical and Electronic Appliances in Australia, Environment Australia*, AEEMA & CESA 2001.
[11] Ibid.
[12] Ibid.
[13] *The Senate Standing Committee on Environment, Communications and the Arts, Management of Australia's Waste Streams (including consideration of the Drink Container Recycling Bill 2008)*, September 2008.
[14] *Extended Producer Responsibility Priority Statement 2007*, NSW Department of Environment and Climate Change.
[15] *Extended Producer Responsibility Priority Statement 2004*, NSW Department of Environment and Climate Change.

The Victorian Government's list of priority materials "offering significant capacity for improved resource recovery and/or reduced environmental harm"[16] includes:

- Electrical and electronic appliances (including televisions and mobile phones);
- Computers and peripheral IT equipment;
- Mercury-containing lamps including fluorescent lamps; and
- Batteries.

The South Australian Government's draft policy lists among its "prohibited landfill waste"[17]:

- Fluorescent lighting and any other lighting that contains mercury;
- Lead acid batteries;
- Computer monitors and televisions, including components, subassemblies and consumables that are part of the equipment when discarded; and
- Electrical or electronic equipment not referred to above.

The Boomerang Alliance believes that the EPHC should design "consistent national arrangements" for end-of-life televisions and computers so that any new regulations, administration or infrastructure can easily accommodate a wider range of other products, in particular, other waste electrical and electronic appliances.

Need for a single scheme

It is critical that there is only one scheme from the start. This will avoid unnecessary delay and adjustment costs when the schemes eventually merge. We outline the reasons below.

Televisions and computers are becoming one product

There is a rapidly increasing compatibility with and conflation of televisions and computers. Many new flat panel televisions are capable of being used as a television and as a computer monitor. Conversely, with the advent of digital transmission, computers are now able to be used as a digital television simultaneously with their use as a computer, provided there is enough processing capacity. Additionally, many television programs are now available for downloading or streaming from the internet.

These technological leaps have happened over a short period of time and are becoming increasingly attractive. The trend is that this merging will become increasingly widespread and that people will increasingly consider the purchase of a computer and a television as one and the same. Launching two separate schemes will be confusing for consumers and may also complicate the issue for producers.

[16] *Towards Zero Waste Strategy*, Victorian Government 2005.
[17] *Draft Environment Protection (Waste To Resources) Policy And Explanatory Report*, EPA South Australia, November 2008.

One scheme will lower costs

A single scheme covering televisions and computers will harness greater economies of scale, reduce duplication and avoid the costs of a merger at a later date, reducing overall costs. It will also set up the framework for the scheme to be expanded to accept a broader range of electronic waste.

For recyclers there is no difference

Visual display units for televisions and computers are already of little distinction to recyclers, which is not an insignificant reason why a joint RIS for televisions and computers has been developed. Distinctions between the two schemes would only, therefore, occur at the PRO and collection phases.

The Boomerang Alliance believes that there should be one scheme operated by a single entity that would provide a seamless point of interaction for consumers. We strongly support the television industry's scheme that provides a simple payment system based on market share.

Alignment with other policies and processes

The proposed scheme complements a range of other government policies and processes. These include:

- **National Waste Policy**

  'Taking Responsibility' is one of the seven key themes in the National Waste Policy Draft Framework[18] and provides additional support for this RIS and some of the additional issues raised by the Boomerang Alliance. The direction for change stated in the draft framework is: "Facilitate business and the community to take responsibility for end-of-life management of materials, products and packaging through a national product stewardship/extended producer responsibility framework.

  It also states that "the application of an advanced charge would provide a supply chain signal that would encourage product re-engineering to avoid waste, waste reduction, the use of less hazardous substances and design for re-use."

- **State Waste Targets**

  Most states are unlikely to achieve their waste reduction targets.[19] The diversion of millions of televisions and computers from landfill would assist with these important goals. Some states also have policies to divert e-waste from landfill that have, for years, remained unfulfilled. For example, under the NSW Government's Waste Avoidance and Resource Recovery Act, computers and televisions have been identified as a 'waste of concern' for 'priority focus since 2004, but to date there has been no action. A robust scheme helps to fulfil these policy goals.

[18] *National Waste Policy, Draft Framework*, Australian Government 2009.
[19] *State of Waste Reports*, Total Environment.

- **National Strategy for Ecologically Sustainable Development**

  The 1992, National Strategy for Ecologically Sustainable Development stated that governments will:

  - work towards introduction of pricing and charging structures which adequately reflect the full economic and environmental costs of waste disposal, while assisting the funding of rehabilitation and maintenance of facilities for waste disposal
  - provide further support for the development of whole-life-cycle methodologies and a methodology for full social cost pricing of landfill and waste disposal facilities, taking into account social equity considerations in charges for waste disposal

- **Climate Change Policies**

  There is a plethora of emerging policies to address climate change, targeting the reduction of greenhouse emissions. As stated above, the capture of the embodied greenhouse gas emissions of televisions and computers otherwise lost from the landfilling of computers serves this goal directly.

- **Phase out of Analogue**

  The 2010 switch to digital TV will trigger a rapid increase in the amount of analogue technologies becoming redundant. The effects are already being felt with the increased purchase of digital televisions equipment and the dumping of old analogue televisions. This makes the need for a scheme urgent, with the requirement that a robust scheme must be in place well *before* the switch off date in 2013.

- **National Secondary School Computer Fund**

  The roll out of $2.1billion worth of ICT equipment to schools by the Australian Government will lead to an increase in the amount and rate of computer obsolescence. In many cases, these funds will be used to replace existing, outdated computer equipment in schools which will immediately become end-of-use equipment. Again, this makes the need for a scheme urgent if this material is to be prevented from going to landfill.

- **Job creation**

  The RIS makes the point that "given the labour intensive nature of the recycling industry, the majority of…costs (50-70%) are estimated to be labour costs." Put another way, the cost of the introduction of a scheme will also directly translate into job creation.

  The Boomerang Alliance estimates that an increase of the rate of television and computer recycling to 70% would create 2,500 new jobs, including 700 direct jobs in the recycling of televisions and computers.[20]

The scheme also complements other policies and processes in an indirect way:

- **Mobile Muster**

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[20] Using *WEEE Recycling a Remarkable Success Story*, Department of the Environment, Heritage, and Local Government, Ireland, 2006; population data from the Australian Bureau of Statistics; and a total recovery of 2.5 million tonnes by 2030 as cited in the RIS for Options 5, 7 and 8.

Poor mobile phone recycling rates have been an ongoing problem for the mobile phone industry and governments over many years, with recycling rates still hovering at around 5% of phones sold. This is despite efforts by governments to encourage Mobile Muster to life its recycling rates, the scheme being in place for many years and consumers paying a premium to supposedly pay for recycling. A scheme for televisions and computers that was able to be expanded to support Mobile Muster would assist with this ongoing problem.

- **Phase out of incandescent lightbulbs**

  The phase out of incandescent lightbulbs significantly presents the problem of more mercury containing compact fluorescent lightbulbs (CFLs) being disposed of to landfill. A national system of collection hubs established by a television and computer recycling scheme would help provide both the location and opportunity for householders to easily recycle CFLs.

Criteria

The EPHC has outlined, in the stakeholder consultation process, a set of criteria which can be used to identify the ideal option for a television and computer recycling scheme. We propose that the criteria and ranking below be used to make this decision.

1. Net benefit to community is directly related to the increased recycling of televisions and computers.

As demonstrated by the RIS, the best outcome for the community is the highest rate of recovery of televisions and computers. Therefore, the recovery rate should be the most important criteria for the selection of the scheme. This is especially so given that there is minimal difference in the cost benefit ratios of each option.

The Boomerang Alliance believes that Options 7 and 8 would deliver the highest rate of recovery. Although all models were presented equally assuming a 70% recovery rate, these two options would be the quickest to implement and, as such, would lead to the diversion of an extra 100,000 to 300,000 tonnes of televisions and computers from landfill.[21] There is also little impediment within Options 7 and 8 for the recovery rate reaching well above 70%, unlike in some other options.

Boomerang Alliance believes that options 1 to 6's, and option 9's greater reliance on co-regulation and/or state regulation and would place an unacceptable level of risk on consumers of the scheme not delivering the benefits set out in the RIS.

2. Consideration of other Government processes

Lack of progress, to date, on the television and computer recycling under the NSW Waste Avoidance and Resource Recovery Act provides a warning of problems when responsibility for extended producer responsibility (EPR) programs is left with individual state governments. Despite have the power to regulate for EPR for televisions and computers since 2001, NSW has failed to put in place any schemes.

[21] *EPHC, Consultation Regulatory Impact Statement: Televisions and Computers*, July 2009, p. 69.

On the other hand, precedents for Options 7 and 8 already exist at the Federal level with the Product Stewardship for Oil program and Refrigerant Reclaim scheme respectively. These operate under the Product Stewardship (Oil) Act 2000 and the Ozone Protection and Synthetic Greenhouse Gas Management Act 1989.

Options 7 and 8 therefore avoid a potentially lengthy process that would require each state and territory to implement legislation. As the RIS points out, experience with the National Packaging Covenant indicates a delay of three years or more delay before all states/territories have legislation in place under the state/territory based models.[22]

As noted above, the draft National Waste Policy (NWP) is a government process that has relevance to the proposed scheme. The signalling of an 'advanced charge' in the draft NWP indicates a particular alignment with Option 7.

3. Equitable impact on market

A scheme that is implemented nationally rather than in a piecemeal fashion by the State Governments is strongly favoured by both industry and environment groups.[23] A nationally implemented scheme is more likely to provide a level playing field for businesses and eliminate free-rider problems between states. Options 1, 2 or 9 may take years for the scheme to become truly national, leaving in place inequity while as some states proceed and others delay.

Rapid implementation of a scheme also improves equity in the current market situation. Manufacturers not participating in voluntary approaches such as Byteback or not contributing to the Product Stewardship Australia (television scheme) process are now free-riding to the disbenefit of responsible participants. It is inequitable to expect participant companies to continue their efforts while they wait for the Government to implement a national, mandatory approach. This makes Options 7 and 8 the most equitable.

4. Acceptability to stakeholders

The main stakeholders are consumers, the wider public and future generations. Consumers will pay for this scheme either directly or indirectly; the public will benefit from the environmental improvements from reduced landfilling, reduced depletion of raw materials and reduced greenhouse emissions; and future generations will benefit from a reduced environmental legacy. It is therefore prudent to implement the scheme that delivers the greatest benefit to these stakeholders, that is, the scheme/s with the highest recovery outcomes, namely Options 7 and 8.

5. Cost to Government

As the RIS points out, state-administered schemes (Options 1, 3 and 9) may result in inequitable costs being incurred between the states and territories. This again strengthens the case for a nationally administered scheme.[24]

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[22] Ibid.

[23] Australian Information Industry Association and Total Environment Centre, Product Stewardship Compact for Computers and Computer Peripherals, 6th May 2009 (supported by Environment Victoria, Clean Up Australia and CHOICE); and Product Stewardship Australia, www.productstewardship.asn.au

[24] *EPHC, Consultation Regulatory Impact Statement: Televisions and Computers*, July 2009. p. 97.

In addition, the RIS shows that nationally administered schemes are more cost-effective as they reduce duplication.[25]

Other issues

Historic and orphan products

The Boomerang Alliance believes that it is critical that, no matter which option is chosen, that historic and orphan products are covered by the scheme and that the cost of collecting and recycling these products are borne by producers, not the government.

Collection and recycling targets

Which ever option is chosen, it is critical that the scheme aims for high collection and recycling targets that reflect the willingness of consumers to pay for these as indicated be the Choice Modelling study. The Boomerang Alliance calls for a collection rate of at least 85% after 5 years of operation of a scheme.

The methodology for the target should be based on the percentage of sales compared to collections as opposed to percentage of 'product available' compared to collections. The latter would lead to a distortion of figures and would depend on unverifiable assumptions of the amount of material in storage.

Threshold

While the proposed import threshold of 5,000 units currently captures 95% of the market, this is in an environment where, beyond the benefits of scale, there are no incentives or disincentives to the amount of units imported by any one trader. Following the introduction of a scheme, it is conceivable that some traders would modify their arrangements so as to avoid the 5,000 unit threshold.

The Boomerang Alliance suggests that some analysis should be done of the minimum quantity of goods that a small trader might ordinarily import, which might be the amount of goods in a single shipping container. This would provide a more objective threshold that should help protect the integrity of the scheme.

Need for regulated recycling standards

The current Code of Practice for Managing End-of-Life Televisions falls well short of acceptable recycling standards. Current recycling rates for e-waste are 80% to 95% and regulations must developed in consultation with all stakeholders (including community groups) to reflect this and dissuade sub-standard recycling operations from entering the market.

In addition, there should be standards for the treatment of specific material types with a priority being on hazardous and non-renewable (precious) resources. This would ensure that recyclers are responsible for achieving the highest resource value of each material.

Regulations should also stipulate what processes are acceptable and what are not**.** Processes that are low-value (such as the use of leaded glass as a fluxing agent) or that create

[25] Ibid, p. 99.

environmentally damaging side-effects (such as processes that create more hazardous waste) should be explicitly excluded.

Local Government Services

The Boomerang Alliance also believes that the use of local government run collection services should not be dismissed at this stage. In some cases, the utilisation of these services by the administering body might be a more efficient method of collecting material. However, we believe that the use of such a service would not supplement the need for a network of drop-off points, and that local government would need to be funded by the scheme to run these services.

Landfill bans

The Boomerang Alliance acknowledges that by themselves, landfill bans would not constitute a sufficient policy response. However, we do not agree with the exclusion of landfill bans as part of the policy options that should be considered by the RIS. As is noted in the RIS, "diversion rates are expected to be higher if a kerbside collection service was established and / or if a landfill ban was put in place".

The Boomerang Alliances believes that landfill bans should be introduced by state jurisdictions in combination with the introduction of an EPR scheme for televisions and computers, and all other waste electrical and electronic appliances.

Conclusions

The Boomerang Alliance believes that the RIS makes a very strong case for the need for a television and computer recycling scheme. It identifies the problem and well justifies the reasons for government intervention.

As noted earlier, the Boomerang Alliance supports a single scheme for televisions and computers being chosen and developed on the basis of its future adaptability to include a wider range of waste electrical and electronic appliances. This scheme must include from the outside all historic and orphan products.

The Boomerang Alliance also supports the introduction of a nationally administered scheme. We believe the nature of the products and the ease of administration makes this option more preferable, as well as making future expansion of the scheme simple for consumers, producers and government. We also believe that a nationally administered scheme will lead to a speedier introduction of the scheme that will capture a greater amount of end-of-life televisions and computers.

The Boomerang Alliance's first preference is Option 8. We believe that this model is a simple, equitable and robust national system that has a strong level of government regulation and regulation while at the same time engaging producers in the management and responsibility for television and computer recycling.

The Boomerang Alliance's second preference is Option 7. We believe that government administration is a good way of ensuring compliance with the scheme, provisions of recycling services and the delivery of a simple and convenient recycling system for consumers.