



AUSTRALIAN COUNCIL OF RECYCLERS INC

THE VOICE OF THE RECYCLING INDUSTRY

Senate Standing Committee
Environment Communications and the Arts
Department of the Senate,
PO Box 6100,
Parliament House, Canberra ACT 2600

RE: Inquiry into Management of Australia's Waste Streams

The Australian Council of Recyclers (ACOR) appreciates the opportunity to make this written submission to the **Inquiry into Management of Australia's Waste Streams** which is investigating

- trends in waste production in Australia across household, consumer, commercial and industrial waste streams.
- Effectiveness of existing strategies to reduce, recover and reuse waste from different waste streams.
- Potential new strategies to reduce, recover and reuse waste from different waste streams.
- Economic, environmental and social benefits and costs of such strategies.
- The policy, priorities to maximise the efficiency and efficacy of effects to reduce, recover and reuse waste from different waste streams and;
- Consideration of a Drink Container Recycling Bill 2008

The Australian Council of Recyclers (ACOR), established in 1983, is Australia's peak industry association representing companies involved in recovering secondary resources. ACOR members currently reprocess and recycle almost 13 million tonnes of material annually otherwise destined for landfill.

Australia's current consumer choice revolution and growth in wealth has created a massive increase in the disposal of redundant goods, with an associated increase in waste diversity, toxicity and complexity. This has a negative impact on the viability of recovery of consumer durable goods, food, packaging, clothing, commercial and industrial goods, and building construction materials. It is vital that governments provide the leadership required to replace this 'take-make-waste' pattern with a more sustainable mode of consumption, reuse and recycling.

Governments across Australia and around the world have recognised the un-sustainability of current consumption patterns, and have either adopted ambitious targets for reducing waste to landfill or adopted Zero Waste policies. However, progress has effectively stalled in many Australian jurisdictions, because the 'low hanging fruit' of easy recycling has been picked and recycling from the remaining mixed streams is considered more expensive than disposal.

The reason that government waste targets have not been achieved is because recyclers receive no recompense for the true value of their recycling services. There will only be minor improvements in recycling services and resource sustainability until this underlying 'market failure' is fixed.

Some state governments have encouraged recycling through the sensible application of waste levies, but this becomes problematic when levies are increased to boost tax revenue without regard for accurately reflecting the environmental externalities of disposal. Losing the link to environmental externalities could discourage some current recycling practices and encourage inefficient recycling in other areas.

The time is overdue for abandoning the focus on waste management and addressing the sustainable management of our resources. This paradigm shift calls for the cessation of ad hoc waste programs and the implementation of technology and infrastructure that sustains resources in the economy rather than disposing of them into the environment. We need to not only value 'goods', but also the recycling and recyclability of these goods.

Our members are increasingly coming under pressure to abandon recycling opportunities as these are not economically viable within the existing waste policy and associated regulatory framework. Continuing to value recycled commodities only on the basis of their secondary material market value will not create the sort of conditions necessary to lift resource recovery levels.

It is imperative that financial rewards are attached to recycling outcomes, based on the 'true' eco-service benefits provided by resource recovery. These eco-service benefits include waste avoidance, greenhouse gas reduction, energy savings, material resource provision, fossil fuel replacement, soil formation, land and water pollution prevention, human illness prevention, and social amenity preservation. At present eco-service benefits are enjoyed by the community for no charge.

Current recycling practices exist because of the intrinsic "value" embedded in products and material at the end of their lives. However there are significant net benefits of recycling to society including:

- **Environmental benefits** - greenhouse gas abatement savings, water and resource use, aquatic eco-toxicity and energy savings;
- **Economic benefits** - annual turnover, employment and indicative multipliers
- **Social benefits** - employment, quality of life, sustainable future, economy and biodiversity.

The Australian Council of Recyclers (ACOR) with financial support from the Commonwealth of Australia commissioned a ground breaking report to quantify and communicate the complete picture of the real value that recycling makes to economic, social and environmental parameters of our society.

Economic Aspects:

In 2006, the Australian recycling industry had a turnover of \$11.5 billion, contributing 1.2% of Australia's GDP, and a capital investment of over \$6 billion. In this same year, the industry directly employed around 10,900 people and indirectly employed another 27,700. This investment and employment has a number of direct and indirect benefits conservatively estimated at \$55 billion. The Australian recycling industry provides both direct and indirect economic benefits.

- **Direct economic benefits** - direct employment, infrastructure investment and value-adding to recovered materials.
- **Indirect economic benefits** - use of accounting, legal and other services; industry and employee spending on other consumer goods and services; and payment of taxes, rates and fees.

Environmental Aspects:

- **Greenhouse Benefits** - Recycling results in a total greenhouse benefit of over 8.8 million tonnes of CO₂eq equivalent to taking 1.8 million cars off the road.
- **Energy Savings Indicators** - The energy saving benefits associated with the Australian recycling performance amounts to over 202 TJ. Assuming an average household electricity usage of 20 GJ and transmission losses of 78.8 percent, the recycling in Australia results in energy savings equivalent to 2.1 million households.
- **Water Savings Indicators** - The water savings associated with the recycling activities in Australia are estimated to be about 134 GL. Based on a volume of 2.5 million litres to fill an Olympic swimming pool, the recycling in Australia results in water savings equivalent to about 54,000 pools each year.
- **Resource Conservation** - The resource saving as a result of the reprocessing of Australian post consumer paper/cardboard is equivalent to three million trees. In the order of 365,000 tonnes of sand, over four million tonnes of iron ore and 1.6 million tonnes of bauxite is being saved through these reprocessing activities. For plastics, the resource savings are measured as tonne of Oil equivalent (toe). The 60,000 and 90,000 toe savings of PET and HDPE equate to 430,000 and 650,000 barrel of oil equivalents (boe's).

Social Aspects:

Long term implications for employment, quality of life, a sustainable future, a stronger economy and improved biodiversity.

ACOR considers the present variability of waste legislation within Australia not conducive to further investment and uniform levels of service provision. As a first step in delivering improved outcomes for waste generation and resource efficiency, ACOR is calling for the implementation of a coherent National Resource Management Strategy to replace existing waste management strategies.

A national strategy of ‘maximum resource recovery and continuous improvement in resource efficiency’ would seek to:

1. value resource recovery eco-services,
2. create mechanisms to overcome existing market failures,
3. financially reward eco-service provision,
4. improve data collection,
5. improve planning and provision for recovery infrastructure,
6. develop national standards for recycling products
7. establish a fund for resource recovery industry development.

These matters are discussed in greater detail however, unless required changes are co-ordinated at a national level this opportunity will be lost.

ACOR Recommendations

This Inquiry into Management of Australia’s Waste Streams comes at a time when public interest and support for improved environmental outcomes is high throughout Australia. This Inquiry has the opportunity to increase economic output, improve environmental outcomes and meet community expectations through the development of a coherent National Strategy for Improved Resource Recovery and Resource Efficiency that is implemented by all states and territories.

ACOR recommends the following actions to directly support a national policy framework of maximum resource recovery and continuous improvement in resource efficiency.

ACOR Recommendation #1

Adopt a National Strategy of ‘maximum resource recovery and continuous improvement in resource efficiency’

To date there has been a fragmented response to waste policy issues by Australian governments, with differing levels of service delivery amongst almost 700 local government authorities, varying targets and regulation amongst states and territories and no current national coordinating strategy. Furthermore, while some state agencies are developing sophisticated yet sensible approaches to the sustainability challenges modern day society present (for example greenhouse issues), there are other instances where departments avoid engaging with the complexity of the sustainability debate (for example over simplification in waste regulation). There are also instances where state departments work at cross purposes to others, for example infrastructure planning and waste policy.

This lack of coordination directly undermines opportunities to maximise resource recovery and improve the resource efficiency of Australian society as a whole. A new approach is needed to consolidate gains made to date and to further accelerate progress in resource recovery and resource efficiency.

ACOR is calling for a national strategy for resource recovery, as opposed to waste disposal, that seeks to maximise the recovery of resources while continuously improving resource efficiency.

This strategic approach contains the following aspects:

- improved mechanisms of valuation that account for resource recovery eco-services and disposal disservices
- net benefits approach to determine the most appropriate resource recovery option (reuse, direct recycling, indirect recycling and energy recovery) based on valuation of eco-services

- removal of ineffective waste ‘hierarchy’ (a net-benefits approach that internalises externalities will ensure optimal outcome)
- increased resource recovery at a level that provides the greatest return on materials and energy investments embodied within ‘waste’
- removal of any validation for disposal as a management option
- identification of areas where strategy and technology development are required
- increased efficient delivery of net benefits to society as a whole.

This national strategy requires improvements in the measurement of resource efficiency at a national, state and territory level to move beyond a measurement based on waste disposal from a single product or commodity stream. Resource efficiency could then be used to measure progress towards sustainable resource recovery and to identify where improvements in recovery amounts, levels of recycled content and phasing out of disposal options for certain products and material streams should be made, in line with the goal of continuous improvement.

Appropriate advisory bodies should also be developed to allow governments to effectively engage with the resource recovery industry and gain advice on improving the recovery of certain materials.

Importantly, a national strategy will ensure a unified response across Australia, ideally with standardised waste regulations that are applied across the board with no exceptions for ‘small sized’ operations that exploit loopholes to operate with no licences. This will assist in keeping the associated costs of resource recovery, for example licensing and reporting, to a minimum.

ACOR Recommendation #2

Improve methods of valuation to include eco-service benefits provided and disposal disservices prevented by resource recovery

In order for a net benefits approach to resource recovery and efficiency to operate effectively, there is a need for accurate accounting of all benefits and costs. The logical long term impact of landfilling is that resources end up mixed in uneconomic concentrations and spread all over Australia. If nothing else, this is an intergenerational inequity.

Valuation purely on global warming potential, or CO₂ emissions could be developed where an approach based on greenhouse gases could lead to a strategy of processing all materials prior to disposal to ensure that they were biologically inactive, and would also provide an opportunity to recover all metals, which have a high embodied energy content. This option would be a positive step in the right direction and could be further refined over time.

The importance of improving methods of valuation cannot be overstated as the present failure to account for externalities is causing a market failure that over-provides disposal disservices and under-provides resource recovery eco-services.

ACOR Recommendation #3

Apply mechanisms at a national level to overcome market failure and address the imbalance between disposal services and recovery options

With mixed wastes, it is in general artificially cheaper to waste the commodity value and embodied energy of materials than to return materials as secondary resource inputs into the economy. Because there is no reward for the eco-services provided by resource recovery, it is not profitable to recover resources from the more highly-mixed waste streams. Self funding mechanisms are required to overcome this market failure and reward the eco-service benefits provided by resource recovery.

There are many mechanisms that can be used to address current market failures that support the generation and disposal of waste. Those favoured by ACOR include:

3.1 *Extended Producer Responsibility (EPR) and Product Stewardship (PS) schemes for specific products*

EPR and PS schemes can be effective mechanisms to recover select product types. There are many examples of schemes in operation or under development in Australia, including (amongst others):

- the Used Oil Stewardship Program
- the National Packaging Covenant
- development of a national approach for recycling of tyres and electronics.

Approaches could include the implementation of ‘deposit’ legislation applied to both materials and complex products to facilitate multi-material processing and recovery or an EPR/PS payment at point of sale, with graduated benefit payments made on the sale of recycled commodity, relative to highest resource value and scaled according to the delivery of eco-service benefits.

ACOR supports across the broad deposit schemes such as advance disposal or recycling fees but does not support restricted CDL or deposits schemes applied in a partial manner.

There are many opportunities to develop additional EPR/PS schemes, however these must be done on a national basis. Resource recovery statistics become readily available under such schemes and can be used to benchmark manufacturers and encourage resource efficiency in product lines.

3.2 *Market Based Instruments (MBIs) such as tradeable certificates*

MBIs such as tradeable certificates have the following advantages:

- can be applied to broader material types or waste streams
- act to directly increase resource recovery
- address the materials that EPR and PS schemes do not cover
- have existing Australian parallels such as Renewable Energy Certificates or NSW Greenhouse Gas Abatement Certificates.

The principle of recognising and rewarding the eco-service benefits that resource recovery provides should be starting point for an MBI, whatever the chosen mechanism.

3.3 *Standardisation of waste levies across Australia*

Waste levies act as a final disincentive to disposal for those products and materials not captured under EPR/PS and tradeable certificate MBIs. However, undifferentiated levies used primarily to raise revenue (as applied in NSW) have the following consequences:

- do not differentiate on the basis of environmental impact (for example the same levy is applied to one tonne of concrete as to one tonne of electronic scrap, although the environmental impact is markedly different)
- do not directly increase or reward recycling as they act only to punish waste disposal
- represent a ‘bottom line’ cost to recyclers for the management of recycling residues
- may decrease recycling of commodities that are currently only marginally economic (for example the recycling of cars in rural and regional locations) and hence reduce potential eco-service benefits
- act as an economic disincentive for innovative improvements in recovery where it is currently either technically impossible or uneconomic
- carry the risk of increased illegal dumping and other litter
- requires additional regulatory authority with the legal ability to prosecute offenders.

As part of the standardisation of levies it is imperative that monies raised through levies are hypothecated to support resource recovery and to ensure that recycling operations are not negatively impacted through increased costs. The NSW levy is uniformly imposed on all forms of waste to landfill (no matter what their environmental impact) on the basis of simplicity of administration, which will almost certainly lead to adverse environmental outcomes.

3.4 Phasing in of disposal bans on certain materials, products or waste streams

A progressive phase-in of disposal bans for materials with high levels of eco-disservices, combined with an accompanying penalty payment for non compliance would act to improve technology developments and attract investment in resource recovery. An example is CFL fluorescent bulbs and tubes where a recycling facility has been constructed for 10 years in Melbourne yet only reprocesses less than 1% of tubes and bulbs discarded as it is more expensive to recycle than to dispose to landfill.

3.5 Apply similar subsidies as for virgin primary resources

There are many subsidies available to primary resource producers including (amongst others):

- diesel excise exemption
- low cost electricity
- tax breaks
- accelerated depreciation
- permission to dispose of materials on-site with no penalty.

These subsidies, to an estimated \$5.7 billion per year,¹ put secondary resources at a competitive disadvantage and should be extended to apply to resource recovery.

3.6. Inclusion of process heat in support for renewable energy

Many Energy from Waste opportunities rely on the provision of process heat, for example the use of process engineered fuels in cement kilns. These opportunities are placed at a competitive disadvantage to options that produce electricity, even though energy recovery as process heat is more thermally efficient than electricity generation. Process heat is excluded from initiatives such as the Mandatory Renewable Energy Target, where Renewable Energy Certificates (RECs) can only be created from electricity generation. Additional support for 'process' Energy from Waste is required to support the positive eco-service contribution it can make to renewable energy.

3.7 Promotion of 'Design for Recovery' to product designers and manufacturers

Decisions made at the point of product design and manufacture can greatly influence the opportunities for resource recovery at a product's end-of-life. However there is no feedback loop with designers to influence product design. Required activities include:

- an education programme (at a minimum)
- rewards for products designed to facilitate resource recovery
- penalties for those manufacturers with products unable to be recovered.

As a starting point to investigating the range of mechanisms that could be employed to overcome current market failures, ACOR suggests an examination of schemes in operation in the United Kingdom and an assessment of their suitability for rewarding eco-services in the Australian context. For example:

- Landfill Allowance Trading Scheme (LATS)
- Packaging Recovery Notes (PRN)
- differentiated landfill tax on the basis of whether the material is biologically active or inactive
- Aggregates Levy.

¹ Nolan ITU 2001 'Independent Assessment of Kerbside Recycling' <http://www.packcoun.com.au/NPC-FINAL-01.PDF>

ACOR Recommendation #4

Improve data collection for determining resource efficiency

Australia does not yet have sufficient data quality to support informed business decisions across all resource recovery sectors. Accurate information is needed to support an informed decision process for the future of the industry, for example, in setting priority areas for Extended Producer Responsibility and Product Stewardship schemes, identifying infrastructure investment opportunities and measuring progress made in resource efficiency.

We also need to measure our levels of waste generation and disposal against other countries so that best practice performance can be identified and achieved (while noting that international strategies may not be directly applicable in the Australian context).

States and territories should report on the basis of a common methodology for data collection, which should include:

- volumes and types of waste disposed of to landfill or other disposal technologies (including the removal of 'Other' as a reporting category)
- volumes and types of resource recovery
- data reported in tonnes, as opposed to percentages, as increasing recovery percentages can hide increasing disposal volumes if combined with increases in the rates of waste generation
- disaggregation of 'mixed' material recovery, for example identification of the composition of mixed bales of plastics being exported for 'recycling'.

The volumes of materials recovered and disposed of are only part of the resource efficiency equation. As improvements are made in developing resource efficiency metrics, so too should data collection improve to keep track. Additional information required includes:

- volumes of virgin and recycled materials used in manufacture
- measurements of recycled content and embodied energy (similar to the energy and water ratings) for given product and also at a state/territory and national level
- time series comparisons of economic output per unit of resource input to track progress made in improving resource efficiency.

ACOR Recommendation #5

Improve planning for and provision of infrastructure for resource recovery

Resource recovery has many elements that can be characterised as a public good. In a similar fashion to the provision of other services like roads, electricity, parks, hospitals, ports and water, resource recovery requires planning support to facilitate infrastructure provision. Presently planning permission is a serious regulatory barrier preventing greater achievements in resource recovery by ACOR members. It is well known within the resource recovery industry that participation rates in recycling decrease exponentially with increases in distance to a facility. Hence recovery facilities need to be located close to the areas of material arisings. Work to overcome this barrier should include:

- creation of dedicated areas on zoning maps for resource recovery
- appropriate servicing for resource recovery areas by road, sea and/or rail and with access to utilities and adequate buffers to prevent impacts on neighbours
- simplified and fast tracked development application and consent modification processes
- protection of existing resource recovery facilities from future, possibly incompatible use arrivals into the locality.

The importance of setting aside adequate land resources for resource recovery cannot be overemphasised.

ACOR Recommendation #6
Development of national standards for recycled products

Recovered resources are often discriminated against on the basis of being ‘recycled’, rather than being assessed on their performance. This is a significant barrier to local market growth. The development of national standards to assure secondary resource performance and allow comparison with other commodity choices are needed to overcome this barrier. The work begun by ACOR on the development of standards for recyclable materials needs to be extended across all significant material types.²

Also required is a change in tender evaluation practices by local government to allow the meeting of material specifications on the basis of performance, as opposed to being a ‘virgin’ material. Being prescriptive on performance is naturally the consumer’s right, however there should exist an equal opportunity for secondary resources to compete on performance. This is especially the case where recycled content can outperform competing domestic and imported resources, but is not chosen because of ‘waste’ connotations. All materials should be selected on their ability to confirm to a performance specification.

ACOR Recommendation #7
Development of a fund to support resource recovery industry development

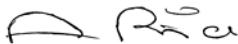
All of the major primary production industries have benefited from decades of government support in the form of grant programmes, funding support for research and development corporations, university research programmes and cooperative research centres. Compared to this the level of industry development support for resource recovery at a national and state level has been negligible.

ACOR recommends that a fund be established to support technology and innovation development within the resource recovery industry, similar in operation and scale to the support given for renewable energy. This is an essential ‘level playing field’ requirement for resource efficiency in Australia and would need to be under the control of a multi-interest board and subject to independent audit.

To complement the operation of this fund and as a separate initiative, it is recommended that a Resource Recovery Research and Development Corporation be established, to work towards the advancement of a profitable, competitive and sustainable resource recovery industry that contributes to Australia’s resource efficiency.

We welcome this inquiry and trust that the inquiry will take on board the following practical recommendations for removing the impediments to the economic viability of recycling, improving the efficiency of service delivery and revitalising resource recovery in Australia.

Yours faithfully,



Anne Prince
CEO

² Please see www.acor.org.au/materials.html for more information on material specifications developed by ACOR for paper, aluminium, glass, plastic and steel.

