

# An Analysis of Regulatory Strategies for Recycling and Re-Use of Metals in Australia

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**Abstract:** This article considers regulatory strategies that promote more efficient use of material inputs within the Australian economy, with particular focus on recycling and recovery of metals, drawing upon the concept of a “circular economy”. It briefly reviews the nature of regulation and trends in regulatory strategies within changing policy contexts, and then examines the regulatory framework applicable to the various phases in the life cycle of metals, ranging from extraction of minerals to processing and assimilation of metals into finished products, through to eventual disposal of products as waste. Discussion focuses upon the regulatory strategies applied in each phase and the changing roles of government and business operators within global distribution networks. **It is concluded that the prevailing political agenda favoring deregulation and reduced taxation may be a major barrier to development of new styles of regulation and more effective use of taxation powers that is needed to support a more circular economy in metals.** The implication for future research is the need to substantiate the outcomes of reflexive regulatory strategies with well-designed empirical studies.

## ... 4.3. Regulation of Disposal and Re-Use of Metals

Laws on waste disposal and recycling are generally administered by State or Territory EPAs as part of their role in regulating industrial pollution. However responsibility for landfills and waste recycling facilities is often shared with local government and private enterprise. In Victoria, the Environment Protection Act was amended in 2002 to foster environmentally sustainable uses of resources and best practice in waste management (under Part IX—Resource Efficiency). This reform established a new statutory corporation, Sustainability Victoria, to oversee industrial waste management plans, a Metropolitan Waste Management Group, to facilitate local government waste management and resource recovery services, and Regional Waste Management Groups, to plan for municipal waste within a certain declared regions. Landfill operators must pay to the EPA a landfill levy for each tonne of waste deposited at their premises [63]. The current rates vary from \$22 to \$58.50 per tonne depending upon the source (municipal vs. industrial) and nature of the waste. Waste is categorized as Category A (most hazardous), Category B or Category C (least hazardous). Category A waste cannot be disposed of in landfills at all unless processed to a less hazardous state. There are some 35 landfill sites across Victoria and only one (Lyndhurst) is licensed to receive Category B waste [64]. In effect, the landfill levy is paid by households and businesses that deposit waste at those sites, providing a price signal to discourage the quantity of waste sent to landfills. The revenue raised by the levy contributes a major portion of the funding of EPA operations in Victoria.

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Numerous defects in the management of landfills by the EPA and local councils in Victoria were highlighted in a recent Ombudsman’s inquiry into a serious methane leak from a landfill site adjacent to a new housing development at Cranbourne on the outskirts of Melbourne [65]. A separate report by the Victorian Auditor

General's Office into EPA management of hazardous waste also found many deficiencies in record keeping and procedures within the EPA [66]. The EPA responded to these criticisms by instituting its own Compliance and Enforcement Review [67] and recently announced that it had implemented 117 of the 119 recommendations from that review [68].

Sustainability Victoria has established a range of programs delivered in partnership with local governments that are directed to recovery and recycling of certain problematic products including "Detox Your Home" (for household chemicals) "Battery Back" (for used household batteries), "Byteback" (computers and peripherals) and "Paintback" (paint). In 2013, the Victorian Government issued a new vision for waste and resource recovery called Getting Full Value: the Victorian Waste and Resource Recovery Policy [69], which seeks to engage industry all levels of government to adopt a shared approach to the management of products at end-of-life, moving (like the national policy) away from government driven waste collection to industry based product stewardship schemes [70].

The existence of markets for export of waste and used goods brings international law into consideration. The most notable treaty in this field is the 1989 *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal* [71], which commits participating nations to reduce the production of hazardous waste and to restrict its trans-boundary movements. The Basel Convention has 180 participating nations, including Australia. **However the USA, one of the world's greatest waste producers, has not implemented the Convention, due in part to potential conflicts with US laws**, including the *Resource Conservation and Waste Recovery Act* (1994), and comprehensive EPA waste management requirements [72]. The Commonwealth Government has introduced legislation to implement its obligations under the Basel Convention [73], as well as guidelines for transfer of hazardous waste between States and Territories [74]. **It has been suggested that national legislation applying the Basel Convention may be in conflict with free trade rules [75].** However, the World Trade Organisation has stated that the principles of non-discrimination and transparency do not conflict with trade-related measures needed to protect the environment [76]. The OECD also has a number of Directives relating to the movement of waste between member nations which establish a two-tier system for "green" and "amber" (hazardous) wastes which inter alia, requires the exporting country to re-admit any amber waste if it cannot be recycled as intended by the original consent procedures [77].  
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